Introduction. Improving the quality of instruction among librarians in elementary and secondary schools in the United States requires a broad program of strategic recruitment and changes in school context. Within this broader program, professional development or continuing education plays a critical role. This paper focuses on reflective teaching practices fostered by a program of professional development for school librarians and teachers emphasizing learning in communities of practice. In this descriptive and analytical case study, the author introduces the concepts of reflection and communities of practice and how they influence a practice-based approach to continuing education. She also describes how a training team implemented these concepts in a course involving inquiry-based partnerships between teachers and librarians in Hawaii, USA. In this article, the author uses the following terms synonymously: continuing education, professional development, in-service training, and staff development.

Method. The key research questions addressed were: What features of a practice-based approach to continuing education result in increased teacher and librarian knowledge about instructional design and changes to teaching practice? How does such training impact long-term practice in the schools? The data sources were: artifacts from the development team including agendas and planning notes; artifacts from the participants including instructional plans and reflection logs; semi-structured interviews with selected participants; and records of debriefing sessions involving the development team.

Results. Data revealed that a practice-based approach in continuing education including use of peer critiquing mechanisms, ongoing mentoring follow-up to formal instruction, and reflective logs was critical in effecting change in teaching practices.

Conclusion. Based on the findings, the study concludes with guidelines for designing professional development.

Introduction

For students to succeed in the 21st century, they must be challenged with rigorous tasks that require critical thinking and application of disciplinary concepts (American Association of School Librarians, 2007; Partnerships for the 21st Century, 2004). The skills that students need include the ability to interpret information, perform analytic reasoning, and demonstrate personal or social responsibility in the core content areas. Although teachers might work on such tasks without soliciting assistance from the librarian in a school, the power of collaborative planning and implementation is undeniable (McGregor, 2003). While the classroom teacher has the disciplinary knowledge, the librarian can assist the teacher with the process or thinking skills necessary for students to construct meaning from information. The synergy of working together produces a seamless blend of holistic learning (Harada, Kirio & Yamamoto, 2008). Based on the premise that critical thinking permeates inquiry-based education, librarians are potentially major partners in identifying the relationships existing between thinking skills and the ways of knowing embedded in various disciplines. They introduce the notion of information literacy as the foundation for deeper understanding that learners develop when they interpret, evaluate, and apply information and knowledge to new contexts. To establish successful teaching partnerships, teachers and librarians must participate in continuing education that hone their skills in collaborative instructional design and implementation.
Effective professional development reflects the following attributes: (1) personal commitment; (2) building trusting relationships through collaboration; (3) opportunities and ongoing support for continuous learning; (4) inquiry-based, practice-based learning within school settings; (5) respect for differences in practitioners’ theoretical backgrounds, prior knowledge, experiences, and expertise; (6) risk taking; and (7) evaluation and feedback (Penuel et al., 2007; Levin, 2003; Fishman et al., 2003; NCATE, 2001). This is counter to conventional professional development activities that are often: (1) focused on individual learning; (2) one-time events (e.g., lecture or workshop) or formal classroom instruction (e.g., semester-long course); (3) conducted away from school; (4) based on artificial exercises or independent practice without guidance; (5) focused on action rather than reflection; and (6) focused on answers rather than inquiry (Dufour & Eaker, 1998; Penuel et al., 2007).

Robb (2000) redefines school staff development as inquiry-based professional development within a school that creates “a teacher-centered learning environment which recognizes and respects the differences in teachers’ theoretical backgrounds, prior knowledge, familiarity with [content areas], classroom experiences, and expertise” (2). In the following brief review of related literature, the author identifies and defines the elements central to this paradigm shift in models of continuing education, i.e., features of reflective practice, a practice-based approach to staff development, and the creation of communities of practice. This review includes material originally cited and described by Yukawa, Harada, and Suthers (2007) in a previous publication.

### Reflective Practice

Reflective practice has been clearly established as a key component of practitioner growth and effectiveness (Schön, 1983). A reflective educator is one who “is committed to continuous improvement in practice; assumes responsibility for his or her own learning; demonstrates awareness of self, others, and the surrounding context; develops the thinking skills for effective inquiry; and takes action that aligns with new understandings” (York-Barr et al., 2006, 10).

Osterman and Kottkamp (1993) argue that top-down reform in lower education frequently fails to create change because change begins with practitioners. They believe that reflective practice has the greatest potential to create educational improvement because it is situation specific and places the professional in the very center of the attempt to create improvement. York-Barr, Sommers, Ghere, and Montie (2006) describe a reflective practice spiral that begins with individual reflection and then extends to reflection with partners, reflection in small groups and teams, school-wide reflective practice, and beyond these to broader social groups and systems.

### Practice-Based Approach

A practice-based approach to continuing education offers a potentially effective means to achieve sustainable school reform in instruction through professional growth for individuals. The practice-based approach to in-service training, advanced by Ball and Cohen (1999), uses authentic records and tools for teaching and learning with the aim of creating a common ground for individuals and teams to work, jointly reflect, explore alternatives, and support each other. Activities are grounded in participants' ongoing efforts.
to design units of instruction and strategies for assessing student learning. This approach recognizes that curriculum reform involves “just in time” learning focusing on immediate problems of practice as well as problems of greater complexity. The curriculum centers on the tasks, questions, and problems situated in practice. Instead of definitive answers and preordained solutions, participants focus on possibilities, methods of reasoning, and alternative conjectures. Importantly, this inquiry-oriented stance is a collective endeavor where professionals learn from one another.

Communities of Practice
A central assumption in a practice-based approach is that strong communities of practice (CoP) cultivate teacher learning and instructional improvement. Since the 1991 publication of *Situated Learning* by Jean Lave and Etienne Wenger and Wenger’s later elaboration (Wenger, 1998), the CoP concept has achieved wide-ranging resonance with practitioners, primarily in education, health care, knowledge management, and computer-supported collaborative learning.

What are communities of practice? CoPs are groups of people who share similar goals and interests and collaborate over time to share ideas and find solutions (Lave & Wenger, 1991; Wenger, 1998; Wenger, McDermott, & Snyder, 2002). What holds them together is a common vision, a sense of purpose, and a real need to know what each other knows. In pursuit of these goals and interests, they employ common practices, work with the same tools, and express themselves in a common language. Through such activity, they come to hold similar beliefs and value systems. They collaborate directly, use one another as sounding boards, and teach and learn from each other. They are colleagues committed to jointly developing better practices. Ultimately, they achieve consensus on and consistency of vision, goals, and action (Lave & Wenger, 1991; Spraker, 2003; Wenger, 1998).

Focus of the Study
Influenced by the aforementioned principles of reflective practice and fueled by the goal to achieve a community of professional practice, a team of developers from the University of Hawaii and the Hawaii Department of Education, designed and implemented a yearlong course in 2005-2006 entitled, Inquiry Learning Through Librarian-Teacher Partnerships. Jointly sponsored by the Hawaii Department of Education’s (HIDOE) School Library Services (SLS) Division and the University of Hawaii’s (UH) Library and Information Science (LIS) Program, the course employed a practice-based approach to the content and structure of the training. This was a four-credit, fee-based course coordinated through the HIDOE. The culminating activities included submission of an individual learning portfolio and team presentations at an annual state educators’ conference in Hawaii.

Research Questions
The following research questions framed this study:

- What features of a practice-based approach to continuing education result in increased teacher and librarian knowledge about instructional design and changes to teaching practice?
- How does such training impact long-term practice in the schools?

Method
Critical in case study research is the triangulation of data to ensure the validity of the findings. In this study, triangulation was achieved by using the following sources in the data gathering process: artifacts from the development team including agendas and planning notes; artifacts from the participants including instructional plans and reflection logs; semi-structured interviews with selected participants; and records of debriefing sessions involving the development team.

All data were collected and organized by an external evaluator, who was a postdoctoral student at the University of Hawaii that had worked on a similar project with the lead course designer. The external evaluator also conducted the initial analysis of the data. As part of the analysis, she coded logs and interviews to identify impact of training activities on developing effective teaching practices. The coding process was a recursive one, allowing for the coding of information into more refined themes and sub-themes.

Participants in the Study
Thirteen librarians and fourteen teachers for a total of twenty-seven practitioners participated in the project. The members constituted nine elementary and secondary school teams of librarians and teachers, who jointly designed and implemented inquiry-focused instruction. Three of the librarians, who participated without partners during the initial summer training, found and involved teacher-partners once the school year started. The practitioners ranged widely in experience, from relatively new professionals to veterans with over thirty years of work in the schools. The librarians frequently took the lead in forming their own teams to participate in the course.

Designers of the Course
The course development team included three facilitators/mentors (referred to as developers or mentors in this paper), as well as research and support staff from the HIDOE and UH. The lead developer and mentor was a professor in the University of Hawaii’s Library and Information Science Program with expertise and over thirty years of experience teaching and facilitating workshops. A second senior mentor was a retired school librarian and an experienced practitioner and skilled facilitator, who had collaborated on professional development activities with the lead mentor for over ten years. The third mentor was an SLS staff member skilled in the use of technology for learning and a former student of the lead mentor.

In the following sections, the author recounts the structure and content of the course and incorporates examples of findings in the appropriate sections of the paper. These findings were initially reported and published in the U.S. (Yukawa, Harada & Suthers, 2007) but have been expanded in this paper to include longitudinal results.

Content and Organization of the Training
The major learning outcomes for the course required that participants design and implement units of study that integrated content area standards with information literacy skills. They were guided to address the following key concepts and course objectives dealing with an inquiry approach to learning:
Objective 1: Determine essential questions for the units of study through: (1) Focusing on a generative theme or problem. (2) Identifying one or more essential questions that drive the project. (3) Transforming standards into clearly stated learning criteria.

Objective 2: Foster the inquiry process through: (1) Defining student performance tasks that clearly measure the learning goals. (2) Incorporating strategies that motivate student curiosity. (3) Incorporating strategies that challenge students to generate higher-level questions. (4) Incorporating strategies that help students investigate their theme or problem effectively and efficiently. (5) Incorporating tasks that assist students in creating personal knowledge from collected information and data. (6) Requiring final products that challenge their students to effectively communicate their knowledge.

Objective 3: Achieve assessment-driven decision making through: (1) Collecting and compiling formative and summative assessment data. (2) Analyzing the data to inform instruction.

Initial Training Segment and Related Findings

The course began with an intensive three-day session in the summer of 2005. The content of the session was founded on prior work done by Harada and Yoshina (2004) on inquiry learning. This session was a critical engagement activity. The mentors introduced the following key concepts: (1) determining essential questions, (2) fostering the inquiry process, and (3) assessment-driven decision making. They engaged the teams in intra- and inter-team discussions to share and reflect on the participants’ past experiences, thus connecting prior teaching activity with the key concepts through joint reflection. They also provided models and demonstrations, putting the concepts into action to support reflection and understanding.

The teams also began the work of collaborative unit planning. This planning was also the means for relationship building. For first-time collaborators, it was a chance to define identities, learn who was good at what, discover how to engage with each other, and begin to establish trust and respect. Veteran teams explored new ideas in the context of their shared experiences, negotiated the meaning of the key concepts, and redefined the purpose of their collaboration for a new curriculum project. It was also an important time for participants to share across teams. All teams began to create a unit plan that would be the artifact they used throughout the year to interact, discuss, brainstorm, plan, implement, and assess their understanding of best practices.

Assignment of Peer Support and Related Findings

The mentors introduced a general process for designing and implementing a unit, supported by monthly individual and team reflections and mentoring support. Each team was assigned a buddy or partner team from another school with whom to jointly reflect throughout the year. Monthly buddy team responses were required, but teams were encouraged to freely respond to other teams in the online discussion spaces that were created for this course.

This was a valuable opportunity for teams to engage with each other and provide feedback and emotional support. A number of participants noted that it was reassuring to see that other teams were facing the same problems as themselves. One librarian reported in her log:
When you’re the only librarian on campus, you wonder, am I doing it right? To hear from other people that they’re going through the same thing, I realized I’m on track. When you send each other positive messages, it makes you want to share and want to contribute to a learning community.

Another librarian noted in an interview:

*I think being partnered with another school was good, because although all schools posted, you get so engrossed in your own project that you don’t take time to read. But by being tied to another school, it forces you to take a look at what the other school learned. They may come across problems that we can make suggestions about, and they make suggestions about our work.*

**School Site Collaboration and Related Findings**

Following the summer training session, the teams continued to collaborate at their respective schools. They focused on understanding and assimilating new concepts and developing their unit plans. Most teams revised their original units, some extensively. One teacher stated in her log:

*We have revised, revised, and revised our unit (via face-to-face meetings, email, phone) trying to ensure that it has all the components shared at our workshop. We then developed the related inquiry lessons and are currently in the midst of implementation. Although we have begun implementing, we are still dialoging about strategies to guide our students to make the critical connections/generalizations between science, technology, and society [that is] one of our target Science Standards for the unit.*

While the teams were diverse in the grade levels, subject areas, and activities used, the team members valued the synergy and support available through partnering. In the interviews and logs, they indicated that they were able to share the load, bring together different skills, complement each other's working styles, act as sounding boards for each other, provide emotional support, and help each cope with the pressures of meeting school priorities. All of these activities contributed to the development of a professional CoP around each team.

Through engagement and resourceful management, the team members were able to leverage their strengths. Teachers knew their subject areas and students, while librarians had broader knowledge of the curriculum and the research process. For one teacher, the collaboration changed her image of her librarian:

*It was a wonderful partnership. I was never this much involved with the library before. How could I have survived all these years without the library? We're content oriented. Librarians have such a wealth of information. Talking to [my librarian partner] gave me so many ideas.*

Importantly, the partnering resulted in higher levels of awareness and knowledge about effective instructional design and pedagogical strategies. For one veteran team member at an elementary school, the CoP learning design provoked new depths of critical thinking about curriculum development. She wrote in her log: “I see the course as helping us to have deeper conversations about what we teach and how we teach.” Her team members struggled to define essential questions and their relationship to student inquiry, ultimately achieving a clearer understanding of course concepts and best learning strategies for their
students. Another member of the team added: “We addressed the essential questions as part of the background building, and the students' own questions as the inquiry.” The partnering also helped the team take student achievement to a higher level: “Working together with [my librarian partner], I've spiraled my kids far above the second-grade level standards.”

To summarize, the real work of relationship building and community building came in the teams' work in their schools. The course design and structure provided learning opportunities but did not dictate how each team should use these opportunities. Reflective practice helped the teams develop their own understandings of best practices through testing them. Each team was also challenged to achieve its own balance of the creative tensions of reflection and action, the planned and the emerging, and face-to-face and online communication.

Ongoing Reflection and Related Findings

The importance of reflection was evident in the learning reported by all participants. One librarian said in an interview:

_Reflecting on my work with the students made me seriously examine what I was doing. It forced me to make the time to think about what I was learning and connect it with concepts such as essential questions. What I am saying is that reflection helped me to grow as a professional._

Along with increased competence came growing self-esteem. A teacher divulged the following in a log entry:

_At the first workshop, I was totally impressed with all the other teams. Everyone was so smart. Then I realized, “Well, you're smart too.” This [course] is where I really developed my self-esteem as a teacher. It has helped me, especially the encouragement of the mentors. They were always so positive. This showed me how to be more positive, and I was more positive with the kids._

Impact of Mentoring Support and Related Findings

Given the challenges of online communication, effective online mentoring strategies were critical to sustaining participation at a distance. Each month participants emailed individual reflection logs to the mentors and posted team reports in the online discussion space. Both logs and reports were responses to structured prompts, i.e., “prompts with a purpose,” as one participant called them. The objectives of the guided reflections were to: (1) provide opportunities for individuals and teams to assess, analyze, and reflect on data related to teaching and learning; (2) provide mentoring support; and (3) encourage cross-school dialogue and critiquing.

Aware of the deficiencies of online communication compared to face-to-face exchanges, the mentors intentionally practiced strategies that nurtured trust and strengthened their relationships with the participants. They read all messages carefully, provided feedback within twenty-four hours, and used a consistently positive tone. An analysis of responses to participant logs as well as notes from the mentors’ debriefing sessions revealed that through regular feedback, the mentors: (1) encouraged participants to collaboratively explore possibilities, methods of reasoning, and alternatives; (2) provided constructive, focused assistance; and (3) provided reassurance and emotional support.
Longitudinal Impact

Following the yearlong professional training experience, the author and external evaluator conducted informal e-mail follow-up with the participants in the 2006-2007 and 2007-2008 academic years. The intent was to find out whether participants had been able to continue using the inquiry-focused practices emphasized in the training. In all cases, the individuals indicated that they were continuing to incorporate inquiry-based approaches in their teaching, e.g., using essential questions and incorporating assessment on a regular basis. What also emerged was evidence that many of the participants were involving other professional colleagues in some of these practices.

At least six school teams had connected their work to school priorities and reform efforts, such as reading and writing programs and standards-based curriculum initiatives. Seven teams had extended their efforts to involve other teachers in their grade level or department. Six teams had also reached out to faculty in other grade levels or departments, or collaborated with other support personnel such as the curriculum coordinator and technology resource teacher.

From the start of the project, a number of the librarians had taken the initiative to form the teams, maintain momentum, and contribute to a change in views about the role of the librarian as curriculum partner. In the years following the course training, many of the librarians had assumed major curricular roles in their respective schools. For example, two librarians at a high school were designated as school leaders of professional learning communities that focused on improving teaching practices. In another instance, the librarian emerged as a key member of the school’s team that was training all teachers in assessing students’ writing performance. Another librarian described her developing leadership in curriculum and instruction thusly:

My deeper understanding of inquiry-based projects gained at our Inquiry Partnerships workshop has allowed me to transfer and apply my knowledge in our standards-based efforts at my school. This year I co-facilitated a focus group with our curriculum coordinator. Our group’s task (which was aligned to our school’s Academic Plan) was to identify five components of a standards-based classroom. Our group achieved our task and presented our work at our last faculty meeting. The training I received in the course has definitely inspired my self-confidence and provided me with the necessary skills to step forward and become a leader in my school.

Conclusion

The case study reported here supports research that learning as reflective members of a community of practice is an effective means of giving educators the same growth experiences we aim to encourage in students. The guidelines provided below are “lessons learned” from a formal course for credit, but they may well apply to informal school-based learning teams.

1. Professional development involves the learners in the identification of what they need to learn and, when possible, in the development of the learning opportunity and the process to be used.
2. It must be primarily school based and integral to immediate and authentic problems.
3. It provides learning opportunities that relate to individual needs. At the same time, however,
professional development is organized around collaborative problem solving. By working together, educators address issues of common concern. This facilitates the identification of both the causes and potential solutions to problems.

4. It engages participants in developing a theoretical understanding of the knowledge and skills to be learned. Results of research must be accessible to practitioners so that they expand and extend their professional knowledge base.

School teams must shape their own learning agendas and create school-based plans for instructional change. To foster a disposition of inquiry, they must have opportunities to probe ideas and perspectives and challenge evidence and possibilities. There must also be mechanisms for cross networking with other teams to reflect on shared interests and challenges. Yukawa, Harada, & Suthers (2007) maintain:

Reform happens when individuals and groups reform themselves, and reforms are sustained when they become part of the social consciousness of the community. By nature, social consciousness is a state of awareness arising from maturity of reflection and co-reflection within the community, not imposed from without. This is the heart of practice-based professional development within communities of practice. (191)

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References


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