

FOCUS

Communities of Practice: A Strategy for Sharing and Building Knowledge

What is a Community of Practice?

CoPs are “groups of people who share a concern, a set of problems, a passion about a topic, and who

deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002, p. 4). Three important characteristics help distinguish a CoP from other groups: 1) the *domain* (topic or theme to be addressed and advanced); 2) the *community* (members motivated by a mutual interest in the domain); and 3) the *practice* (ideas, tools, expertise, knowledge, and shared resources that serve to move the field of inquiry forward) (Wenger, 1998; Wenger, McDermott, & Snyder, 2002).

What Makes a CoP Unique?

A CoP is much more informal than a *work group* or *task force*. Participants may volunteer or be assigned to a task force, but the activity usually has a specific predetermined goal and a projected time of existence (Nickols, 2003). Members of CoPs are not typically assigned, but join based on their interest in the domain and their ability to contribute to the practice. Together, the members of the community share their expertise and mutual understanding about the domain to develop greater knowledge and build the practice. *Learning communities* are “groups of people engaged in intellectual interaction for the purpose of learning” (Cross, 1998, p. 4). They are often cross- or multidisciplinary rather than focused on one primary area, as CoPs are.

How Are CoPs Useful?

The experiential knowledge that an individual develops over time and through a variety of experiences, places, and activities can be profoundly useful in his or her own particular setting. By building on its members’ shared knowledge, a CoP can be useful in developing new ideas and new strategies. A CoP may form in response to a specific issue or need, and once that issue or need has been resolved, its members may disband the CoP or choose another issue to examine.

The Xerox Experience

Studies of experiences at companies such as Xerox have demonstrated that CoPs are a very effective way for professionals to share informal or tacit knowledge gained from experience in the field. This sharing among participants results in building on current knowledge and expanding the practice (Saint-Onge & Wallace,

The National Center for the Dissemination of Disability Research (NCDDR) is working with grantees of the National Institute on Disability and Rehabilitation Research (NIDRR) to encourage researchers to expand their common understanding and to jointly address issues related to research quality, standards, and guidelines. To achieve this, the NCDDR is modeling the use of Communities of Practice (CoPs) as a knowledge translation (KT) strategy.

2003). The Xerox study focused on field service staff. Observers noted that the “tech reps” often exchanged repair tips in informal situations. This sharing of tips learned through experience in the field was critical to

helping the tech reps do a better job and could not be found in a training manual or classroom setting. Ultimately, Xerox worked to facilitate communication among the tech reps by providing radios and developing an electronic database of tips and solutions (Brown & Gray, 1995).

The Armed Forces Experience

Baum (2005) reported on two active online CoPs that were developed by U.S. Army company-level commanders from their desire and need to share critical information not available in training, but acquired from day-to-day experiences. *CompanyCommand.com* was established in 2000 as a professional forum for U.S. Army captains, and in 2001, *PlatoonLeader.org* was developed for lieutenants. Recognizing the value of these online CoPs, the Army later began to provide server space and support to maintain them (Baum, 2005).

The OSEP Experience

While more commonly recognized in the sphere of business, the application of CoPs in areas such as education and research is expanding. The Office of Special Education Programs (OSEP) has sponsored several activities that incorporate CoPs as a technical assistance (TA) strategy for enhanced collaboration and problem solving in order to improve results for children with disabilities (Linehan, Müller, & Cashman, 2005). These include *TA Communities*, facilitated by several Regional Resource Centers and national TA centers, and the *IDEA Partnership* at the National Association of State Directors of Special Education (NASDSE).

TA Communities (<http://www.tacomunities.org/>) was established in 2003 to bring together personnel at local and state levels to address issues related to implementing special education legislation through six CoPs (Lee, 2003). A second-year evaluation study noted that there is satisfaction among CoP participants but that neither the participants nor facilitators reported high levels of involvement in the CoPs (DeStefano, Ruedel, Skipper, Shami, & McInerney, 2005).

The IDEA Partnership (<http://www.ideapartnership.org/>) at NASDSE currently sponsors CoPs that address 1) IDEA / Title I Collaboration; 2) Shared Agenda Across Education, Mental

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NCDDR Survey of NIDRR Grantees

In the fall of 2004, the NCDDR sent a brief survey addressing the areas of knowledge translation and communities of practice to all of the NIDRR-funded “Centers of Excellence” (Rehabilitation Research and Training Centers and Rehabilitation Engineering Research Centers) and Model Systems (burn, spinal cord injury, and traumatic brain injury). A sample of Disability and Rehabilitation Research Projects (DRRP) and Field-Initiated Projects (FIP) was included to total 100 grantees. A total of 96 surveys were returned for a response rate of 96%. Respondents reported great variability in familiarity with and interest in CoPs. The survey revealed the following:

- 40% of respondents reported familiarity with the concept of CoPs.
- 16% reported having direct experience participating in a CoP.
- 51% of grantees reported an interest in participating in a CoP with researchers from other NIDRR-funded projects.
- 47% responded “Unsure” when asked if they’d like to

participate in a CoP, with several adding comments that they would like to know more before committing to a “Yes” response.

- 2% of grantees responded “No” when asked if they’d like to participate in a CoP with other NIDRR researchers (Martin, Starks, & Westbrook, 2005).

These results suggest a need to provide technical assistance and information resources on CoPs that are tailored for the NIDRR grantee community. The results also facilitated the identification of grantees with experience and interest in CoPs.

Needs Sensing in August 2005

The NCDDR asked 100 grantees about their interest in CoPs as a topic for training and technical assistance and as a strategy for the NCDDR in working with NIDRR grantees. The grantees responding again included Centers of Excellence, Model Systems, and a sample of other NIDRR-funded projects. Although it was not one of the most requested TA topics, 19% of respondents indicated that CoPs would be a TA topic of interest. About 22% of respondents identified CoPs as an effective strategy for the NCDDR in working with NIDRR grantees (NCDDR, 2005).

Health, and Family Organizations; and 3) Interagency Transition (Linehan, Müller, & Cashman, 2005).

Characteristics of CoPs

The following characteristics of CoPs illustrate their usefulness as a channel for developing strategic capabilities:

- Communities enable practitioners to take collective responsibility for managing the knowledge they need, recognizing that, given the proper structure, they are in the best position to do this.
- Communities among practitioners create a direct link between learning and performance because the same people participate in both the CoPs and in teams or business units.

- Practitioners can address the tacit and dynamic aspects of knowledge creation and sharing as well as the more explicit aspects.
- Communities are not limited by formal structures; they create connections among people across organizational and geographic boundaries (Wenger, 1998).

Benefits of CoPs

Although people with any level of understanding and experience can participate in CoPs, the purpose is not to teach novices but to build on the cumulative knowledge of members and bring their practice to a new level, thus advancing the domain. Allee (2000) identified a number of benefits of CoPs. For an organization, CoPs can help drive strategy; support faster problem solving both locally and organization-wide; aid in developing, recruiting, and retaining talent; build core capabilities and knowledge competencies; diffuse practices for operational excellence more rapidly; cross-fertilize ideas; and increase opportunities for innovation. Benefits for the community include building common language, methods, and models around specific competencies; embedding knowledge and expertise in a larger population; aiding retention of knowledge when participants leave; and increasing access to expertise. Individual benefits include helping participants do their jobs better; fostering a learning-focused sense of identity; helping participants stay current and ahead of the field; and finding a sense of sharing with colleagues.

How Do CoPs Communicate?

Communicating in a variety of ways (electronic discussion lists and bulletin boards, Web-based meetings, teleconferences, face-to-face meetings, chat rooms) helps develop the feeling of community and results in the increased sharing of information. It is important to ensure that technology does not drive the community but rather responds to the needs of the community.

Five Stages of Communities of Practice

Wenger, McDermott, and Snyder (2002, page 69) identified the following five stages of CoPs:

1. Potential The basic elements exist: a social network, an important topic, perceived value from developing the network, and the sharing of knowledge.

2. Coalescing Energy is generated to develop the community, build trust among its members, and identify what knowledge should be shared.

3. Maturing The CoP’s focus, role, and boundaries are clarified, and gaps in knowledge may become more apparent as it expands.

4. Stewardship The focus is on action and maintaining momentum, sometimes by adding new members, and working to keep the community’s practice on the “cutting edge.”

5. Transformation Since CoPs depend on the commitment and passion of its members, a point may arrive where a community’s work is done. It may go dormant and revive when a new issue emerges to stimulate participation. Sometimes a CoP will split into new communities or merge with others.

A Community of Practice for NIDRR Grantees

The NCDDR directed efforts in 2005 to working with interested grantees to initiate a Community of Practice for the purpose of sharing knowledge about conducting research within the NIDRR community and examining issues of quality and standards for high quality disability research. When grantees come together in the organic, supportive atmosphere of a CoP, they can freely share their perspectives on what reflects quality in the area of disability and rehabilitation research. Grantees' collective expertise can be applied to develop a consensus statement or to identify standards that can be applied to their research. Following are the opportunities, benefits, and guiding principles of the NCDDR CoP.

Opportunities and Benefits for Members of the NCDDR CoP

- Be on the cutting edge of issues relevant to NIDRR projects.
- Jointly explore and identify strategies that can benefit NIDRR researchers.
- Work together to respond to the challenges related to the topic of high quality disability and rehabilitation research.
- Discuss topics of mutual interest with other NIDRR-funded researchers.
- Share information about research-based programs, practices, products, and policies that improve outcomes for people with disabilities.
- Explore the topic of knowledge translation and dissemination as it relates to NIDRR-supported research.

Guiding Principles for Members of the NCDDR CoP

- Community members believe that banding together, sharing their collective wisdom, and exploring the state-of-the-science will help them improve outcomes for people with disabilities.
- Community members are active, valued members of the community who have diverse opinions and viewpoints.
- Community members agree that individual opinions shared on the community Web page and in meetings and teleconferences are confidential and will not share these opinions outside of the community.
- Community members respect the professionalism of all members. Individual expertise is valued and respected.
- The NCDDR-CP1 discussion list is only one aspect of the community experience, and members are encouraged to participate in other community activities and events.

Activities to Date

Pilot-phase activities of the NCDDR-sponsored CoP included a teleconference with approximately 50 NIDRR grantees and Dr. Margaret Campbell of NIDRR on the topic of outcomes planning and reporting. This was a question-and-answer discussion with a transcript and audio file archived after the event (http://www.ncddr.org/du/products/5_12_05_Campbell/transcript_51205.html). The CoP held three other teleconferences in order to define the purpose of the group and to review the invitational materials. One face-to-face meeting was held in conjunction with the 2005 annual meeting of the National Association of RRTCs (NARRTC). The CoP maintains an electronic discussion list where members can share information and comment on draft

materials presented. After a summer hiatus, the CoP will be reinitiated in the fall of 2005.

Potential CoP Activities

Some of the ideas suggested by members for the NCDDR-sponsored CoP to pursue include the following:

- Develop a consensus statement on disability research to express NIDRR grantees' collective experience/opinion related to quality and how it is reflected in disability research.
- Examine current accepted standards of evidence to see how they could be amended or expanded to appropriately reflect the status of rehabilitation research.
- Share tacit knowledge gained from experience in carrying out the practice of NIDRR-sponsored research.
- Identify where there are bottlenecks that can be impacted by sharing and how this knowledge can move the field ahead.
- Recognize that RRTCs have similar budgets, are mostly university-based, and have similar needs regarding reporting requirements and strategies to meet expectations. Members of the CoP can share ideas on developing goals, evaluation plans, training reports, and documentation. Grantees that trust and understand each other are willing to share these with their colleagues.
- Address the grand challenges in the field of rehabilitation research, including how these challenges have been met in the past, what the major achievements have been, what the recent (mid-term) developments are, and what future (long-term) challenges must be addressed. Within this, the CoP can examine issues of value, quality, and validation in terms of the science, knowledge, and service that have been produced through NIDRR's funding efforts.
- Develop a rationale for quality rehabilitation research and describe rigorous designs that provide alternatives to randomized controlled trial methods; describe the status of the strength and purpose of rehabilitation research.

Conclusion

The activities to date indicate that the CoP concept is a positive strategy to encourage NIDRR grantees to work together in areas of common interest. As the future focuses more on outcomes and evidence, grantees can work collegially to share and learn from each others' expertise, and to use their collective knowledge to build the practice of disability and rehabilitation research.

Why an NCDDR CoP for NIDRR Grantees?

What is in it for me? All NIDRR researchers are busy people with many things on their plates and many hats they must wear. Why should they make the time to participate in this community? The benefits are numerous. The CoP provides a way to share thoughts, knowledge, and experiences with other researchers who have a common goal—to carry out NIDRR-sponsored research in efficient, effective ways in order to achieve relevant findings that impact the lives of people with disabilities. The CoP also provides a venue for a group of interested peers to communicate and gather needed information to come to a consensus on topics that affect the members and the organizations for which they work. In today's world, it is critical to be able to show that the research sponsored by NIDRR is important, reliable, and achieving measurable outcomes that improve peoples' lives.

What must I contribute? NIDRR researchers who participate in a CoP share their knowledge, both tacit (experiential) and explicit (learned), about the research process in the disability and rehabilitation arena. The expertise across disability areas, research organizations, and geographic locations contributes to the richness of the exchange of ideas. Subgroups that focus on particular topics may work together and report to the larger group. The more informal nature of the CoP helps facilitate communication among its members. The discussion is not monitored or evaluated, which means members are able to communicate openly. The group chooses what items to share with others.

What will the CoP accomplish? The goal of the CoP is to provide an avenue for online discussion and other ways of sharing knowledge to encourage the community of NIDRR researchers to develop a common understanding and response to such issues as determining the principles of high quality research in the disability and rehabilitation arena. The community reflects the needs and the interests of its members, who propose, plan, and carry out any activities.

How much time will this take? The amount of time dedicated to a CoP depends on the members, their interest and passion for the domain, and the immediate needs of the community. Much of the communication takes place through an electronic discussion list as members have time. On occasion, the community schedules a teleconference, webcast, or face-to-face meeting in order to address a specific topic or get input from an expert guest. Members also share materials that may require some time for review and comment.

What is the role of the NCDDR? Of NIDRR? The NCDDR provides necessary support, such as locating and securing resources, identifying speakers, and organizing the logistics of webcasts, teleconferences, or face-to-face meetings, depending on what the community members feel they need in order to make progress toward their common goal. NCDDR also works to facilitate communication and progress of the CoP. If invited, NIDRR staff may share information with the CoP, but they will not direct or monitor its activity.

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Available online: <http://www.ncddr.org/kt/products/focus/focus11/>



The NCDDR assists, through information and technical assistance, NIDRR grantees with identifying and crafting dissemination strategies. These strategies are designed to meet the needs of a grantee's unique target audience. NCDDR also analyzes and reports on dissemination trends relevant to disability research.

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