Case Study 2

Antonio Mendez
by Anna Flynn and Jim Klein

Julie Leung, principal of Master Elementary School, pushed her chair back from her desk, let out a sigh of frustration, and asked herself, "How am I supposed to bring this school up to date technologically when we can't even get Internet access?"

Leung, in conjunction with members of the School Improvement Team and the district’s Technology Planning Committee (TPC), had just met to consider how to ensure that students and staff were technologically literate and made maximum use of technology (specifically the Internet) in their Master School Learning Community. One of the parent representatives on the School Improvement Team, a professor at the local university, offered to organize an instructional design (ID) team of doctoral students to meet with the principal and TPC to assess the school’s technology needs and make a proposal to help the school meet one or more of its objectives. The ID team, led by Antonio Mendez, first visited the school in September.

Master Elementary School Background

Master Elementary School is a K-5 public school located in Albuquerque, New Mexico, serving approximately 400 students with its 30 teachers and staff. The school had a computer lab consisting of 30 somewhat dated computers that were not linked to the Internet, and two computers with Internet connections that were located in teacher work areas. The school district allocated funds for computer hardware and software, but at the start of the project, Master Elementary had not yet received funding for upgrading equipment or providing Internet access from the computer laboratory. However, Leung was confident that the school would receive funding in the near future, and she wanted her teachers to be ready to use the technology as soon as it was available.

Current Classroom Use of Technology

A preliminary survey of teachers revealed that each class spent 30 minutes twice a week in the computer lab. Other technology being used in the
classroom included overhead projectors and VCRs. Most teachers expressed curiosity and interest in the Internet as a classroom tool, although hardware and software limitations prevented use of the Internet and e-mail in the computer lab.

**Teacher Capabilities and Interests**

As in most schools, the teachers, staff, and students differed in their knowledge and use of computers. The technological literacy of teachers at Master varied greatly from minimal knowledge, to use of word processing, to accessing NASA through the Internet. Most teachers expressed an interest in learning other ways to integrate emerging communications technology into their classes, but lack of time and inadequate technology were major hurdles to overcome. However, some teachers had computers at home and were knowledgeable and facile at navigating the World Wide Web to access classroom resources. Other teachers knew very little, and some had never been on the Web and did not know the basic procedures for navigating the Web.

Also, teachers from the different grades were concerned with finding computer and Internet resources specifically for their age group. For example, kindergarten teachers wanted to know what computer skills they should be teaching kindergartners, and teachers of children with special needs wondered if there were anything on the Internet that they could use with their students. A broader concern was how to prepare the students technologically for high school, college, and the work world. The existing skill levels and needs of each class of students appeared to vary greatly.

**School Improvement Team and Technology Committee**

The mission of the School Improvement Team, which consisted of several teachers and parents, was to identify areas needing improvement and to recommend an action plan to Leung. One area identified by the team was the use of technology at the school. The team developed a goal and four objectives related to technological literacy, which were given to the TPC to implement.

**Goal:** Students and staff are technologically literate and make maximum use of technology in the Master School Learning Community.

**Objective 1:** Students graduate from Master School with the ability to use a computer as a tool to express thoughts and ideas, to analyze data, and to communicate using interactive programs.
Objective 2: Teachers are trained to teach their students to use technology to maximize student learning.

Objective 3: Parents are involved in the technological education of their children.

Objective 4: All staff are trained to maximum use of technology in the performance of their duties at Master School.

Both the School Improvement Team and the TPC wanted to take concrete action to improve the computer skills and knowledge of the teachers and staff so that they could integrate the computer, especially the Internet, into classroom activities and lesson plans. Only Master Elementary and one other school (out of the seven in the district) were still awaiting funding for Internet hookup. Leung and the committee members felt certain that funding for Internet hookup would be allocated in the near future. They believed that advance training would give teachers an advantage when the funding actually came through.

Despite the limitations of the existing computer hardware and software, the School Improvement Team and the TPC still wanted to maximize use of Master’s existing resources and prepare teachers for the day when Master would have full capability to access resources through the Internet in the computer lab. The committees pondered how to best proceed.

Mendez’s ID team also wondered what the best approach would be, given the technological limitations and existing time constraints. If training were the answer, only two dates were available for a teacher in-service: October 18 and January 10.

**Invoking ID practice via the Antonio Mendez case**

1. Identify information needed to conduct a thorough needs assessment.
2. Specify effective methods, instruments, and procedures for determining the technology needs of the teachers, students, and staff at Master Elementary.
3. Suggest potential means for meeting varying needs of teachers, students, and staff; discuss the advantages and limitations to each approach.
4. Consider the goal and four objectives developed by the School Improvement Team. Discuss challenges associated with implementing each objective. How would you prioritize these?