

Communities of Practice: Expanding Professional Roles to Promote Reflection and Shared Inquiry

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The field of early intervention continues to experience challenges in connecting theory and practice, reducing professional isolation, and translating principles into action. An examination of the way we perceive and enact professional roles reveals their limited scope in addressing these challenges. This article introduces the concept of expanding roles to include collaborative reflective inquiry within communities of practice as one way to reform professional practices. We suggest that reflection within communities of practice not only extends our own understanding, insight, and command of the situations in which we work, but also holds the potential to advance the field as a whole.

The construct of role is the primary way to organize conceptually the various responsibilities of professionals in the field of early intervention and education. By defining professional roles and relating them to our goals in serving children and families, we can form a more cohesive picture of the nature of our work than by considering professional competencies, education and training, or job functions alone. An examination of roles reveals that they have evolved rapidly in recent years to reflect changing policies and practices. The early intervention literature, for example, tracks the emergence of roles that are more egalitarian, collaborative, and community focused at a time when services are becoming more inclusive. Although professional roles have expanded to encompass increasingly complex functions, our responsibility to engage in collaborative reflection and inquiry as a way to inform and reform practices is often overlooked in the conceptualization of roles.

Traditional frameworks used to describe professional roles and functions have emphasized the nature of direct services to the child and family (Bailey, 1989; Bricker, 1989; Strain et al., 1992) and the need to plan those services in collaboration with other adults serving the child (Bacon, & Dougherty, 1992; Bruder, 1993; Buysse & Wesley, 1993; File & Kontos, 1992; Gallagher, 1997; Hanson & Widerstrom, 1993; Hutchinson, 1994; Leiber et al., 1997; Ripley, 1998). Increasingly, this collaboration

has involved relationships across disciplines and fields and has included a focus on planning and problem solving to enhance service systems (Buysse & Wesley, in press; Buysse, Wesley, & Boone, in press; Buysse, Wesley, & Skinner, 1999; Wesley, 1994).

As reflected by the acceptance of a family-centered philosophy to guide practice, roles in early intervention have evolved first to incorporate a view of the child in the context of the family. Professionals are encouraged to view parents as partners, and family priorities ideally drive services (Bailey, 1996; Bailey, Buysse, Edmondson, & Smith, 1992; Dunst, Trivette, & Deal, 1988). Roles such as family partner, listener, and communicator are cornerstones in professional development and practice in early intervention. Professionals also have begun to view the child and family in the context of the community. The emphasis on forming partnerships to serve children in natural environments and the subsequent move of special educators into community settings have spawned the development of additional roles and functions related to indirect service delivery. Besides the conventional roles of diagnostician, curriculum designer, and intervention provider, early intervention professionals now play the parts of community resource coordinator, services manager, materials broker, childcare consultant, inclusion marketer, community planner, program evaluator, and adult educator (Buysse & Wesley, 1993; File & Kontos, 1992;

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Gallagher, 1997; Hanson & Widerstrom, 1993; Wesley, 1996).

Although professional roles have undergone considerable transformation over a relatively short period of time, reconceptualizations of early intervention roles beyond direct work with children and families have been limited to interdisciplinary collaboration related to service delivery in various contexts. Developing collaborative relationships with new colleagues in community settings is an important first step in supporting the day-to-day implementation of early childhood inclusion, but it does not go far enough to address the challenges and complexities of our work in a dynamic field. Profound changes in the way we view the fundamentals of our work, including redefining who our clients are and where and how we serve them, require a restructuring and reorganization of our individual and collective knowledge. What is missing in current practice is the role and responsibility of participation in a community of people whose goal is to engage in mutual analysis of each other's experiences and observations as a way to continually refine their practice and ultimately contribute to the formal knowledge base. Expanding roles in this way builds on Gallagher's (1998) suggestion to make "teacher craft knowledge the center piece of our efforts to improve both practice and teacher education" (p. 500) and recent recommendations to provide early childhood teachers with additional opportunities to reflect on practice (Bowman, Donovan, & Burns, 2000). It stimulates thinking that is divergent and inductive, rather than convergent and deductive (Kuhn, 1977, cited in Skrtic, 1991), by inviting the ongoing deconstruction and reconstruction of knowledge as a means to interpret new situations and to solve problems with imagination.

The early intervention field could profit in at least three critical areas by the expansion of professional roles to include such reflection and collaborative inquiry: closing the gap between research and practice, reducing the isolation of early intervention practice, and optimizing the translation of principles (e.g., high-quality care and intervention, family-centered values) into concrete policies and practices. A promising approach to this type of shared inquiry and learning is to build communities of practice based on diverse expertise and designed to scrutinize and improve the way we work with children and families in early intervention (Buysse, Wesley, & Boone, in press). The purpose of this article is to examine the concept of purposeful and collective reflection as a strategy for the development of the individual professional and the profession itself. Through this examination, we hope to stimulate dialogue about new ways to enlighten our current practices in early intervention. In the following sections we present a rationale for increased reflection in the field of early intervention and introduce the role of reflective practitioner. We then review the litera-

ture on learning organizations and communities of practice and introduce key concepts from these approaches for promoting reflection and inquiry in early intervention. Next we compare the goals, participants, methods, and outcomes of a community of practice with four other models of collaborative inquiry. Finally, we describe various challenges and possible strategies for implementing communities of practice and the implications for transforming professional roles.

THE NEED TO INCREASE REFLECTION IN EARLY INTERVENTION

For several decades, the literature on teacher education has advanced with some vigor the practice of reflection as a framework for critical thinking (see Hatton & Smith, 1995). Although definitions of *reflection* have not been used consistently by the theoreticians, researchers, or teacher educators who employ them (Hatton & Smith, 1995; LaBoskey, 1994; Valli, 1992), there is general agreement that *reflection* refers to the ongoing process of critically examining past and current practice to facilitate the development of future action (Han, 1995). According to Schon (1987), for reflection to occur, a professional requires an overarching theory or value with which to compare lived experiences. Research provides evidence for at least four qualitatively distinct forms of reflection: (a) technical examination of one's immediate skills and competencies in specific settings, (b) descriptive analysis of one's performance in a professional role, (c) dialogic exploration of alternative ways to solve problems in a professional situation, and (d) critical thinking about the effects on others of one's actions, considering social, political, and cultural forces (Hatton & Smith, 1995). The ideal end-point in reflective practices is the capacity to apply one or more of these types of reflection to a given situation as it is unfolding (Hatton & Smith, 1995), an undertaking described by Schon (1987) as "reflection-in-action."

Much has been written about the benefit of reflection to sharpen professionals' perceptions of their usual methods and approaches to challenging situations, both to identify those that are not effective and to reframe them after rethinking the assumptions and understandings that have sustained familiar practices. Entire volumes have been devoted to the analysis of reflective programs and strategies (Clift, Houston, & Pugach, 1990; LaBoskey, 1994; Russell & Munby, 1992; Schon, 1991; Tabachnick & Zeichner, 1991; Valli, 1992). Through reflection, teachers identify gaps between theory and their practices, contrast their practices with those of others in the school, and become aware of discrepancies between their immediate interpretations about what transpires in their classrooms and their ret-

rospective analyses (see Cochran-Smith & Lytle, 1993). New analytic frameworks emerge as well as questions for future inquiry (Howard, 1989).

Studies of reflection have been hampered by the considerable challenge of operationalizing a definition of reflection in research instruments. This, in turn, has made it difficult to develop a means for gathering data and analyzing them to show unequivocally that reflection has taken place. Yet, a notable body of work on this topic exists in this country and internationally. The marked increase in the appearance of the term *reflective practice* in the literature during the past 15 years suggests that reflectivity is becoming an accepted practice in the field of education.

In the field of early intervention, reflection has been addressed, in a somewhat limited way, primarily within the context of seeking individual supervision and mentorship as a first step to developing the disposition, tools, and commitment needed for life-long learning (Fenichel & Eggbeer, 1991; Spielman, 2000; Tertell, Klein, & Jewett, 1998). To expand our understanding of the relevance of reflective practices to the early intervention profession, it may be helpful to consider the notion advanced by Dewey (1933) that the science of education resides in the inquiries of all practitioners. He challenged the field of education to identify the ways in which the function of education could be conducted "with systematic increase of intelligent control and understanding" and urged educators to ponder how educational activities could become "in less degree products of routine tradition . . . and transitory accidental influences" (Dewey, 1929, p. 9, as cited in MacKinnon & Erickson, 1992). Similarly, the rationale for systematic reflective practices in early intervention lies in the belief that child development and disability theory and research are but part of what contributes to effective practices. Knowledge derived from practitioners' own experiences and observations, coupled with the disposition to question assumptions and practices, is important in the development of individual professionalism and the field as a whole.

In some fields of science (e.g., medicine), individuals function within a scientist-practitioner paradigm, with an understanding of the potential of their work to advance the field as a whole. By contrast, most early interventionists are currently only peripheral participants in the professional education and research communities. For the most part, professional activity consists of applying techniques and methods that have been found by researchers to correlate positively with child and family development and learning. Through systematic reflection, early interventionists would examine their work with children and families through many lenses in a dialectical process, with an awareness of how each experience draws on and in turn shapes their knowledge, beliefs, values, attitudes, and skills.

Drawing from the literature in teacher education, it seems reasonable to expect better practice when early interventionists reflect on themselves in their practice, especially when that reflection occurs within a process of systematic inquiry. Critical inquiry into practice forces practitioners to move into the center of their own doubts (Schön, 1987). As reflective practitioners, early intervention professionals would move from their direct experience of situations that may be puzzling and uncertain through a process of observation, inference, suggestion, intellectualization, and the subsequent testing of hypotheses in practice (MacKinnon & Erickson, 1992). To be optimally productive, this reflection and inquiry would proceed through collaboration with peers, including those from other disciplines and family members who have children with disabilities. To define the role of the reflective practitioner in early intervention, it may be helpful to distinguish among a variety of inquiry-oriented practices, many of which have been developed largely through application in preservice education. LaBoskey (1994) identified three main strategies for reflective practice in teacher education: journal writing and portfolio development, interpersonal interaction with a group or individual (e.g., supervision, coaching, mentoring), and action research. Our conceptualization of reflection in early intervention incorporates key features of each of these strategies.

First, the reflective practitioner systematically records events and reactions to events in everyday practice. Documenting beliefs and perspectives as one goes about one's profession is a way of expanding the capability of memory alone and assists in the reenactment and reconstruction of experience, which is at the heart of reflective thinking. Second, the reflective practitioner engages in discourse with another person or group so that multiple perspectives can be brought to bear on early intervention issues, thus taking reflection beyond being a means of "personal adjustment" (Bullough, & Gitlin, 1991, p. 39) to one of collective inquiry regarding roles, values, and structures in a larger social and political context. Finally, the role of reflective practitioner in early intervention includes collaboration with researchers, other practitioners, and families as partners in research. Such collaboration provides the opportunity for multiple perspectives to influence the research agenda, to participate in its conduct, to interpret data, and to disseminate findings. As one goal of collaborative inquiry, contribution to the knowledge base represents the full enactment of a complex cycle in which an individual first identifies a question about practice through reflective writing, then engages in a dialogue about that question with other professionals whose collective perspectives may modify the question, and finally develops and implements with the group a plan of research to find a solution to the question. In the next

section, we focus on the notion of promoting collective reflection.

A FRAMEWORK FOR PROMOTING COLLECTIVE REFLECTION

Two schools of thought have contributed to the notion that the process of change should be approached as a common knowledge-building process, with reflection and inquiry as the foundation in both. The first is generally referred to as "learning organizations," and it is widely known in the field of business and organizational development. The second is "communities of practice," a less well known concept that has recently attracted attention in the field of education.

The Learning Organization

The learning organization is a metaphor for individual self-development within a continuously self-transforming organization (Starkey, 1996). In essence, the sum of individual learning directs the logic of change and creates an organization greater than the sum of its parts. Change is not imposed on the organization by external forces (as in many school reform efforts), nor is it directed internally by the management structure. Indeed, there is no agenda for change in this framework, except as it emerges from individual learning throughout the organization.

The learning organization concept is based, in part, on Donald Schon's work on reflection, and was first popularized by Peter Senge (1990) in a widely known publication entitled *The Fifth Discipline: The Art and Practice of the Learning Organization*, the subject of numerous critiques within the organizational development literature (see, e.g., Chawla & Renesch, 1995; Flood, 1999; Senge, Kleiner, Roberts, Ross, & Smith, 1994; Senge et al., 1999; Starkey, 1996). Although developed primarily to address the need for innovation and change within the context of organizations, the learning organization framework offers important ideas that may guide the field's collective struggles to identify effective ways to promote reflection and inquiry in early intervention throughout various organizational structures (e.g., professional organizations, early intervention agencies, professional development programs). It should be noted that the purpose here is to introduce these ideas strictly as a means of stimulating individual and collective thinking about new ways to approach our efforts to build the knowledge base and improve practice.

According to Senge (1990), the core of a successful learning organization is based on five disciplines—life-long programs of study and practice: personal mastery,

mental models, shared vision, team learning, and systemic thinking. Reflective practice is central to each of these disciplines.

Personal mastery refers to learning that occurs to expand an individual's capacity to create desired results within an organizational environment that encourages this for all of its members. Personal mastery is achieved by continually clarifying and deepening one's personal vision. In early intervention, creating a suitable work environment and time for reflection may be the key to helping practitioners develop a personal vision and focus their energies in a positive way toward achieving this vision.

Mental models refer to the conceptual structures that drive cognitive processes for creating meaning and making sense of the world. Mental models are internal pictures that can be limiting and self-restricting. For example, the prevailing view of professional development as transferring knowledge from an expert to a novice is a mental model that should be tested within a framework of reflection and inquiry to determine how this view shapes our actions and decisions.

Shared vision consists of shared core values and a common sense of purpose. In the absence of a shared vision, members of an organization lack the principles and guiding practices needed to achieve purpose. Promoting a shared vision in early intervention could mean fostering risk taking and experimenting with new ideas (e.g., developing a new mentoring program, expanding services to include community settings, creating opportunities for parent leadership) for the purpose of expanding the field's capacity to shape its future and define new practices.

The goal of *team learning* is to align people's thinking and energies through dialogue—to transform the collective thinking of individuals into something bigger than the sum of its parts. Senge (1990) argued that the discourse associated with successful team learning must achieve a delicate balance between discussion, where different viewpoints are presented and defended to support a decision, and dialogue, where people suspend their views to enter into deep listening as a means of exploring the mental models of others. Although working in teams is a familiar concept in early intervention, this distinction between discussion and dialogue as a means of encouraging reflection and inquiry has not been adequately explored. Presently, teaming in early intervention primarily focuses on the needs and priorities of children and families.

Finally, the discipline of *systemic thinking* provides a language for describing and understanding the forces and behaviors that shape entire systems. It integrates all five disciplines into a combined approach characterized by building a community in which it is safe and acceptable to engage in generative conversation and experi-

mentation with new ideas. We now introduce the second school of thought—communities of practice—an innovative approach that is perhaps more relevant for promoting reflection and inquiry in early intervention.

Communities of Practice

Although it bears some resemblance to the organizational learning approach, the community of practice framework did not originate in the organizational development field and appears to be a less widely known concept. The notion of community of practice was first used by researchers to describe the way in which meaning was negotiated and reflected on in the practices of specific occupational groups (e.g., architects, physicians, tailors, performing artists; Brown & Duguid, 1991; Lave & Wenger, 1991). Like learning organizations, a community of practice (sometimes referred to as a “learning community”) emerges from a common desire among its members to achieve change (i.e., improve existing practices); it provides regular opportunities for collaborative reflection and inquiry through dialogue; and ultimately, it develops common tools, language, images, roles, assumptions, understandings, and a shared world view (Englert & Tarrant, 1995; Marshall & Hatcher, 1996; Rogoff, 1994; Stamps, 1997; Westheimer & Kahne, 1993). One way in which the approaches differ is in the ability of communities of practice to transcend organizational and geographic boundaries. Members of a community of practice may represent a variety of backgrounds and organizations, but there exists a common set of core issues (e.g., developing and evaluating consultation strategies, discovering the best way to conduct program evaluations, defining school readiness) that binds the members together into a single community. Another important distinction concerns the emphasis placed by communities of practice on sharing new knowledge and products that emerge over time with the broader education community and the field at large.

In education, the emphasis has shifted from *describing* various communities of practice to *creating* communities for the purpose of improving practice, particularly as it relates to professional development (Palincsar, Magnusson, Marano, Ford, & Brown, 1998). Communities of practice originated in response to several barriers to professional development that were thought to exist within the culture of U.S. schooling and within the very institutions of higher learning responsible for preparing practitioners—the separation of research and practice, the isolated nature of teaching, and the lack of agreement about what constitutes recommended practices. These barriers also exist in the early intervention field and contribute to a lack of collegiality, intellectual stimulation, and professional support. Within traditional models of personnel preparation, for example, it is not uncommon

to expect students to apply research-based knowledge to the problems of everyday practice with only very limited opportunities for practicum and field-based experiences.

Communities of practice share key elements with other models of collaborative inquiry, but are also distinct from these approaches in several important ways. Table 1 contrasts the goals, participants, methods, and outcomes of communities of practice, learning organizations, action research, learning communities in higher education, and professional development schools. Common to all is the emphasis on increased interactive dialogue among professionals about professional knowledge and practice. Ongoing reflection and inquiry are core practices in each model, as is the notion that by improving what and how they learn, participants create positive outcomes that extend beyond their own learning. As Table 1 indicates, models of collaborative inquiry differ in their scope—who participates and whether the goal is short term and local or long term and public. In learning organizations, action research, learning communities in higher education, and professional development schools, participation by families and other consumers is rare. Communities of practice offer perhaps the greatest promise in terms of achieving diverse expertise and making an impact on the field because the approach recognizes that many concerns related to children and families do not fall neatly into functions or disciplines (Senge, 1990) and cannot be addressed without representation from multiple disciplines and interests.

IMPLEMENTING COMMUNITIES OF PRACTICE IN EARLY INTERVENTION

How might the early intervention field begin incorporating a community of practice framework to shape the future and define new practices? First, we must acknowledge that we have much to learn about the specific mechanisms by which we might transform traditional views of teaching and learning (in which practitioners are viewed as recipients of knowledge) into learning communities (in which practitioners are viewed as coproducers of knowledge; Buysse, Wesley, & Boone, in press; Englert & Tarrant, 1995). Palincsar, Magnusson, Marand, Ford, and Brown (1998) suggest that designers of professional development programs take the lead in building communities from the ground up—bringing together diverse expertise (i.e., parents, university faculty, researchers, policymakers, administrators, service providers) and introducing them to an inquiry-based approach that first explores the meaning of a community of practice. Over time, the goal is to develop shared practices and orientations (e.g., services are inclusive, family centered, culturally sensitive) and to commit to a process

TABLE 1. Models of Collaborative Inquiry

Model	Goal	Participants	Methods	Outcome
Community of practice (Lave & Wenger, 1991); Palincsar et al., 1998; Stamps, 1997)	To engage in systematic collaborative discourse, reflection, and inquiry for the purpose of improving professional development and practice and contributing to the field at large	Members with diverse expertise and experience who transcend organizational, disciplinary, and geographic boundaries include families and consumers	Group reflects on professional practice, identifies a set of core issues or concerns, and employs a variety of methods to explore those concerns, including empirical research and ongoing reflection	Coconstruction of the professional knowledge base by researchers, practitioners, and consumers Improved services for children and families Public dissemination of findings, products, and processes
Learning organizations (Senge, 1990; Starkey, 1996)	To promote organizational change and improvement through collective individual learning	Limited to members of a specific organization	Individual and group reflection organized within five disciplines: personal mastery, mental models, shared vision, team learning, and systematic thinking	Transforms organizations into communities in which it is acceptable to engage in generative conversations and experimentation with new ideas
Participatory action research (individual and participatory) (Calhoun, 1994; Cochran-Smith, & Lytle, 1993; Patterson et al, 1993; Sagor, 1992)	To engage in systematic disciplined inquiry for the purpose of improving teaching, learning, and schooling	Primarily limited to school personnel and university members	Standard qualitative and quantitative research methods applied to a specific area of focus	Provides new knowledge and improves school practice in the area of focus Improves school's organization as a problem-solving entity
Learning communities in higher education	To link existing courses or restructure curricular material in higher education so that learners have a deeper understanding and integration of the material	University students and faculty	Courses linked by common theme, historical period, issue, or problem; linkages can be within a major or interdisciplinary	Students connect academic work with active and increased intellectual interaction with each other and with faculty
Professional development schools (Book, 1996; Darling-Hammond, 1994; Holmes Group, 1990; Kochan & Kunkel, 1998; Murray, 1993)	To connect what student teachers learn in the classroom with practices in the school setting	Primarily limited to school personnel, university staff, student teachers	A variety of strategies build partnerships between the participating schools and university, promote learning from one another, and improve education at all levels.	Joint activities lead to better preparation of students for the real world of professional practice School improvements Continuing education for professionals

of studying and questioning those practices and orientations in an ongoing way in order to refine them when necessary. This idea could be extended easily to include the research and policy arenas as well as professional development. Indeed, the ideal community of practice incorporates diverse expertise to bring together research, policy, and practices in a way that is both meaningful and relevant to all participants—something that is almost impossible to achieve through more contrived, one-dimensional approaches (e.g., a theory-to-practice journal, a set of written recommended practices).

In early education and intervention, we envision communities of practice taking many different forms (Buysse, Wesley, & Boone, in press). Childcare staff, parents, early intervention consultants, and other specialists will engage in dialogue and reflective inquiry to explore the meaning of embedding interventions in community and family activities. Students, university faculty, field supervisors, and parents will meet monthly to discuss what it means to individualize inclusion. Policymakers, parents, researchers, medical personnel, and practitioners will work together to examine developmental prac-

tices in neonatal intensive care units and to improve practices and policies affecting children's transitions from hospital to home. Early interventionists, preschool and kindergarten teachers, parents, and public school special education administrators will use their experiences and perspectives to illuminate their understanding of school readiness and investigate the impact of school readiness assessment on children with disabilities. Each of these examples acknowledges the value of involving families and practitioners as co-constructors of knowledge and creates a mechanism for shared inquiry and learning as a means of improving practice. Fostering communities of practice within college classrooms and community-based settings requires a shift in power and philosophy and the creation of a common language to communicate new ideas. As the field moves in this direction, a number of challenges must be addressed.

Challenges and Opportunities

The goal of creating communities in early intervention for the purpose of shared reflection on practices will not be easy to attain. In many respects, the entire enterprise of shared inquiry and reflection at various levels throughout early intervention represents an area that is ripe for future research. Numerous obstacles are apparent—from those related to the logistics of creating and sustaining communities of practice to tensions that exist between a reflective orientation and the emphasis on technical skills as the foundation for our work (Skrtic, 1991). In this section, we describe several such challenges and offer ideas for turning these challenges into opportunities for change.

1. *Making reflection a shared value in early intervention.* Aside from recent suggestions to promote supervision and mentorship within the context of professional development, reflection does not appear to be a shared value in early intervention. The current emphasis on identifying and disseminating recommended practices in our field, for example, is somewhat removed from conflicts between theory and practice and may not recognize the tension between institutional ideals and workplace realities. A reflective orientation demands an ideology of early intervention substantially different from that traditionally employed. Because the focus of early intervention practice historically has been on identifying immediate and pragmatic strategies to produce child progress and support families, it is conceivable that reflection could be perceived as an unnecessary diversion from mastering essential technical skills and content. Such resistance to demands for reflection has been noted in the literature on teacher education (Hatton & Smith, 1995; Valli, 1992; Zeichner, 1990).

One approach that we have applied in our own work to overcome this obstacle is to introduce the com-

munity of practice framework to groups of practitioners who are already meeting—for example, a group of early intervention consultants who meet regularly to discuss various aspects of their work. By providing written material in advance and organizing a meeting to introduce the notion of collaborative inquiry and learning, we have engaged participants in discussions of the group's reflective process. The format of the introductory meetings has been flexible. Sometimes we have employed a focus group approach that targets a few questions; at other times we have used an informal conversational structure to identify topics that lend themselves to a reflective orientation and to explore how group members might begin to study and share their day-to-day experiences and insights in a new way.

The first step in making reflective practice a shared value is a fundamentally simple one: Begin a dialogue about it with members of an early intervention community. This can be accomplished through a variety of strategies, including face-to-face meetings, Internet communication groups, dialogues through published literature, and cracker barrels or special strands at professional conferences.

2. *Incorporating a community of practice framework into existing professional development programs.* Another challenge is incorporating a community of practice orientation into existing professional development efforts. In early intervention, we face the same hazard as that described by Schön (1983) for teachers of older children, namely the deadening effects of seeing the same kinds of situations over and over again and after awhile, seeing only what we come to expect. How do we design professional development tools, experiences, and environments that support and encourage students and practitioners to employ reflective practice strategies?

In many ways, the field has already begun to apply community of practice principles to professional development efforts. In early education and intervention, the distinction between inservice and preservice training is beginning to blur (McCullum & Catlett, 1997). As a result, professional development activities now frequently include both preservice students and practitioners, as well as family members, administrators, and a variety of other interested participants. Including participants with diverse expertise and applying a reflective orientation will transform professional development from "a research to practice" paradigm to a model in which research and practice are no longer viewed as separate endeavors, but as intrinsically interdependent. One way to build shared inquiry and reflection into existing preservice training efforts is to create communities of practice in conjunction with students' field experiences and practice. Forming partnerships between university training programs and community-based early education and intervention programs could provide richer, more mean-

ingful experiences for preservice students and reap benefits for everyone who is involved. By providing continuing education credit for all participants, for example, the partnership would expand professional development opportunities for practitioners in the field. This, in turn, could lead to improved practices and higher quality services for children and families.

3. *Sustaining communities of practice over time.*

Another set of challenges concerns the logistics of creating opportunities for shared reflection and inquiry and sustaining these efforts over time. These challenges range from motivating and obtaining commitments from a wide array of participants (including family members from diverse groups as well as professionals from a variety of backgrounds and disciplines), to determining group processes (e.g., developing practical strategies for written reflections, addressing changes in membership and leadership, balancing members' short-term needs with the group's long-term goals, identifying methods for generating, and sharing knowledge with a broad audience), to allocating time and resources to these efforts. The lack of research in this area means that there are a number of questions we simply cannot answer. What is the best way to orient new members to the community? Is there an optimal size for a community of practice to promote shared reflection and professional growth? What are some effective strategies for promoting tolerance for ambiguity in our work and divergent perspectives?

Although it is unlikely that practical solutions will emerge any time soon in early intervention, the literature on communities of practice in other fields offers promising approaches to some of these obstacles. Waddock (1999) has suggested, for example, that multiple incentives promote and work together to sustain the involvement of diverse participants in communities of practice, including (a) the need for cross-fertilization of ideas and communication, (b) the prospect of solutions from which all members benefit, (c) the opportunity to share leadership and power, (d) enhanced understanding about multidisciplinary learning, and (e) the sense of actually making a difference for children and families. Addressing other challenges will require a concerted effort from the entire field and a fundamental shift in how we conceptualize every aspect of our work. We should begin to question, for example, the need for separate infrastructures to support preservice and inservice training as well as developing programs of research and formulating public policy without input from families and practitioners. The shift to reflectivity will demand that we identify the capacity of our organizations and programs to support this work and advocate for necessary changes. Specifically, this will involve gaining support from administrators, finding accessible places and times for meetings, reimbursing families for their participation, gaining release time for teachers, creating solutions to the issue of lost

"billable" hours, and securing clerical support and other resources.

4. *Sharing ideas that emerge from communities of practice.* A final challenge is creating mechanisms for sharing new knowledge that emerges from communities of practice with the broader early education and intervention community. Strategies for documenting and disseminating new ideas and products represent the least developed aspect of this approach. Yet, ultimately, success in sharing new discoveries with the broader community hinges on the ability to find a common language to communicate effectively with a diverse group of stakeholders, including parents, students, practitioners, researchers, and policymakers. At the program level, new information could emerge as a result of a group effort to document a process that involves reflecting on and describing current teaching practices, problem solving about particular concerns, gathering information to develop new approaches and strategies, and developing case examples illustrating the effects of new practices on individual children and families (Englert & Tarrant, 1995). The products of this endeavor could include new curriculum materials, a collaborative monograph, presentations at professional meetings, or an expansion of group membership via the Internet.

Implications for Roles

To begin and sustain reflective inquiry within communities of practice, we must transform our view of our own roles and those of others, perhaps reframing our professional relationships. Communities of practice alter the linear relationships through which knowledge "trickles down" from those who discover the professional knowledge base to those who provide and receive services shaped by it, because the model invites and builds upon knowledge from each. Who might be affected by these changes in roles and relationships? First, we must assume that early interventionists have the authority to construct knowledge about their practice through reflection with others. It is not uncommon for early intervention professionals to share ideas and solve problems together; the challenge is to formalize, broaden, and deepen such collaboration without losing the interest and commitment of participants. A first step in broadening the reflective process is to replace the traditional parochial view of "our field" with a more inclusive one that values and seeks the participation of early childhood professionals, school psychologists, public health administrators, and others whose perspectives and experiences could contribute to our understanding of the work with children and families.

Second, we must expand our relationship with families to include them as essential participants in the process of collaborative reflection and inquiry. This shift in role goes beyond including families in the planning and

coordination of services for their own child. It extends recent thinking about the way families could be involved in research (e.g., to help set a research agenda, co-author products, and present findings) by requiring their systematic inclusion as vital members of communities of practice and, along with practitioners, as equal partners in generating knowledge in the early intervention field. To achieve this, it will be necessary to provide incentives for their participation, for example, stipends and continuing education credit.

Increased democratization of the research process, which includes gathering data as well as interpreting and sharing findings, could meet resistance among some university-based researchers, who currently maintain control over the type of inquiry and the nature of collaboration with practitioners and families. In communities of practice, university faculty relinquish their privileged position in program design, development, and research (Bulough & Gitlin, 1991); they are one among many other groups with a responsibility to understand and improve early intervention practice. A shift from working *on* to working *with* the world of practice is required (Waddock, 1999). It may be that increased pressure on departments within institutions of higher education to diversify their funding base may point out the need for increased public awareness of their work. This, in turn, could lead to the inculcation of value for outreach activities among all professional staff, including researchers.

Finally, communities of practice promise more than collaborative empirical research. We must ask whether the field is ready to move toward accepting the conceptual analyses and interpretive knowledge of practitioners and families as part of a redefined knowledge base, rather than relying on the traditional approach to discovering new knowledge through the scientific method. Such a change cannot be mandated, expedited, predicted, or controlled, but may have to occur in and of itself. This inclusive approach to knowledge production honors and innovates the contributions and roles of every member of a professional community. ♦

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