Virtual Reference Teams: Collaboration and Knowledge Sharing Across Time and Distance

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Abstract

With multi-campus staffing of a virtual reference service, an innovative organizational network has emerged in the Penn State Libraries—the virtual team. Virtual teams are geographically dispersed groups whose collaborative work is enabled by a network of communication technologies. Virtual team members are committed to a common purpose, have interdependent performance goals, and are mutually accountable for team results. In lieu of face-to-face contact, dispersed teams must collaborate and share their knowledge through a robust virtual workspace—an integrated set of tools that enables complex communication and serves as a common information repository that is easily revised and accessible any time, anywhere. At their best, virtual reference teams also operate as communities of practice—reference librarians developing a shared practice by interacting around problems, solutions, and insights, and building a common store of knowledge. This paper addresses the opportunities and challenges of working in virtual reference teams and communities of practice. In particular, it details how Penn State librarians created an effective virtual workspace and community of practice to support team knowledge sharing, collaboration, and shared management.

The Penn State Virtual Reference Service

In fall 2002, the Penn State University Libraries launched a chat virtual reference service to support its growing community of remote users. The Penn State Virtual Reference Service (VRS) features chat, co-browsing, and authenticated access into licensed databases. VRS serves students, faculty, and staff at twenty-one residential and commuter campuses statewide, as well as students enrolled in World Campus distance learning courses. Through a dynamic, integrated information system called LIAS (Library Information Access System), the university libraries offers on-site and remote access to a wide range of services and resources including more than 5 million volumes, 68,000 serial subscriptions, 350 databases, and 8,000 electronic full text journals.

VRS is currently staffed by a virtual team of seventeen professional librarians located at twelve different campuses. Their reference experience at Penn State currently ranges from one to more than thirty years, and their primary assignments range from general reference to subject specialties in the arts, history, biology, and women's studies. At least eight librarians alternate VRS coverage between their campus offices and their homes.

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Since service began in 2002, team training and collaboration has been completely virtual; VRS librarians have never assembled face-to-face as a group. In lieu of face-to-face contact, they collaborate and share knowledge in an online course management system called ANGEL. On a monthly basis, staff meetings are conducted by telephone conference call.

The organizational structure that best describes VRS is "virtual team," a geographically dispersed group whose collaborative work is enabled by a network of communication technologies. Virtual team members are committed to a common purpose, have interdependent performance goals, and are mutually accountable for team results. Dispersed teams require a robust virtual workspace in order to collaborate and share their knowledge. The most effective virtual workspace enables complex communication and serves as a common information repository that is easily revised and accessible any time, anywhere.[1] In accord with other characteristics common to virtual teams, VRS team members have reporting relationships in different departments, and VRS accommodates entry, exit, and reentry as departmental schedules shift and sabbatical opportunities arise.

Unlike the typical project-centered virtual team, the Penn State Virtual Reference Service supports a perpetual mission, its members join voluntarily, and they share responsibility for daily operations without a formal management hierarchy. Operating as a "community of practice," VRS librarians "…are peers in the execution of 'real work.' What holds them together is a common sense of purpose and a real need to know what each other knows."[2] More than simply colleagues exchanging ideas, they are committed to developing better practices, and they engage in sharing behaviors that support the transformation of individuals' personal knowledge into organizational knowledge.

Virtual Teams and Communities of Practice: Success Factors

Scholars and consultants in the field of organizational management widely agree the following factors increase the durability and effectiveness of virtual teams and communities of practice:

- a clear mission that makes explicit the roles and responsibilities of the members;
- members who are self motivated, flexible, and adaptable;
- member who have strong computer and technology skills;

- members who are willing to share responsibility for facilitating, moderating, coaching, and coordinating;
- a robust communication network that supports rich conversation, knowledge sharing, sub-communities, and storage of messages, data, and documents;
- a system of anonymous peer review and continuous process improvement.

In addition, members of a virtual team with a reference service mission must have a passion for learning and a strong public service orientation.

Penn State: A Case Study

At Penn State, the mission of the Virtual Reference Service and the roles and responsibilities of its members are stated clearly in two documents: *Guidelines for Penn State Chat Virtual Reference* (based on the RUSA *Guidelines for Implementing and Maintaining Virtual Reference Services*) and the RUSA *Guidelines for Behavioral Performance of Reference and Information Service Providers*.[3] Since its inception, the Penn State VRS has been staffed by professional librarians on a volunteer basis. When polled in 2002, these librarians reported they were motivated to join by a general love of reference work, an interest in working with innovative technologies, the opportunity to collaborate with other librarians across Penn State campuses, and the opportunity to stay relevant to the growing number of students and faculty who frequently work online.[4] Because Penn State has always employed co-browse capable virtual reference software, strong computer and troubleshooting skills have been essential for VRS librarians. With these skills, they have provided effective service, despite the software and network vulnerabilities such an interface presents.

Penn State University's web-based course management system, ANGEL, provides the critical internal communication network for the Virtual Reference Service. Like Blackboard, WebCT, and other course management systems, ANGEL includes an array of features that support collaboration and personal interaction among members. Librarian personal profiles, staffing schedules, and message boards for coverage exchange, problem reports, and assignment alerts are posted there. Members also are able to share documents, files, web pages, internal messages, and Internet email. In addition, the university's system-wide phone conferencing network supports monthly staff meetings, and a VRS Toolbox web page provides links to training materials, service policies and guidelines, staff meeting minutes, a transcript archive, and more.

The one-hour monthly staff meeting by telephone conference call is the primary vehicle for shared leadership, anonymous peer review, and knowledge sharing. The standard agenda includes: Hardware Issues, Software Issues, Policy and Guidelines Reminder, Transcript Reviews, and Other Issues. One team member assumes responsibility for scheduling and booking monthly meeting dates that are convenient for the majority, while another calls for agenda items and sends out reminders of each meeting in advance. Still others record minutes and moderate the meeting to ensure that all have an opportunity to comment on each agenda item. Each month, different members select a policy or guideline for discussion, two transcripts for reference interview analysis, and two transcripts for a segment called CIA (Continuously Improving Answers). In CIA, the focus is on recommending alternative sources or search strategies in answer to questions posed in the transcripts.

Although subject specialty and years of reference experience vary among VRS librarians, only one queue is staffed, and all librarians accept questions from any patron, on any subject. Since most of the VRS questions have come from undergraduates with pressing deadlines, VRS librarians strive to assist all patrons with a basic search strategy before referring them to a subject specialist if more depth is needed. To support this service goal, cross-training sessions are added periodically to the monthly meeting schedule. During these sessions, selected subject specialists offer practical advice on the resources and search strategies they use to answer frequently asked questions in their field. Knowledge sharing practices, from simply reading transcript logs and engaging in lighthearted chats about them to critical transcript analysis and cross-training sessions, all serve to enrich our community of practice and help us become better practitioners.

Evidence of service effectiveness is reflected in the exit survey statistics and comments compiled at the end of each semester. Consistently, more than 90 percent of VRS exit survey respondents have reported that VRS met their needs and they would use the service again.[5] To ensure continued high-quality service, new librarians with interest in participating in VRS will be asked to conduct a self-assessment of their skills and commitment to the demands of virtual reference work. The list of *Core Competencies for Virtual Reference Service*[6] compiled by the Washington State Library Statewide VRS Training Committee provides an excellent checklist for such a self-assessment.

Cox and Morris aptly observed that, "As a profession we need to be looking for more powerful ways to harness networking to strengthen professional knowledge sharing and collective learning."[7] The VRS team is one approach to fostering knowledge sharing and collaboration through technology. Recently, the Penn State Libraries also ventured into virtual teams and communities of practice to share knowledge and improve collection development across its distributed campus system. With a robust communication network and a clear mission, time and distance are no longer barriers to effective knowledge sharing and innovation in any library service.

Notes

1. Jessica Lipnack and Jeffrey Stamps, *Virtual Teams: Reaching Across Space, Time, and Organizations with Technology* (New York: John Wiley & Sons, 1997): 7.

2. John Seely Brown and Estee Solomon Gray, "The People are the Company: How to Build Your Company Around Your People," *Fast Company* (October 1995): 78. http://www.fastcompany.com/online/01/people.html.

3. *Guidelines for Implementing and Maintaining Virtual Reference Services* Prepared by the MARS Digital Reference Guidelines Ad Hoc Committee, Reference and User Services Association and approved by the RUSA Board of Directors (June 2004). http://www.ala.org/ala/rusa/rusaprotools/referenceguide/virtrefguidelines.htm; *Guidelines for Behavioral Performance of Reference and Information Service Providers* Revised by MOUSS Management of Reference Committee and approved by the RUSA Board of Directors (June 2004). http://www.ala.org/ala/rusa/rusaprotools/referenceguide/guidelinesbehavioral.htm.

4. Susan A. Ware, Joseph Fennewald, Lesley M. Moyo and Laura K. Probst, "Ask a Penn State Librarian, Live: Virtual Reference Service at Penn State," *The Reference Librarian* 38, no. 79/80 (2003): 291.

5. Penn State Virtual Reference Service statistics and exit surveys are published at http://www.de2.psu.edu/faculty/saw4/vrs/stats/.

6. *Core Competencies for Virtual Reference* (Olympia, Wash.: Statewide Virtual Reference Project, Washington State Library, n.d.). http://secstate.wa.gov/library/libraries/projects/virtualRef/textdocs/vrscompetencies.pdf.

7. Andrew Cox and Anne Morris, "Creating Professional Communities of Practice for Librarians," *The Electronic Library* 21, no. 2 (2003): 96.

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