Case Study: Jones Computer Technology Magnet School

I. Community and School Data

Jones Computer Technology Magnet is an urban high school located in an economically depressed neighborhood in a Midwest city. The school was built in the late 1990's. The building contains 70,000 square feet and was designed around four "pod" areas, each containing six classrooms. Jones adopted a computer theme to allow parents the opportunity to select a technology-infused curriculum for their children.

As a result of a court-ordered desegregation mandate and a magnet school assistance grant, enrollment for Jones must meet specific guidelines aimed at preventing minority isolation. Fifty percent of the students enrolled at Jones are from the immediate attendance area, the other 50% are from priority schools outside the attendance area. Parent and extended community support are nearly non-existent, though the parent base remains relatively stable due to a low mobility rate of 12%.

II. Student Data

Approximately 80% of Jones 500 students receive free or reduced lunches. The local attendance area is a very low-income neighborhood of mainly African American and Hispanic families. Twenty-eight percent of the students come from homes where English is not the primary language. Of these most are Spanish speakers. A smaller percentage speaks Vietnamese. The students who are bussed to the school come from many neighborhoods within the city, including a number from middle class, white families.

In 1998 Jones' reading scores on standardized tests were the lowest in the district and its math scores were the third lowest. Reported scores are for tenth grade, to correlate with the statewide standardized testing performed at 5th, 7th, and 10th grades.

10th Grade State Assessments	Jones Magnet	District Average	State Average
Math	45.50	51.60	60.90
Reading	46.60	53.40	65.20
Writing	42.34	53.04	63.20

III. Administrative and Staff Data

Jones' staff consists of 35 teachers. This includes one full-time ESL teacher and three paraprofessionals, one full-time instructional resource/curriculum specialist, and one full-time technology facilitator. The principal has been at Jones for two years.

Staff turnover at Jones is at 80% per year, and the majority of newly hired teachers are in their first three years of teaching. Despite the fact that Jones is a technology magnet school, a shortage of teachers across the region prevents the school from hiring a technologically literate staff. The district provides some classes in technology use, which Jones' teachers have taken advantage of. Because it is a magnet school, teachers at Jones are required to perform additional research, assessment, and reporting tasks. Despite this extra work, no additional compensation is provided within the district pay scale.

IV. Instructional Information

All of Jones' content goals include principles of engaged learning; however, professional development activities in this area have been lacking. Current instructional practices lean towards traditional models of teaching. The school is located within one hour driving distance of four major state universities, all of which have large teacher development programs. Despite this, very few pre-service teachers serve internships at Jones, and the school is not part of the professional development-training network within the state.

V. Technology Context

Jones is technology-rich. The school's computers total more than 240. Each classroom has a minimum of 5 desktop PCs. One computer sits on the teacher's desk, and the others are typically distributed among groups of desks. All have Internet access. A mobile lab of 20 is usually set up in the learning center or the library. All administrators have laptop computers with Internet access.

There is one full-time technology facilitator, Joan, who is in charge of coordinating and delivering all professional development as well as maintaining the extensive digital and AV equipment and media (computers, videoconferencing equipment, software, VCRs, etc.). Joan has come to rely on the assistance of several students with an interest in computers. These students are able to help during the noon hour with basic troubleshooting.

Most of the teachers will attend technology-oriented staff development activities, however, they have little hope of applying newly acquired skills due to a lack of district-level support. For example, five Jones teachers were paid to attend Web development training from a well-known vendor. When they returned to the school, the district IT department would not provide them with server space for local educational Web development.

VI. Additional Contextual Information

The district has teamed up with two state universities to operate a Schoolwide Equity and Excellence Model (SEEM), a research-to-practice initiative that will focus on helping teachers boost student achievement.

In 1998, the school received a $1.7 million Federal grant to buy the 129 laptop computers for students, to provide interactive video between school and student homes, and to fund new staff salaries. After this, the teachers in the school were encouraged to incorporate more technology in day-to-day activities, including the use of reading programs, multimedia presentation software, digital cameras, and video editing equipment.

Additional suggestions for school wide improvement came from the technology skills survey administered to all staff members. A set of proposals for technology use emerged:

- Reactivate the building technology team to assist in immediate and long-range planning
- Revise the staff technology skills survey to reflect new areas for growth
- Develop a professional development model
- Revise and update the Student Technology Skills Continuum
- Revise the Internet Usage Agreement
- Develop a long-range, comprehensive technology building plan
- Purchase a technology curriculum that provides skills acquisition in a cross-curricular instructional environment.
- Encourage the sharing of knowledge and expertise related to new skills and their application to instruction.

VII. Data Tables

The results of a survey in which teachers rated themselves on ability to perform specific technology tasks are shown below. The table shows percentage of teachers at a competency level, ranging from low skill (Level 1) to expertise (Level 4). A majority of teachers reported Competent (Level 3) skill in most areas (file management, word processing, Web browsers and Internet use, etc.). For each skill area, the level with the highest percentage of respondents is in bold.

Technology Skills Competency Survey				
	Level 1 (Minimal competence)	**Level 2** (Novice)	**Level 3** (Competent)	**Level 4** (Expert)
Basic Computer	1%	15%	**52%**	32%
File Management	1%	**45%**	42%	12%
Word Processing	6%	16%	**55%**	12%
Web Browsing & Internet Research	11%	37%	**43%**	9%
Presentation Software Skills	**34%**	31%	14%	21%
Copyright & Internet Policies	6%	24%	26%	**44%**

Though the majority of the teachers reported having Level 3 or 4 skills in all but one of the above, most of the teachers reported being only at Minimal or Novice (Level 1 or 2) in their ability to integrate these skills into instruction.

Technology Integration Skills	31%	**33%**	25%	11%