SECTION 7
GAP ANALYSIS

PROCESS:

Pekin District 108 participated in the Area 3 Learning Technology Center NextSteps Training program by being a "pilot" district in the fall of 2000. A team representing district personnel and Learning Technology Center and ROE staff came together to collect data, analyze it, and develop a reporting system whereby the district could review critical findings in order to map out future goal setting for technology and teacher and student learning. During the process, the team reviewed possible data collection tools that would best meet district needs and developed a formal data collection action plan.

Each data instrument was analyzed by the NextSteps Team and critical findings were developed with supporting data. In addition, the visiting team of ROE and Technology Learning Center people completed site visits to five of our buildings and completed a composite report on their findings. These site visits along with all the other data collection materials were synthesized into one comprehensive district report. The NextSteps Report (Audit) has been used as a basis for change the last six months and is the basis for data collection and analysis of our revised technology plan. In addition we have added additional data where we felt new information was needed to pinpoint the current reality.

The following tools were used for data collection and analysis:

- District NextSteps Composite Site Visit Report (completed in September, 2001)
- NextSteps Teacher Online Survey
- NextSteps Administrator Online Survey
- Analysis of Prior Three Year Technology Plan using NextSteps Tool 30
- Community Survey
- Hardware & Software Inventories / Aging Inventories
- Staff Development Analysis (NS Tool 14)
- School Improvement Plans & School Report Card Data
- ETP Spectrum for Learning to determine current instructional practices with NextSteps Tool 9 (Mapping Instructional Practices)
- Tool 11: Libraries as Information Centers
- Tool 17:Accountability Analysis
- Tool 18: Instructional Hardware Analysis
- Use of NextSteps Analysis Guide Indicators to determine current reality and to help note identified needs
- Use of Focus Groups
- Artifact Review
- Technology Deployment Tools that included Tool Capacity, Ubiquitous Access, and Technical Support Analysis

We have begun the process of revising the technology plan by going back and synthesizing further those areas that need to be addressed first in order to move our technology and learning initiatives forward. Upon completion of that process, we categorized the statements into the respective focus areas of the technology plan: community involvement, engaged learning, professional development, and technology deployment and sustainability. The following is our gap analysis based up the various data collection tools and analysis procedures completed by the technology committee and district personnel.

COMMUNITY INVOLVEMENT:

Statement: *District uses various methods to communicate with parents.*

Data/Observations Used for Findings:

- Teacher on-line survey responses indicate 28% of teachers currently communicate electronically with parents/guardians
- Administrator on-line surveys indicate 80% of administrators responded that they communicate daily with parents either by e-mail/web/voice system
- NextSteps Visiting Team indicated that traditional methods of communication are used as a means to communicate district efforts:
    - Newsletters
    - News Articles
    - Parent Organizations
    - Open Houses
    - Grandparents' Day
    - Flyers
- NextSteps Visiting Team in its audit report noted other methods being used to communicate in some buildings (district need to review efforts and determine whether expansion is needed)
    - Web pages with teacher links
    - E-mail communications
    - Student Artifacts on web

Tools Used for Analysis: *NextSteps Building Report; Artifacts; District Interviews, NextSteps Teacher Online Survey; Administrator Online Survey*

Statement: *Opportunities for consistent, ongoing and sustainable benefits for wider community to access technology and/or be more involved in school initiatives is in the emerging stages.*

Data/Observations Used for Findings:

- No opportunities for access to technology labs by community are currently available
- Interviews indicate no analysis was done as to the reasons parents/community members did not take advantage of training opportunities during the first technology plan
- A process was in place to build a collective vision with stakeholder involvement but vision is not clearly articulated to staff or the wider community per site visit interviews
- Interviews indicate that the vision needs to be better articulated with wider community to continue community support efforts.

Tools Used for Analysis: *Building Visit Reports; District Interviews; Analysis of vision statement by NextSteps Team Members*

Current Reality:

- *Traditional open communications exist between the home and school.*
- *Use of electronic communications as a means to highlight school initiatives is emerging*
- *Involvement of non-parents in school initiatives is currently limited*
- *Community does not have access to technology and few collaborative projects are currently in place*

Identified Needs:

- *Expand communication efforts beyond parents and wider community*
- *Get a broader base of community involvement in school initiatives*
- *Pursue avenues to include wider community involvement in planning, implementation, and evaluation processes to gain additional support*
- *Expand electronic communication possibilities between the school/home/community*

Based upon above data analysis, goal for community involvement is:
Enhance community communications and collaboration.

ENGAGED LEARNING:

Statement: *Engaged Learning Practices appear to be showing some movement forward.*

Data/Observations Used for Findings:

- 54% of teachers indicate that students work alone when using technology
- 31% of teachers indicate students use technology in pairs or small group work
- 71% of teachers indicate students use technology within the classroom vs. lab setting
- 23% of teachers indicate use of technology has not yet changed their instructional strategies while 59% indicate it has and another 18% strongly agree that technology has changed instructional practices *(challenge is to increase number of teachers who have changed practices as a result of technology)*
- Role of learning center teachers (media personnel) is showing change from traditional roles:
  - 21% of teachers co-partner at least on a monthly basis
  - 21% of teachers co-partner on weekly basis
  - 21% of teachers not currently partnering with LCT
  - 16% of teachers not currently integrating technology (*indication no co-partnering due to lack of teacher change vs. learning center teacher)*
- In 3 of 5 buildings visited by NextSteps Team, Learning Center Teachers were co-partners in the learning process in classroom settings

Tools Used for Analysis: *NextSteps Teacher and Administrator Online Surveys; Site Visit Reports; Interviews; NextSteps Tool 9 (Mapping Instructional Practices); Tool 11: Libraries as Information Centers*

Statement: *Student opportunities to use technology on a regular basis for learning initiatives that promote engaged learning/best practices is in emerging stages.*

Data/Observations Used for Findings:

- Teachers On-line Survey responses indicate 46% of teachers use of technology with students on daily basis; 27% on weekly basis; 11% monthly, and another 11% not at all
- Item 20 (Teacher Survey) concerning the student opportunities to construct/produce knowledge with technology:
  - 17% indicate Seldom/Never
  - 17% indicate 2-4 times per year
  - 25% indicate at least monthly
  - 41% indicate weekly/daily
- Review of Part 4 of Teacher Survey indicates top 5 student uses of technology:
  - Use content software to practice skills
  - Instructional Games
  - Desktop Presentations

- Graphics
- Internet Tools
- Although building site visit report indicates all students have access to technology and are taught basic skills, equitable opportunities to use the technology in the learning process are dependent upon teachers.

Tools Used for Analysis: *Teacher & Administrator online surveys; building interviews; Data review from NextSteps Analysis Guide*

Statement: *Students have strong foundation (focus) of technical skills with limited opportunities to experience "real world" learning and/or to demonstrate use of various technologies to support their learning.*

Data/Observations Used for Findings:

- Principals and Teachers interviewed during site visits indicate all students have a program that teaches basic skills to all students
- On the online surveys, When asked about student proficiency with technology, teachers indicate:
- 23% not sure how proficient students are with technology
- 13% believe less than 15% of students are proficient
- 17% believe 15-49% of students are proficient
- 28% believe 50-70% of students are proficient
- 19% believe over 70% of students are proficient
- RAP program offers all students opportunities in media centers
- Junior High Students required to take Industrial Technology class, which has strong emphasis on technology related modules (real world activities)
- Write to Read Labs in K-3 buildings incorporate technology
- Interviews indicate student technology uses focus on PowerPoint as a major activity
- Student Focus Groups also indicate spend most of their time doing PowerPoint
- Administrator online surveys indicate all students are getting the following learning experiences:
- Internet
- PowerPoint
- Spreadsheets
- Microsoft Word
- Building Interviews and Building Walk Through by Visiting Team gave supporting evidence that projects are being done that go beyond use of technology for technical skills. Report states" all buildings have project(s) students complete using technology, whether it takes place in the classroom or learning center."
- Building Report indicates some students have opportunity to participate in activities where they are able to use various tools to create/present their learning.
- Review of student artifacts/teacher and student descriptions of projects during site visits/walk through indicate 43% of student work focused on literacy uses; 53% on adapting uses; and 4% on transforming uses
- Interviews indicate the area of assessment has not been addressed

Tools Used for Analysis: *Teacher online survey; Administrator Interviews; Site visit; Student Focus Groups; Teacher interviews; Learning Center Teacher Focus Groups; Student Artifacts on display*

Statement: *Technology Deployment and district's commitment to sustainability can support new ways of teaching and learning for all students. (Best Teaching Practices/Engaged Learning)*

Data/Observations Used for Findings:

- The availability and organization of technology tools allow student access to technology to support their learning
  - All classrooms have a bank of five computers that have Internet access
  - Ratio of computers to students are at optimal stage (*CEO Forum and NextSteps Analysis Guide Indicator Descriptors)*
  - Each building has one lab
- There is a broad range of technical resources to support instructional practices
  - Classrooms equipped with computers, printer, teacher workstation, and large screen monitor
  - All buildings have digital cameras and scanners available for teacher/student use
  - Little aging equipment found in building walk through and that which is aging is used for drill and practice
- Local and global resources are universally available
- Technology support is provided on building and district level to support the instructional program

Tools Used for Analysis: *Instructional Hardware Inventory; Analysis tool for hardware deployment; Building Walk Though Data; Site visit interviews*

Current Reality:

- *All students have access to technology, however, consistent equitable learning opportunities with technology is dependent upon the teacher*
- *Technology use in the classroom shows movement from literacy stages to more adapting/integrating levels, with some opportunities for "real world" learning experiences*
- *Technology emphasis with students emphasizes improvement of technical skills*
- *Learning Center Teachers (media personnel) are emerging as building leaders/co-partners in instructional practices*
- *Training of teachers needs to continue to focus on how it can be transferred to instructional practices/student learning results*
- *District has shown its commitment to "best" instructional practices through its aggressive hardware purchases and professional development opportunities open to all staff*

Identified Needs:

- *Continue to develop strategies that will move additional teachers from literacy uses to adapting/transforming uses to give all students opportunities to experience higher level learning/real world learning*
- *Continue to explore technology as a tool for learning and its potential for new learning experiences that go beyond the classroom walls*
- *Continue to offer students the opportunities to use a variety of tools in their learning*
- *Continue to move from teacher centered to more student centered classroom environments*
- *Continue efforts to have learning center teachers become co-partners in the instructional process*
- *Address the area of assessment*

Based upon above data analysis, goal for Engaged Learning is:

Extensive daily students use of technology tools to create knowledge for themselves and to share it with others.

PROFESSIONAL DEVELOPMENT:

Statement: *District Staff Development Program/Model has offered a variety of training opportunities for all staff (teachers, media personnel, administrators, and other support personnel).*

Data/Observations Used for Findings:

- District leadership have met need for retooling their present and new staff through various programs - Technology Academy established in 1995; Summer camp program; release days for technology training; Fellowship program
- One fourth of each building's staff have been trained each year in basic technology skills
- Site visits indicate that in 3 of the 6 buildings visited, building leaders articulate expectation, with staff having to demonstrate mastery of basic tools
- Comprehensive staff technology development pilot program is available beyond the Technology Academy
- All teachers interviewed voice positive feedback regarding district efforts to offer training
- District urgency to train staff is evident in creation of support positions to offer district and site training opportunities in addition to mentoring support
- Evidence exists that training opportunities, although heavy emphasis on technical skills, also included engaged learning practices (how to integrate technology into classroom)
- Using NextSteps Tool 14 (*Staff Development Analysis*) district program shows gradual change from the original program four years ago which was all technical skill building
  - Prior to 1999, of the 55 workshops offered, 37 had literacy focus & remainder adapting (integration) focus
  - During 2000, district offered 29 workshops with technical focus; 18 had an integration focus; and 4 workshops were held that can be described as Innovative Models (transforming uses)
  - District interviews indicate need to offer less technical workshops and more workshops that focus on use of technology as a learning tool
  - Content Focus of Training (current program) includes:
    - Software/hardware specific courses (how to use-tech. skills): (78%) of titles product focused. Examples include: *Learning Village, School Vista, Microsoft Word, Excel, PowerPoint, Intro. to Internet, Publisher, Network, Inspirations, etc).*
    - Teacher-centered courses: (17%) of titles now focused on learning goals rather than technology (Traditional teacher-centered lessons are created thereby automating present units and practices - same story but different tools.) *Examples include: "Integrating Software into the Math Curriculum," Algebra with Calculator and Computer Enhancement," "Computerized Record keeping for Teachers," Using Multimedia Effectively in the Classroom," and "Making Books Using the MacIntosh."*
    - Student-centered courses: (5%) of titles now focused on new teaching and learning skills and practices using technology (NCREL's Engaged Learning Practices). Restructuring efforts are connected to technology learning. New stories are created with new tools. *Examples include: "Using Technology as a Tool in Meeting Language Arts Expectancies*
- District personnel have started a review of their progress and plan to develop new strategies based upon the *Illinois NextSteps Audit* (pilot) completed by ROE and Area 3 Technology Learning Center Personnel

Tool Used for Analysis: *Building and District Interviews; Artifact Review by TLC Visiting Team; NextSteps Tool 14; Analysis Guide Indicators for Pillar 3 (Professional Development)*

Statement: *Teachers are at different levels of readiness for integrating technology into classroom practices.*

Data/Observations Used for Findings:

- Using the NextSteps Teacher on-line teachers report:
  - 29% consider themselves beginners; 48% Confident users; and 24% indicate skill level where could teach others
  - 8% have not started using technology with students, 39% have used technology with students for 1-3 years; 23% have used technology with students for 4-5 years; and 35% report use for five years or more
  - Approximately 83% of teachers use technology for professional use daily, with another 14% weekly *(high use of technology for professional tasks)*
  - Although there is high use of technology for professional tasks, transfer of that learning into classroom practices is lagging: 54% indicate students continue to work individually when they use technology for their class work; Decrease in lecture or whole class activities has occurred with 15% of teachers
- Based upon Site visits and NextSteps Tool 7 (*Mapping Instructional Practices)* after training, present instructional practices show 43% of teachers practice literacy usage of technology; 53% adapting (integrating), and 4% are at transforming uses (innovating)
- Review of all data tools indicate currently that staff development training and teacher readiness to transfer learning into classroom practices do not match with aggressiveness of the training program or technology acquisitions

Tools Used for Analysis: *Next Steps Teacher Online Survey; NS Tool 9; Interviews/Site Visits*

Statement: *Training programs have had a major focus on technical skills, resulting in limited transfer of learning into actual classroom practice.*

Data/Observations Used for Findings:

- 64% have had less than 10 hours of training in past 5 years on how to design/assess curriculum using technology
- 41% have had less than 10 hours of training in past 5 years on Learning Standards
- 23% indicate training has not changed instructional strategies
- Personal Mastery of Tools (Part 3 of Teacher Survey) indicates technical focus:
  - Learn Word Processing skills 91%
  - Learn Internet Skills 75%
  - Learn E-mail Software 75%
  - Learn how to use content software 62%
  - Multimedia 20%
  - Simulations 17%
  - Web Tools 47%
- Classroom uses of same mastered tools is not reflected
  - 3% of teachers are using simulations in classrooms as part of learning
  - 2% of teachers are using multimedia as a means for teaching/learning
  - 5% of teachers use Web Tools in classroom work

Tools Used for Analysis: *Teacher Online Surveys*

Statement: *Need exists to expand training opportunities for teachers and Learning Center Teachers beyond technical skill building to move instructional practices to the next level, whether it be adapting or transforming.*

Data/Observations Used for Findings:

- Reviewing data from the five buildings visited by NextSteps Team, present practices show 43% literacy uses; 53% adapting; 4% transforming *(District desires to decrease level at literacy and increase levels at adapting/transforming stages in next three years)*
- Review of Site Visit Reports/Interviews indicate need to review role of learning center teachers and to offer necessary training to make them co-partners in the instructional process
- Review of building leadership readiness to embrace/support technology efforts impacts teachers willingness to explore innovative models
- District Technology Personnel have identified strategies that need to be implemented to make staff development program move forward and to show results in classroom practices:
  - District expectations for all teachers clearly defined
  - Accountability at the building level
  - Involvement in more stakeholders in planning, implementation and evaluation of staff development programs
  - Brainstorming new methods to deliver staff development services to teachers

Tools Used for Analysis: *Site Visit Report; Administrator Online Survey responses; Interviews*

Statement: *There are system barriers that inhibit potential progress of the staff development program/model.*

Data/Observations Used for Findings:

- Release time concerns
- Availability of Substitutes
- Communications between district and buildings - initiatives operate independently in buildings and district (coordination lacking)
- Differences in roles of learning center teachers building to building
- Lack of coordinated real-time data for assessing and revising staff development initiatives
- No system approach guiding and leveraging the "big picture" (budget, decisions on delivery of training and assessment processes)

Tools Used for Analysis: *Interviews; Site Visit Reports; Artifact Review*

Current Reality:

- *Comprehensive staff development program/model is in place*
- *Major focus of training has been technical with some opportunities for training that addresses using technology as a learning tool*
- *There are some barriers that impede progress of training program but they are currently being addressed by the District*
- *All staff have optimal opportunities for professional growth*

- *Learning Center Teachers are key players in staff development initiatives that can move instructional practices forward in their respective buildings*
- *Teacher expectations need clarification and additional articulation*
- *Teachers and administrators recognize the need to address the area of assessment*

Identified Needs:

- *Continue to meet the needs of teachers, learning center teachers, support personnel and administrators who are at different levels of readiness*
- *Address needed changes in instructional practices with a sustained effort focused on measurable student results*
- *Implement strategies for the identified system barriers that inhibit progress of the staff development program*
- *Develop a plan that allows for collaborative efforts between district and building training efforts (support initiatives with building follow-up activities)*

Based upon data analysis, Professional Development Goal:
Teachers, administrators, school library personnel, and support staff master technological skills needed to perform their work.

TECHNOLOGY DEPLOYMENT & SUSTAINABILITY:

Statement: *Technical support is available to ensure successful instructional/learning practices.*
Data/Observations Used for Findings: • Access to technology is available • Response time at the building levels is high per building interviews (NextSteps Site Visits) • Teacher On-Line survey results indicate satisfaction with technical support needs: ➢ 24% indicate response time as outstanding ➢ 53% indicate satisfactory response time ➢ 7% indicate technical support is lagging/frustrating ➢ 3%indicated response time was debilitating that instruction was impeded • Technical support exists on building and district level, with learning center teachers being the first line of support • All building interviews indicated building level support is efficient and had only praise for staff who give technical support • Building Walk Through report indicated equipment is well maintained to maximize instruction
Tools Used for Analysis: *NextSteps Teacher On-line Survey; Building Interviews; Building Walk Through*

Statement: *There is a broad range of technology tools available to support current instructional and learning practices.*
Data/Observations Used for Findings: • Local and global resources are universally available for teachers and students in classrooms,

labs and media centers
- Each classroom is equipped with a minimum of five student computers, a teacher station, and large screen monitor (*Building Walk Through by Visiting Team*)
- Some buildings have laptops available for checkout
- Any "aging" equipment is primarily used for drill and practice skills
- Each building has scanners and digital cameras
- Ratio of computers to students is considered "optimal" by CEO Forum Standards -District Instructional Hardware Inventory shows 2.8:1 student to computer ratio for the district

Tools Used for Analysis: *NextSteps Audit Report by Area 3 Technology Learning Center; Building Walk Through; Instructional Hardware Report (NextSteps Tool 18); District Inventory; NextSteps Analysis Guide, Pillar 4.*

Statement: *There is a disparity between buildings in the number of peripherals for student use.*

Data/Observations Used for Findings:
- Reviewing the District's Tool Capacity Surveys and self analysis following findings made:
  - Although there is a minimum of one scanner per building, there is disparity in student-to-peripheral ratio between building levels. This could be the result of additional purchases at the building level (site based decisions) or a reflection of teaching and learning practices at the higher levels. *(area need to review)*
  - Use of digital cameras also shows disparity. Although the District ratio would be 105.1, that number is lowered due to the enrollment figures of the junior highs and the number of digital cameras they have acquired. Middle schools have higher ratios than K-3 buildings.
  - There is a disparity in student video cameras between building levels. This may be due to instructional practices. All buildings have a higher ratio of students to video cameras than recommended by CEO Forum.
- Administrators interviewed indicate some peripherals bought by individual buildings (site based management) or by parent groups

Tools Used for Analysis: *NextSteps Tool 20 & 21; Tool 18-Instructional Technology Inventory analyzed with CEO Forum data; NextSteps Analysis Guide - Pillar 4*

Statement: *District is challenged to be able to continue its technology deployment and sustainability efforts to increase student opportunities for use of technology use in the learning process.*

Data/Observations Used for Findings:
- Funding for hardware and other technology tools will remain a challenge due to the fact that district has been awarded sizable grants in past years that are in last phases
- With purchase of equipment comes the greater need of having available dollars for training
- Critical Need to continue to look at roles and responsibilities of personnel to ensure movement forward (also ability to keep all of the positions or to find means of combining resources)
- Need to continue to review distribution patterns, etc. to ensure equitable learning opportunities for all students

Tools Used for Analysis: *Artifact Review; District Interviews; Building Level Interviews*

Current Reality:

- *Aggressive infusion of technology dollars for hardware and software*
- *Optimal levels for student/computer ratios*
- *Local and global resources are universally available*
- *Hardware access in labs, media centers, and building computer labs*
- *Wide range of tools available for teacher and student use that can support higher levels of instructional practices (more than literacy/technical skills)*

Identified Needs:

- *Continue to find funds/resources to maintain/upgrade equipment and plan for the replacement of equipment as it becomes "aging"*
- *Continue to train teachers to use technology available in the instructional practice*

Based upon data analysis, Technology Deployment & Sustainability Goal:
Manage information and data to enhance decision-making.
Provide fiscal and human resources to assist in adding, maintaining, and replacing technology.

In addition, the district realizes that the technology committee will need to undertake ongoing assessment/evaluation of its technology plan. Section 9 defines processes that will be used during/at the end of each phase of our plan.