



Chapter 6

Promoting Collaboration among Trainers in the National Weather Service

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BACKGROUND

In the last several years, the National Weather Service (NWS) has undergone a *massive* modernization and reorganization effort, substantially changing the organization's structure and the technologies used to produce forecasts. When the reorganization is completed in the year 2000, the NWS will have approximately 120 local weather forecast offices throughout the country (plus Puerto Rico and Guam), with over 1000 forecasters.

The new technological systems (such as Doppler radars and upgraded satellites) have produced a flood of data that requires forecasters to have up—to—date scientific knowledge, computer skills, and cognitive tools for synthesizing the vast amount of information available. Early in the modernization process, the NWS recognized the need for a strong training program to help its forecasters effectively use the new technologies and data to better predict deadly weather events. Toward that end, the NWS developed a unique peer training system and created a new position, the Science Operations Officer (SOO), in each forecast office to lead it.

Many organizations use peer training, primarily for short—term, focused training on a skill or knowledge (Bergeron, 1994; Ginger et al., 1996; Carr, 1992) or to fill gaps when training budgets have been cut (Howe, Dawson, & Gaeddert, 1991). Businesses and other organizations usually bring employees to a corporate

Previously Published in *Challenges of Information Technology Management in the 21st Century* edited by Mehdi Khosrow-Pour, Copyright © 2000, Idea Group Publishing.

This chapter appears in the book, *Collaborative Information Technologies* by Mehdi Khosrow-Pour. Copyright © 2002, IRM Press, an imprint of Idea Group Inc.

training facility, teach them fundamental instructional skills and theories (Nilson, 1990) such as adult learning theory (Filipczak, 1993), and then provide them support in terms of both materials and mentoring (Trautman & Klein, 1993). Once the training need is over, the peer trainers frequently return to their previous jobs.

The NWS' training program is considerably different from the above model. First, SOOs are responsible for all aspects of training in their office, not just a single course or topic. They do not return to their 'real' jobs when the training need is over—training is a continuing responsibility. Second, most SOOs do not have prior experience in training, and many have had no training in how to be a trainer. Third, although nationally developed training materials are provided, SOOs must tailor them to address their local needs and forecast problems.

In recent years, SOOs have been assigned additional responsibilities, decreasing the time available for their training and research duties. For those with little experience or incentive to do training, other job duties can quickly take higher priority. Even for SOOs who enjoy doing it, finding time to develop and deliver training is problematic.

The NWS funds a variety of training activities, including our own program, the Cooperative Program for Operational Meteorology, Education and Training (COMET®). The COMET Program provides both on-site courses and distance learning materials. SOOs make up a substantial portion of the students attending our residence courses, but the classes focus on advances in meteorology. Neither the COMET Program or the other NWS training organizations have traditionally provided much support to SOOs in their functions related to developing and delivering training.

In the absence of training experience and a support facility, SOOs do have one major asset each other. Many SOOs have been in their jobs for several years and have learned what works and what doesn't, at least for their staffs. Those most active in training have developed dozens of local training packages that others could use, either entirely or as development templates. However, with the SOOs scattered throughout the country and reduced travel budgets, they have few opportunities to share their experiences and the materials they have developed.

IMPROVING COLLABORATION USING TECHNOLOGY

As part of the COMET Program's efforts to improve NWS training, we wanted to help SOOs share training materials and other resources they have found useful. In addition, we hoped to provide learning opportunities for those unfamiliar with educational theory, instructional design, and other components of training. A final goal was to foster a community in which best practices could be shared and more experienced members could mentor newer members.

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