



The Learning Lab at WHYY

Planning Study

Prepared for

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Imagine yourself in the year 2006 at the Learning Lab at WHY Y....

From its 7th-Street entrance, you pass into a lobby surrounding you with digital images. Giant screens showcase cutting-edge digital art, public broadcasting productions, and digital content produced in Lab workshops and courses.

In front of you is a working production studio, filled with community members working with new-media pros.

A concert virtuoso stands on the studio stage, preparing for a master class with students from Settlement Music School. Surrounding the stage are technicians, readying equipment for a live community-cast to schools in Chester County. Soon, seniors will be taking their seats to watch the performance. The master class will eventually be repurposed into a datacast, sent directly to the home computers of Settlement's members and alumni, and carried on the Lab's own website.

In the Training Space, a media producer/instructor is teaching hands-on video production to outreach staff from community development organizations. Nearby, in the Project Shop, staff from the Greater Philadelphia Chamber of Commerce, Greater Philadelphia First, Leadership Inc., and the Forum of Executive Women are working through the assortment of digital technologies that will make possible a multi-site, region-wide town meeting on leadership.

At the Community-Casting Hub, the technical director is fielding calls and making matches. Delaware's Department of Education is calling to schedule a virtual tour of Eastern State Penitentiary Historic Site. Montgomery County's intermediate unit wants to book a videoconference with a University of Pennsylvania professor for a high school class studying the Schuylkill River. The Human Resources Planning Group calls to find organizations interested in a free, datacast workshop on employee performance reviews. Philadelphia's Department of Health calls to schedule the weekly health information update for school nurses.

Every day the Learning Lab at WHY Y is alive with creativity, invention and energy, fulfilling its mission:

To share the power of digital technology to foster a more connected and informed community in southeastern Pennsylvania, southern New Jersey, and Delaware.

Executive Summary

In April 2002, under a planning grant from the William Penn Foundation, WHY Y began to sharpen its vision for a new digital Learning Lab. The Lab would be a *physical* place, a building where organizations throughout the region could learn to use digital communications technology to enhance and expand the work they do every day. It would also be *virtual*, a digital connectivity service that would link people and organizations across the region in ways never before possible. Spurred by a renewed community focus and the federal mandate to transfer from analog to digital broadcast technology, the station has set aside land to build the new facility on 7th Street, behind its Technology Center in Philadelphia. The foundation grant provided the opportunity to consult with the community and investigate how the new facility and connectivity service could advance the region.

Over the course the study, the Learning Lab concept was introduced to and shaped by the community during meetings with representatives of approximately 150 organizations and interviews with community leaders. The project team researched the existing learning lab marketplace, including the neighborhood and populations that the Learning Lab will serve and similar experiments conducted by other public broadcasters. Market needs were further assessed through a series of focus groups with WHY Y members and early-adopter teachers. The team also listened to the station's concerns in a presentation before WHY Y's board and WHY Y staff members. Finally the team analyzed this research and recommended Lab facilities, core products and services, and the pilot projects that will launch the Lab.

The following summarizes the findings and recommendations of the planning study:

- The mission of the Learning Lab should be *to share the power of digital technology to foster a more connected and informed community in southeastern Pennsylvania, southern New Jersey, and Delaware.*
- There is a great regional interest in digital technology. Local cultural groups, public-interest organizations, corporations, and educational institutions have all expressed a desire to explore digital projects but lack the training, and often the resources, to begin.
- The Learning Lab will benefit the regional economy by bringing technology to underserved areas, by efficiently providing high-quality training materials to job seekers and local employees, and by expanding the reach of the region's cultural resources.
- The Lab will serve five markets: *School Learners*, especially K-12 teachers and universities; *Career Learners*, including welfare-to-work, in-service training, and professional development; *Recreational Learners*, including cultural patrons and active seniors; *Public Information Learners*, those who want or

need to stay abreast of public affairs; and *WHYY members*, who, while they fall within these categories, deserve special attention.

- Taken together, these markets represent the full range of sectors within the community. Each incorporates organizations and individuals with a range of access to and sophistication with digital technology.
- Because WHYY has access to all five of these markets, the Learning Lab can facilitate cross-sector collaborations. This region is full of groups who need content, such as schools and senior centers, and groups who have content, such as performing-arts organizations and museums. WHYY is in a unique position to bring these groups together. As the Learning Lab grows, a network of the region's cultural organizations, cause-related groups, educational institutions, and businesses will grow with it.
- The school market is of special interest to WHYY. With this in mind, the planning study included a focus group with early adopter teachers. This focus group showed teachers were eager to incorporate technology into their classrooms but lacked the training to do so. Technology in schools is often old or broken and is rarely used to its full potential. The Learning Lab will become a source of professional development credits for teachers, helping them to integrate technology into their lessons.
- The Learning Lab's mission can best be achieved if its core products and services represent what the above markets say they want and need. Through community meetings, interviews, and focus groups, the project team identified three core products and services:
 - **Training:** The Learning Lab at WHYY's competitive advantage is that it will be an authentic production studio where organizations and individuals learn hands-on digital production from production experts.
 - **Production and Repurposing Content:** A center for new-media production, the Lab will help organizations create content. It will also re-package and re-purpose WHYY's own programming in a variety of formats for a wide array of uses.
 - **Connectivity:** The Learning Lab will connect people and organizations in ways never before possible. Using the full range of new technologies, including webcasts, datacasts, and videoconferencing, the Learning Lab will connect organizations with each other, organizations with their constituents, and central organizations with their branches. This connectivity function will be the centerpiece of the virtual Learning Lab.
- The Learning Lab building will be designed with maximum flexibility to accommodate changes in technology and function over time. It will include five spaces:

1. **Studio Stage:** Small studio stage, wired for broadcast, datacast, and web-cast, where lectures, performances, and town meetings will be held for live audiences and home participants.
 2. **Project Shop:** Creative space where community partners and Lab staffers will meet to brainstorm around new concepts, explore projects, and create productions.
 3. **Training Space:** Sixteen-person classroom where experts provide community members with hands-on project-based training in the art of digital production.
 4. **Connectivity Hub:** Place where digital connections between geographically separated community members are booked and implemented.
 5. **Digital Showcase:** Lobby area where large panel screens will present digital art, productions, school curricula, and products developed in the Learning Lab itself.
- Since parking is top on the minds of many potential users, the Lab should help visitors locate parking or consider constructing a revenue-producing lot under the building.
 - The Learning Lab will be launched with a series of pilot projects:

Digital Arts in Education Series: Music, drama, and dance performances are held on the Learning Lab studio stage on a regular schedule before an audience of school students. Schools throughout the region experience the performance through a datacast, which features a live moderator; pre-recorded behind-the-scenes video; and interaction between the classes, moderators, and performers via email, chat, and call-in. Pre- and post-program activities are prepared for teachers and students.

Professional Development Courses: The Learning Lab serves as a distributor of continuing education courses for a range of professionals. The courses are presented before a live audience at the Learning Lab, streamed via the Web or datacast, and archived for later use on home and office computers. Commercial or not-for-profit partners provide the content.

Electronic Field Trips for Schools: On a regular basis, the Learning Lab offers electronic field trips to K-12 classrooms. The experiences feature videoconferencing with knowledgeable tour guides at historic or cultural sites, a “tour” of the site, and a chat room on the Learning Lab website.

Digital Training and Production Partnerships: These partnerships will train community groups to produce their own content using WHY Y equipment. Productions may be distributed through datacasts, the Learning Lab’s website, or one of WHY Y’s current distribution platforms. This pilot is already underway using WHY Y’s Local Access Unit.

Digital Town Meetings: Digital town meetings allow viewers in remote locations to participate in events held on the Learning Lab’s Studio Stage. Meetings employ a range of technologies, including videoconferencing, datacasting, and collaborative webcasting. Digital town meetings are designed to enable an organization to interact long-distance with its branches, other organizations, its constituents, or its members.

Digital Production Training for Broadcast Professionals: The Learning Lab creates courses for local and national public radio and television professionals. Each course comprises three days of hands-on training.

Training for K-12 Digital Trainers: The Lab trains the technology staff of regional media centers serving local school districts. The training course combines video production and editing with integration of content into classrooms. Once trained, these “K-12 Digital Trainers” will be equipped to train teachers in their districts.

Digital Camp for Kids: The summer camp will be a week-long experience featuring hands-on digital video and editing training for children.

Course on Amateur Video Production: This is a course for Learning Lab members in three sessions: how to shoot video, how to edit video, and a screening of productions. The productions may be distributed on WHY Y’s secondary digital channel, the Lab’s website, or displayed in the Lab’s digital showcase. In the future, the course can be offered to the general public.

Exhibition of Digital Art: In collaboration with local art schools and arts events, the Learning Lab presents juried exhibitions of digital artwork. Exhibitions will enliven the space for Learning Lab visitors and will be open to the general public.

- Foundations, corporations, and government agencies are funding digital projects like those envisioned for the Learning Lab. Funding sources for Learning Lab operating costs have been researched and identified. Because one of the greatest challenges is keeping the technology current, the Lab should seek out technology partners.
- There are a number of policy issues related to creating the Learning Lab that lay beyond the scope of this study. These include governance, fee structure, and the relationship between WHY Y and the Lab.
- In the immediate future, WHY Y should secure start-up funding, hire a core staff, and continue to pursue the ten pilots listed above. It should begin building the Learning Lab when it has attained a critical mass of successful projects and the remaining capital has been raised. A core of successful projects will permit the community to gain familiarity with digital technology and permit the technology to mature to more user-friendly formats.

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Introduction

The Assignment

In April 2002, under a grant from the William Penn Foundation, WHY Y began to explore the feasibility of a new facility: a Learning Lab where people and organizations throughout the region could master and utilize new digital technologies. The Learning Lab concept has been on the minds of station leadership for some time, and in fact the station has raised \$4 million in capital funds from government and individual sources. The grant from the William Penn Foundation enabled WHY Y to explore the Lab's markets, functions, and facilities and the difference the Lab could make to the station and the broader community it serves.

Station leadership envisioned the Learning Lab as a *physical* place, a new building on 7th Street between Arch and Race Streets, on a plot of land the station owns adjacent to the Technology Center. It would also be a *virtual* lab, a digital connectivity service that links far-flung people and organizations in ways never before possible. The focus of the Lab would be lifelong learning, and its users would include teachers and learners of all types. Some envisioned the Lab as a visitor destination, made possible by WHY Y's proximity to Independence Park, the region's most popular tourist attraction.

Methodology

The planning study was conducted over a 20-week period. Kyra McGrath, Vice President for Strategic Projects and General Counsel, provided direction and management. Nancy Moses, Cultural Development Consultant, served as Project Director, assisted by Craig Santoro, a former producer of online curriculum content. Bill Weber, Vice President and Chief Technology Officer, served as in-house technology consultant, providing essential information on digital technology and its potential for serving a variety of community needs. Richard Somerset-Ward, an authority on digital applications in public broadcasting, served as advisor and authored the section of the report on digital experiments in the public broadcasting industry.

The research approach was as follows:

1. During five community meetings attended by representatives of approximately 150 organizations and interviews with 16 community leaders, the project team presented the Learning Lab concept. These sessions yielded in-

formation on the challenges organizations face, their internal capacities, and the ways digital communications could help them advance their mission.¹

2. Three focus groups, one with early-adopter teachers and two with WHY Y members, were commissioned from Argentieri Marketing Research. These sessions revealed information about the current use of digital technology and attitudes and opinions about the kinds of activities, services, and courses that would draw these key markets to the Lab.
3. Through site visits to 11 regional digital educational facilities, telephone interviews, and Web research on e-learning services, the project team secured information on the competitive marketplace in which the Learning Lab would operate
4. Through a series of meetings attended by 46 WHY Y personnel and a presentation before WHY Y's Board of Directors, the team secured internal views and opinions about the Learning Lab and the station's core competencies and assets that could be brought to bear on the Lab.
5. Through analysis of Center City population data and a survey of the neighborhood that surrounds the Learning Lab site, the team assessed how the Learning Lab would fit within the fabric of its immediate neighborhood.
6. Finally, through Web research, the team identified regional and national government agencies, foundations, and corporations that might support digital communications projects.

Information derived from these diverse sources was coded, analyzed, and used to shape the findings and recommendations that follow.

¹ See Appendix A for a list of those consulted.

Digital Technology

In May 2003, WHYY – and every other public television station in the nation – is required by the Federal Communications Commission (FCC) to “go digital,” by transforming its broadcast mode from the current analog format to a digital format. By that time, WHYY, which launched digital Channel 55 in May 2000, will have had three years of digital broadcast experience.

Digital technology provides both the impetus for and core of the Learning Lab at WHYY. Because many are unfamiliar with digital technology, this section presents a brief overview.

Traditionally, television signals have been sent in an analog format. This means the electronic sound and light waves that make an object appear on a television screen are shaped like, or analogous to, the sound and light waves emitted by the actual object. Although analog technology can accurately present real-world events, it is also cumbersome, slow, and loses integrity when data is copied. Digital technology makes up for these shortcomings.

The term “digital” refers to any technology that breaks information down into tiny parts, representing each part as a series of zeroes and ones. Information in a digital format can be transmitted much more quickly and cheaply, copied much more accurately, and manipulated much more easily than analog data. Because digital information can be compressed, the amount of digital data that can be sent over a particular bandwidth greatly exceeds the amount of analog data that can be sent over the same bandwidth. Although digital technology has been around for many years now, in the form of computers and CD players, for example, a current revolution is extending digital applications to many more areas.

Digital Television (DTV)

Because of the efficiency of digital technology, digital television signals can carry significantly more information than traditional analog signals. This increased capacity can be used in a variety of ways to increase the quality and quantity of information carried over the airwaves.

High Definition Television

One application of this increased capacity is high-definition television (HDTV), the application of DTV most people are familiar with. HDTV is transmitted with twice the clarity of today’s standard television signal and features CD-quality sound, widescreen format, and movie-theater-quality images. High-definition signals contain a lot of data, and broadcasting in high-definition uses most of the capacity available on a DTV signal.

Multicasting

Digital programs broadcast in Standard Definition (SDTV) do not require the large capacity that HDTV programs require. With SDTV, it is possible to broadcast as many as five digital channels over the same space needed to broadcast a single analog channel. This process, known as *multicasting*, creates additional channels for public broadcasters to fill with programming, greatly increasing the station's distribution capacity.

Datacasting

Computers have always been digital, but now that television can use a digital format as well, there is great potential for interaction between TVs and PCs. Televisions will start operating more like computers, while computers will start operating more like televisions. Experts predict that evolving computers and televisions – and perhaps telephones as well – will eventually converge into a single device.²

This convergence is partly reliant on a process called *datacasting*, which uses the increased capacity of digital television signals to quickly transmit massive amounts of data over the airwaves. Through datacasting, rich, interactive, television-quality experiences, much like a DVD or a CD-ROM, can be sent via television signals directly to a particular PC.

Due to its high speed of transmission, datacasting can offer far richer experiences than current Web connections. It is extremely inexpensive, extremely fast, and holds enormous potential for broadcasters and the community alike. Datacasts are one-way signals; they can be sent from broadcasters to PCs but not from PCs to broadcasters. But two-way interaction is possible when datacasting is used with the Internet.

For a PC to receive datacasts, it must be equipped with a DTV card (currently about \$250) and a regular television antenna, such as a set of rabbit ears. Rich information, such as an interactive video recording of an orchestral concert, is sent via the broadcaster's digital signal and received by the PC's rabbit ears. The datacast concert would be higher in quality than information sent over the Web and would feature more user control than a TV program.

Other Digital Technologies

Although digital broadcasting and the opportunities it affords have, in a large part, inspired the Learning Lab vision, digital broadcasting is not the only technology the Lab will employ.

Digital Recording and Editing

Because digital data can be reproduced so clearly and manipulated so easily, digital audio and video are fast replacing their analog counterparts and revolutionizing the worlds of television and cinema. Digital filming, recording, and editing not only ease

² Macklin, B. "What Every Marketer Needs to Know About ITV." New York: eMarketer, Inc., 2002.

the workloads of broadcast professionals; they also put high-quality production techniques within the reach of ordinary citizens.

Videoconferencing

First used in the mid-1980s, videoconferencing pioneered the use of digital technology as a visual communication tool. Fifteen years later, videoconferencing remains an effective method for connecting geographically separate individuals. Usually transmitted via ISDN telephone lines, but also available over the Internet, videoconferencing has been used in distance learning, workforce development, and corporate conferences.

Satellite

Satellites can be used to transmit both analog and digital signals. Although this technology is relatively expensive to use, there are advantages to satellite transmission, including two-way communication over a broadcast area that covers the entire North American continent. WHY? currently has full satellite capability.

Internet

Finally, the advent of digital broadcasting does nothing to eclipse the value of the Internet. Datacasting is an extension of the networking technique developed for the Internet and is directly compatible with the Web.

Integrated Technology Solutions

Individually, each of these technologies offers exciting applications; when used in combination they are revolutionary. By combining datacasting and the Internet, for example, people in one place can view a meeting happening in another *and* share their opinions in real time. By combining videoconferencing and pre-recorded digital video, students in their classrooms can interact with a curator *and* experience a virtual tour through the halls of the museum. A lecture broadcast live via satellite becomes more accessible when it is datacast to employees' own PCs. The digital revolution has spawned a colorful pallet of technologies, which, when combined, offer inventive and interactive solutions to a wide range of communication challenges.

Rationale

Why would WHYY, a public television and radio station, want to create a digital learning facility? The answer to this question can be found in two major trends affecting the entire public broadcasting industry.

The first trend is public broadcasters' renewed focus on the local community. The expanding universe of cable choices, many of which brand shadow public broadcasting, has caused an identity crisis of sorts for public broadcasting. Public broadcasters are examining their missions – what they bring to the communities they serve – and are putting greater emphasis on their original missions of lifelong-learning experiments.

This trend has been embraced by WHYY. It was a factor in WHYY's decision to build a new Civic Space, which is now used constantly for community events, training courses, and videoconferences. It is also at the root of the station's targeted outreach to key constituencies: children's services, arts and culture, senior citizens (Wider Horizons), and workforce development (WHYY Advantage).

The second trend affecting public broadcasting is the FCC mandate to transmit a digital signal by May 2003. As noted above, digital technology offers an exciting array of non-broadcast applications. Spurred, in part, by the digital revolution, WHYY expanded from a public television and radio station into a multi-platform Technology Center. Station leadership then began to imagine a new facility that could marry the renewed lifelong-learning and community focus to the digital imperative: a community-based Learning Lab.

During this planning study, WHYY's vision for a Learning Lab was vetted in meetings with over 160 educators and community leaders. The attendance at these meetings – over twice what project staff anticipated – the enthusiasm of the participants, and the wealth of ideas that were shared speak to the timeliness and potency of the vision. Analysis of the discussions at these meetings and other research point to five important opportunities the new digital capacity of the Learning Lab brings to the region.

First, the Lab brings the opportunity to help regional organizations exponentially expand their impact and reach. Through digital technologies, government health agencies can send videos showing new strains of viruses to doctors' desktop computers. A new CEO can meet employees from distant locations and avoid the cost of travel. Cultural organizations of all stripes can deliver performances, lectures, and courses directly to their members' homes or workplaces. These and other ideas emerged as community leaders from Greater Philadelphia, Delaware, and southern New Jersey envisioned how digital technology could bring them new levels of interactivity with students, constituents, members, and the general public.

Second, and even more exciting, is the Lab's opportunity to make connections between and among sectors. WHYY is especially well positioned to make such cross-sector

matches because of the breadth of its relationships. The Learning Lab, for example, could help a professor arrange a virtual tour of a nuclear power plant led by the regional director of the Federal Nuclear Regulatory Commission. The Lab could match a school district seeking cultural experiences with museums and performing-arts organizations seeking audiences. Greater Philadelphia is full of entities that create content and entities that need content. By matching them, the Learning Lab will foster partnerships and collaborations and advance community cohesion.

Third, the Learning Lab provides the opportunity to foster civic engagement. Digital technology opens exciting opportunities for dynamic interaction between government at all levels and the citizens it serves. People from one neighborhood can share ideas with people from other neighborhoods and develop solutions to problems common to all. Government officials can stage town meetings and take questions from citizens sitting in their living rooms. Robert D. Putnam, in his seminal work *Bowling Alone* argues that Americans are suffering from a loss of “social capital,” which is the reward of communal activity.³ While no one would argue that a virtual experience could ever replace face-to-face interaction, digital technologies make possible new forms of collaborative civic action.

The fourth opportunity stems from digital technology’s ability to enhance lifelong learning. Throughout our lives we are learners: in formal education, in our careers, in our leisure, and as citizens. Each of these roles is served by the new Lab. Students in their classrooms will interact with the region’s best cultural and historical institutions. Members of local arts organizations will have broadcast-quality video of performances and exhibits datacast directly to their PCs. The Learning Lab’s studio stage will host lectures, performances, and panel discussions for live audiences and home participants. Lifelong learning is one of the core missions of public broadcasting, and the Learning Lab brings opportunities to extend lifelong learning in new and exciting ways.

Finally, the Lab will strengthen the regional workforce with convenient professional development and digital production training. Through WHY Y’s digital signal, rich training materials will be transmitted to job centers throughout the region more quickly and cheaply than ever before. Employees of local companies, lawyers, psychologists, and accountants will engage in sessions with world-renowned speakers transmitted directly to their workstations. At the same time, employees of organizations and companies throughout the region will take digital production courses at the Lab, returning to the workplace with an invaluable set of skills. These skills, coupled with the professional development infrastructure created by the Lab, have the power to attract investment to the area and boost the regional economy.

The mission of WHY Y is to *make our region a better place, connecting each of us to the world’s richest ideas and all of us to each other*. By using digital technology to enrich community life, forge community cohesion, and foster lifelong learning, the Learning Lab helps the station realize its mission in the digital age.

³ Putnam, R. D. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Shuster, 2001.

Findings

The project team cast a wide net to capture information on the environment in which the Lab would operate and the needs of the community it would serve. To understand the existing marketplace, the team studied learning labs and connectivity services operating locally and around the nation. To learn from WHYY's peers, it commissioned a survey of digital experiments in public broadcasting. To answer questions about potential users, the team surveyed the neighborhood from a visitor perspective. To determine community needs, the team consulted over 160 representatives of cause-related organizations, arts and culture groups, government agencies, and private companies. What follows are findings from this research. For the effect this research had on shaping the Learning Lab vision, please see the "Implications" section of this report.

The Learning Lab Marketplace

Greater Philadelphia, southern New Jersey and Delaware are home to many companies, educational institutions, and not-for-profit organizations that provide digital-technology training or use digital technology as a connector. The following examples, which range from simple computer labs and wired classrooms to complex, well-equipped facilities, suggest the marketplace of learning labs in which WHYY's new facility will operate.

Local Training Centers

Delaware Technical and Community College

Delaware Technical and Community College, located on four campuses, offers higher education to college students, lifelong learners, and job-skills seekers. The technology available in Del Tech's facilities has served community needs since the college's founding in 1966. About 20 percent of Delaware's total population has passed through a Del Tech building at some point. Although the buildings described here are located on Del Tech's Terry Campus in Dover, their services are mirrored in similar buildings on the other three campuses.

Terry Conference and Training Center

Dedicated in 1996, the Terry Conference and Training Center is a large one-story building on the outskirts of Dover. The center's extensive facilities are used for college courses, computer training, workforce development, distance learning, and corporate events. The building contains two 100-seat conference rooms; six wired classrooms; four computer labs; one mobile lab; one distance learning studio; one television studio; two satellites; and 300 parking spaces, most of which are usually filled. Each year, 27,000 attend 2,000 events at the center.

The \$100,000 distance-learning studio uses a series of cameras and microphones to provide broadcast-quality, interactive experiences for students unable or unwilling to travel across the state for class. *Homework TV*, a cable show produced

at the center, offers homework help to viewers. Students who appear on the show as tutors also have a chance to operate the cameras and learn about TV production. "Wheels" is a mobile computer lab that takes computer and Internet training beyond the digital divide. Other programs include a computer/sports camp for children, workforce development, basic computer training, and college preparatory computer training.

Technology Center for Excellence in Teaching and Learning

Across the street from the Conference and Training Center is a converted high school that houses the Technology Center for Excellence in Teaching and Learning. At its heart, Del Tech's Technology Center is a place where teachers come to get technology training and to produce unique, multimedia teaching materials with the help of tech experts and an instructional designer. Multimedia materials are constructed with a team approach, and special tables have been designed to permit four people to work on a single computer at the same time. The center offers two levels of certificates to teachers seeking tech training.

The Enterprise Center at BCC

Burlington County College's new Enterprise Center in Mount Laurel, New Jersey, seeks to lure the corporate market with high-tech conference facilities and global connections. The large facility features over 44,000 square feet of meeting space, including a large auditorium, 12 training/meeting rooms, and a focus group suite, all wired for Internet and videoconferencing. Each of the 575 seats in the Global Auditorium has an Internet port, and most of the Center's rooms feature large screen projectors that can accommodate all major laptop brands. The building is wired with T1 and ISDN lines, as well as super-fast lines within the center. All events can be digitally recorded or broadcast live around the world. In addition to conference space, the Enterprise Center will offer customized corporate training, computer and management courses, and certificate courses from Microsoft, A+, and Cisco.

Camden County Educational Technology Training Center (ETTC)

Located in a vocational-technical high school in Sicklerville, Gloucester Township, the ETTC is home to the most high-tech K-12 learning facility in New Jersey. It features several cameras, three Picturetel videoconferencing monitors, mobile microphones, a wireless mobile laptop lab, and a document camera. The main camera can follow the lecturer as he or she moves around the classroom, and microphones are only activated when they are directly spoken into. A large-screen Smartboard, viewed by all parties in the distance-learning experience, allows instructors to draw over Windows applications with electronic markers. The space is designed for maximum flexibility, wired with ISDN and IP, and connected to the county's Wide Area Network (WAN). The ETTC is also equipped with a bridge, which allows users to communicate with eight other parties at once.

The staff classifies their distance-learning activity into three main categories: electronic field trips, collaborative learning experiences that involve more than one school, and

special sessions with major guest speakers. The ETTC has organized and implemented major videoconferences on an international scale. The facility is also used for meetings, adult education, teacher training, and workforce development.

The Franklin Institute

The Franklin Institute Science Museum has several on-site learning facilities, all geared toward the school market. Cyberzone, located in an exhibit space on the fourth-floor, features 25 workstations that are used by families and teachers. It is funded by UNISYS and heavily used. The Harcourt Teacher Leadership Center, a high-end teacher-resource facility, features a number of computer stations in a wireless environment and a small library. The Conference Center, a videoconferencing facility, is rented out for events and meetings. The UNISYS Teacher Technology Center has 12 workstations to train teachers to use the Web and digital technology. The Institute is also building a 4,200-square-foot education center on the ground floor that will feature two learning labs and an orientation space. It is slated to open by November 2002.

The Franklin Institute provides teacher-training courses free of charge and focuses on teachers of students K-8. Since registering with the Pennsylvania and New Jersey Departments of Education as a provider of professional development courses for teachers, course attendance has more than tripled. The Institute attributes the success of its learning labs to its experience with K-8 teachers and a familiarity with schools' technology capabilities.

Camden County Resource Center: Workplace Literacy Lab

The Camden County Resource Center, along with five other New Jersey centers, is a One-Stop Career Center, targeting people at the lowest rung of the employment ladder. Its Workplace Literacy Lab is a pilot program featuring 15 wired workstations, a full-time facilitator, and a part time teacher. The basic curriculum is enhanced by "jobcasts," produced by New Jersey Network. Each eight-minute jobcast highlighting a single job is broadcast daily on New Jersey Network and webcast to the Workplace Literacy Lab's workstations. All jobcasts are archived at the website for anytime access.

Since the lab opened in November 2001, all but one of the 40 participants has mastered the program. According to lab staff, the ingredients to a successful workforce literacy lab are a variety of training tools that match clients' skill levels, adequately trained staff, and instructors who give feedback and enjoy helping clients.

The Animation Stewdio

The Animation Stewdio is a Philadelphia-based program that teaches kids, age seven-17, "the high tech fine art of animation." Professional animators teach hands-on, project-based courses in a space designed as a professional animator's studio. Students learn techniques ranging from paper cutouts to the latest in digital animation. By the end of the session, the students have completed a broadcast-quality piece of animation. Animation Stewdio's student productions have appeared on national television, at film

festivals, and on the Internet. The courses are extremely popular and clearly demonstrate an interest in digital production among children and adolescents.

Scribe Video Center

Founded in 1982, Center City's Scribe Video Center is a not-for-profit organization that teaches people to use video as an artistic and political tool. With a focus on training individuals who do not have easy access to video technology, Scribe offers workshops in camera and lighting, editing, sound mixing, 16-mm film, script writing, and oral history production. Admission to a Scribe workshop (between \$75 and \$195) allows participants access to Scribe's equipment and the expertise of professional producers, editors, and sound mixers. The Community Visions program, which is free of charge to community organizations in Philadelphia, Chester, and Camden, offers not-for-profits the opportunity to convey their message on film with the help of Scribe experts. The annual Youth History Project teaches production techniques to middle school and high school students. Scribe productions have been shown at film festivals, various screenings, and on public television.

Local Services

The Philadelphia Museum of Art (PMA) Distance Learning Department

The PMA's distance-learning department runs about 250 videoconferenced classes each year. At \$100 per hour-long session, the classes are geared toward students at all grade levels. About 95 percent of participating schools are outside the Philadelphia area, in various locations around the country. According to the PMA, some local schools have videoconferencing equipment, but it has been difficult to get them interested in the museum's service. Still, the distance-learning program is working at full capacity and has never had to aggressively seek clients. The PMA has been a recognized leader in the museum distance-learning field since 1995 when the program began.

PMA distance-learning sessions take place in a small videoconferencing studio with a static camera in front of backdrops and are transmitted via ISDN lines. With this relatively low-tech set-up, the PMA creates a quality, interactive experience. The PMA has found that a moving-camera tour throughout the museum is nearly impossible, due to acoustical problems, lighting logistics, equipment immobility, and the distraction of museum visitors. Instead, the museum educator uses slides, backdrops, museum-produced videos, and small objects to engage the students. Crucial to WHYY's interests, the PMA prefers to connect directly to schools, rather than use an intermediary connection service. Connecting through an intermediary has caused problems, complicating what is a fairly simple process.

The PMA also has distance-learning equipment in its Conservation Department, so conservators in other facilities can visually communicate with the PMA lab. The PMA is a member of the Educational Enterprise Zone, a national consortium of cultural institutions that are engaged in distance learning, including the Smithsonian and Museum of Modern Art in New York.

Npower

Founded in Seattle in 1999, Npower is a Microsoft-funded organization that provides technology training and assistance to not-for-profit groups. Npower has affiliates in five cities and is seeking to establish a sixth in Philadelphia. Affiliates receive \$250,000 per year for three years from Microsoft and are part of the Npower network, but they remain independent organizations driven by local needs. Npower services include technology training, technology consulting, online tools and resources, and hands-on help in technology planning, database creation, website development, networking, maintenance, and volunteer matching.

Npower and Microsoft approved the Npower Philadelphia concept in December 2001, and a Philadelphia board of directors, which includes several people consulted for this planning study, was formed in March 2002. Npower has conducted needs-assessment surveys and focus groups with not-for-profit organizations located in Philadelphia and the surrounding counties. WHYY met with the nascent Npower Philadelphia once in June and again in July 2002 to discuss partnership opportunities. If all goes as planned, Npower Philadelphia will begin offering services in January 2003.

A Community of Agile Partners in Education (CAPE)

Based in Bethlehem, Pennsylvania, CAPE is a not-for-profit consortium of 120 educational and community organizations dedicated to “unlocking the educational power of technology.” Members are generally small to mid-sized, the majority of which are K-12 schools, intermediate units, colleges, and universities, including Drexel and Community College of Philadelphia. A handful of health care, cultural, and community-service organizations are also members. In addition to fostering relationships between like-minded organizations and raising money for technology projects, CAPE provides its members with access to databases, LISTSERVs, and a multi-point bridging service for videoconferencing. CAPE’s for-profit subsidiary, CAPE Enterprises, Inc., provides training in videoconferencing and Web-based technologies, as well as technology-adoption consulting services. Its facility in Allentown has three videoconferencing suites.

Educational Technology Consortium (ETC)

The Educational Technology Consortium is a partnership among WHYY, several local higher-learning institutions, and WebStudy Inc., a provider of online distance-learning tools. The consortium was originally formed so that local community colleges could benefit from WHYY broadcasts of video courses. Later, as four-year learning institutions and WebStudy joined the group, the consortium’s activities grew into a sophisticated, Web-based, distance-learning enterprise. The consortium is distinguished by extensive collaboration between product-developers and users. The consortium members are WHYY, WebStudy Inc., Camden County College, Community College of Philadelphia, Delaware County Community College, Temple University, University of the Sciences in Philadelphia, Ursinus College, and Widener University.

Generations on Line

Generations on Line is an organization dedicated to improving the lives of older people through Internet technology. The organization operates on the belief that the Internet is crucial to seniors' connection with society. In order to help seniors learn this invaluable tool, Generations on Line provides senior centers, libraries, and retirement homes with self-training software, featuring large fonts and familiar images. The software provides instruction on the basic uses of the Internet, including email, search engines, and threaded chat. Software packages cost \$250 for host centers, but seniors can use them for free.

Training Centers and Services around the Nation

Digital Clubhouse Network

Founded in 1996, the Digital Clubhouse Network currently consists of two Digital Clubhouses, one in Silicon Valley and one in New York City, which teach community members to express themselves through information and digital communications technology. With a focus on children, the elderly, and citizens on the other side of the digital divide, Digital Clubhouses seek to turn individuals into full participants in 21st-century life by increasing their digital literacy. The "little hands working with big hands" approach hopes to strengthen intergenerational bonds by having knowledgeable young people train their elders.

The Digital Clubhouse Network's major work consists of Digital Storytelling Projects, which operate on the principal that everyone has a story to tell, and all of these stories can be told effectively through digital technology. The Digitally Abled Producers Program (DAPP) and the Executive Producers Program train kids, age 12-20, in leadership skills, project planning, production techniques, and equipment operation. Graduates of these programs are encouraged to return and train others. More than just technology training, Digital Clubhouse programs seek to enrich lives and build better people through meaningful projects.

Access Tucson

Operating under the belief that television belongs to everybody, public-access cable channel Access Tucson provides technology and television-production training to everyday citizens. Members can take courses along one of three paths: No Tech, Low Tech, and High Tech. The No-Tech path is for would-be producers who want to learn about the non-technical end of television production. Courses cover organization, script writing, and promotion. The Low-Tech path trains producers of simple, talk-show-format programs. The High-Tech path is for individuals interested in hands-on technical education. Courses cover both studio production and field production. Trained members can produce their own programs or serve as technical volunteers for other members' programs. Over 7,000 original programs were aired in 2001.

Community Technology Centers' Network (CTCNet)

Beginning in 1983 with a single computer center in a Harlem basement, CTCNet now comprises over 700 Community Technology Centers (CTCs) across the country and

around the world. A Community Technology Center is any independent service or agency where low-income individuals can use computers or receive technology training. As a network of these centers, CTCNet provides connections between its members; builds partnerships; offers the benefit of nearly two decades worth of experience; and develops resources, such as its “Center Start-Up Manual.” The Philadelphia area is home to between 200 and 300 centers that qualify as CTCs.

New Horizons Computer Learning Center

Catering mostly to corporations, New Horizons hails itself as “the largest independent IT training company worldwide.” It is one of several for-profit companies in the Philadelphia area, including the University of Phoenix and the Cittone Institute, offering classes that range from understanding Windows to most major certification courses. These companies have well-trained staffs, established reputations, and extensive course catalogs. The New Horizons center closest to WHYY is located in King of Prussia, where there is ample parking. The staff at New Horizons steers students looking for basic computer literacy programs to local community colleges and high schools, where such courses are usually offered at affordable rates. Computer courses are also taught at some computer stores, such as Microcenter.

Digital Experiments in Public Broadcasting

As the digital revolution sweeps through public broadcasting, the most dramatic changes may come in non-broadcast, particularly online, methods of communication. It is these online technologies that are having a dramatic affect on the world of formal education. Statistics for K-12 schools show there is now one computer for every 4.9 students in this country and one computer connected to the Internet for every eight students.⁴ Public broadcasting, with its strong educational focus, is scrambling to catch up with this. WHYY's concept of Civic Space, its content strands (particularly the Wider Horizons strand), and its plans for the Learning Lab all point to the station's efforts to harness non-broadcast methods of communication. What follows are examples of digital experiments at other public broadcasters.

Connecticut Public Television

In 1999, Connecticut Public Television (CPTV) set up an ambitious mechanism called Mapping the Assets. The program was led by a Strategic Planning Committee representing many of the leading institutions and interests in the state, including the Secretary of State and the Chancellor of the State University system. Under their leadership, a dedicated team contacted every public and private organization with possible interest in creating a community alliance dedicated to using the new technologies for the public good. In this way, the whole community was tapped and large parts of it involved. The Governor was impressed and dedicated \$10 million to support the development.

CPTV is now embarked on the next stage of the process, Connecting the Assets. It is forming partnerships and creating individual pilot projects with a wide variety of Connecticut institutions, including Yale University, Mystic Seaport, Trinity College, the Learning Corridor, Connecticut Children's Medical Center, the Connecticut Library Network, the Connecticut Public Affairs Network, and the Discovery Museum. With an annual budget for these projects of approximately \$1 million, CPTV is helping this consortium of partner institutions produce videos and distribute their work through broadband networks that include a high-speed fiber connection and CPTV's digital frequency.

Network Chicago

WTTW Chicago launched Network Chicago in July 2000. In many ways, Network Chicago represents the opposite of the Connecticut approach. Instead of consulting painstakingly with the community first, WTTW judged that it knew its community well enough and created a multi-platform network. It then invited community institutions to provide content and distribution outlets for the network. The first step was for WTTW to double the amount of local programming it produced for its television and radio stations. It created joint ventures with one of the city's largest newspapers, began to

⁴ Edwards, V. B. ed. "Technology Counts 2001." *Education Week*, 20.35 (2001): 10-104.

publish its own free newspaper, and entered into joint productions and joint ventures with many of the city's institutions.

This ambitious program is largely funded by a capital campaign of \$55 million. But, even in the likely event that the entire \$55 million is raised, \$25 million in deficit funding will be necessary in the five year period ending in 2005. It is far too early to make judgments about the success or failure of Network Chicago. Critics note that WTTW has already somewhat reduced the amount of new local programming it is planning to produce in the immediate future. Supporters point to the number of important Chicago institutions—the orchestra, the Field Museum, the Art Institute, the Shedd Aquarium, and several others—that have partnered with WTTW to produce important local programming for the network. Collaboration with the *Chicago Sun-Times* has also generated a good deal of much-needed promotion and publicity for the network and its activities.

WVIZ/WCPN

In Cleveland, the public television station (WVIZ) and the public radio station (WCPN-FM) merged in 2001 and formed a totally new organization. This is a “public media company.” One of its principal purposes is to connect community institutions to each other, to community residents, and, most particularly, to K-12 classrooms. Connectivity is not easily achieved by museums, libraries, and schools: they need an outside agency to help them do it, whether they are connecting through digital frequencies, digital subscriber telephone lines, fiber optic cables, wireless microwaves, or satellite signals. All of these technologies are capable of providing broadband connections, though their availability depends on location.

WVIZ/WCPN sees connectivity as perhaps the single greatest service it can provide to its community. Most other public television stations think that providing content is more important, but the fact remains that, without connectivity, content is useless. The State of Ohio is blessed with an incomparable fiber network (SOMACS) that connects all museums, libraries, schools, colleges, and public broadcasters within the state. Yet, even with this network and University Circle, Inc., Cleveland's well-established cultural consortium, the funding of interactive connections between classrooms and cultural institutions remains a problem. With their merger only one year old, it is too early to see any real progress in the ambitious task WVIZ and WCPN have set for themselves, but they are clearly positioning themselves to be the hub of the community's use of broadband technologies in the public sector.

ChalkWaves and AITOL

In Kansas, Missouri and southern Illinois, an alliance of public television stations called ChalkWaves has designed and created a system known as America's Instructional Television On Line (AITOL). This system, very much a work in progress, makes digitized programming and, more importantly, *segments* of digital programs available to teachers' classroom PCs. An online database enables teachers to search and to choose short video segments from more than 700 hours of educational programming. By filling out an online order form, they can have their selections delivered to computers in their

own classrooms, at a time of their choosing, so that the segments can be used to illustrate lessons.

ChalkWaves conducted a 24-school field test of the system in the summer of 2001 to test the delivery systems, market acceptance, and alignment to state academic standards. The results of the test were overwhelmingly positive, except in a few schools that had insufficient bandwidth. An evaluation report is available at www.mkn.org/aitol/. The development of AITOL has been funded by a grant from the Corporation for Public Broadcasting. South Carolina has developed a similar system, www.knowitall.org, using video segments from South Carolina ETV's *SearchSCETV* database. Because of copyright protection, it is available to teachers in South Carolina only.

WGBH Teacher Center

In 1996, WGBH Boston created a professional development center for teachers. The purpose of the center was, in part, to train teachers how to use the teacher guides that WGBH produces to accompany its national programming. The courses at the Teacher Center included workshops and training sessions focused on integrating technology, such as software, DVDs, and CD-ROMs, into the classroom. Workshops took place at an existing facility used for in-house information-technology training. WGBH rented out workshop space and used the revenue to pay for staffing and a Teacher-Center library. Although the Teacher Center only sought to break even, there were commercial and academic efforts that provided similar services at a lower price. Now reorganizing the Teacher Center, WGBH is considering a membership for teachers that would allow them access to library materials.

Nebraska Arts Network

Nebraska Educational Television (NET), with the Nebraska Arts Council, studied the feasibility of 180 Nebraska arts organizations pooling their creative resources to take advantage of developing digital technologies. The alliance hopes to provide a statewide arts portal; a series of distance education and training opportunities for professional staff, volunteers, and the general public; and a Nebraska Arts Network, using one of NET's new digital frequencies. Implementation funding is now being sought.

onCourse

A group of public television stations, in conjunction with educational technology distributors and educational institutions, will begin beta testing a new e-learning venture, onCourse, in fall 2002. Headed by the former CEO of a leading commercial e-learning company, onCourse seeks to enter the volatile educational technology market by offering teachers multimedia "learning objects" to be used in classrooms. A learning object is any existing piece of video or audio that can be incorporated into a lesson, for example a short piece of animation on photosynthesis or a video of undersea exploration. Programs produced by public broadcasting stations are full of learning objects, which onCourse will archive in a database with lesson plans and other teaching materials. Teachers can access the database through digital connections, including datacasting

where available, and search by subject and correlation to state academic standards. In the future, onCourse will be able to identify individual users and better tailor the user experience. A major fundraising drive, hoping to raise \$4 million dollars, is now getting underway.

There are many other experiments taking place throughout the country:

- In New York City, there is a proposal to create a broadband education network for the public school system, based around WNYE-TV and WNYE-FM, both of them owned by the Board of Education.
- In Lincoln, Nebraska, a federal grant has enabled the University of Nebraska, in collaboration with the University's Teachers College and the state's public broadcasting system, to launch the National Center for Information Technology in Education (NCITE), an institute for applied research involving educators from all parts of the country.

Like the Learning Lab at WHYY, all these experiments are in their early stages. Today, when only seven percent of American homes have high-speed Internet access,⁵ and an even smaller percentage can receive digital broadcast signals, there is no meaningful way of measuring the effects of these experiments. Clearly, however, they will have important ramifications for the Learning Lab at WHYY.

⁵ Markhoff, John. "Two Tinkerers Say They've Found a Cheap Way to Broadband." *New York Times* 10 June 2002.

The Learning Lab's Neighborhood

The charge of the planning study team included assessing the appeal of a digital Learning Lab for the general public. Unlike professional users, members of the general public would use the Lab for recreational learning, much like they use college non-credit programs, historic sites, or museums. Accordingly, the project team surveyed the Learning Lab's neighborhood from this point of view.

The WHYY Technology Center is located at 150 N. 6th Street, between Arch and Race Streets, directly across the street from the new National Constitution Center on Independence Mall, the visitor gateway to Independence National Historical Park (INHP). The Learning Lab will be built on the grounds of the WHYY Technology Center, directly behind the existing building, with an entrance on 7th street.

The area is exceptionally well served by highways from every direction. Running east/west, Interstate 676 traverses the city and crosses into southern New Jersey at the Benjamin Franklin Bridge two blocks east of the future building. Close by, 676 intersects with the region's most important north/south highway, Interstate 95.

Sixth Street: Independence Mall and National Constitution Center

INHP is Philadelphia's signature tourist attraction, and during peak tourist season, between 2,500 and 3,000 people a day pass through the newly constructed Independence Visitor Center, which stands one block south of WHYY. Most are tourists, from across the nation and around the world, who come to visit Independence Park attractions: the Liberty Bell, Independence Hall, and, soon, the National Constitution Center. Once they enter the Park, tourists tend to travel within the north/south axis of the Mall.

Much of the reason for this lies in the design of Independence Mall, which is configured and landscaped to encourage visitors to stay within its boundaries. Moreover, the government buildings and corporate headquarters that line 6th Street between Market and Race Streets make those few blocks uninviting for pedestrians.

The National Constitution Center, scheduled to open in summer 2003, is expected to draw one million visitors per year. Although the center features an entrance on 6th Street, directly opposite WHYY, planners estimate far fewer visitors will use this entrance than the main entrance on the Mall, the bus drop-off on 5th Street, or the elevator from the center's underground parking garage. Consequently, little foot traffic is likely to pass by the WHYY Technology Center or the Learning Lab.

Seventh Street and Franklin Square

Seventh Street, where the Learning Lab will actually be located, is a busy traffic corridor and even less inviting. The only visitor attraction is the African American Museum in Philadelphia, about a block south of the Learning Lab site. Pedestrians who venture along this stretch of sidewalk are faced with the unfriendly rears of the same govern-

ment buildings mentioned above, as well as two parking lots, an abandoned hospital, and Philadelphia's Police Headquarters.

Franklin Square, one of William Penn's original eight-acre squares, sits across busy Race Street. Because of its relative isolation from residential neighborhoods, the park is under-utilized and poorly maintained. While the City Planning Commission's recent interest in restoring the park is good news, it would take a dramatic revitalization to transform the park into a viable visitor destination.

Population

Although the Learning Lab will not be built on Philadelphia's liveliest block, it is still located in Center City, the regional hub of culture and entertainment.

Center City Philadelphia is a vibrant, growing, and largely young community, with 60 percent of its inhabitants between the ages of 18 and 44. Moreover, 90 percent of Center City households are comprised of only one or two people.⁶ Old City, east of WHYY, and Northern Liberties to the north are growing neighborhoods for married couples without children, the most common household type in America, and young singles. Empty nesters, who comprise the country's fastest-growing household type, live in Society Hill to the south and Rittenhouse Square to the east. Philadelphia trails only New York and Chicago in downtown population.⁷

This active population fills galleries and restaurants during Old City's First Fridays, attends the Philadelphia Museum of Art's Wednesday and Friday evening events, and joins the corps of volunteers organized by Philadelphia Cares. Young singles have spurred an unprecedented boom in rental real estate development. Cultural organizations, health clubs, bookstores, and specialty food markets are creating activities for empty nesters, couples without children, and young singles. Fresh Fields Whole Foods supermarket, for example, produced singles nights that once attracted as many as 200 shoppers. Now it offers singles cooking classes that are typically over-subscribed.

Conclusion

Attractions that are located in areas with high foot traffic are likely to secure drop-in visitors. This is not the case for the Learning Lab at WHYY. The inward-facing buildings of Independence Mall will not bring much foot traffic to 6th Street, let alone to 7th Street where the Lab's entrance will be located.

The most promising aspects of its neighborhood are highway access and proximity to Center City's growing population of empty nesters and young people. These are strengths upon which the Lab can draw.

⁶ Cecil, G. "The Success of Downtown Living: Expanding the Boundaries of Center City." *Center City Developments*. Philadelphia: The Center City District and Central Philadelphia Development Corporation, 2002.

⁷ Holcomb, H. J. "Offices Turn into Residences." *Philadelphia Inquirer*, 22 July 2002.

Group Meetings

External Group Meetings

The Learning Lab at WHYY is a concept that seeks to benefit the community. With this in mind, WHYY hosted a series of group meetings with over 160 community leaders, representing arts-and-culture organizations, government agencies, cause-related organizations, educational institutions, and for-profit companies. The purpose of these meetings was to vet the Learning Lab concept with its potential users and to determine how these users could best be served by digital technology. Meeting attendance was nearly double the team's expectations.

Four group meetings were held in WHYY's Technology Center in Philadelphia, each group of guests representing one of the major markets the Learning Lab hopes to attract: recreational learning, school learning, public information learning, and career learning. A fifth meeting was held at WHYY's Wilmington studio for leaders of these market categories whose organizations are located in Delaware. Below is a summary of these meetings.

Recreational Learning Meeting

The participants at the recreational learning meeting represented groups with a wide range of technology experience and capability. Although most of these groups felt the pressure to grow technologically, many were stymied by a lack of funding and technical skills. Likewise, several groups had ideas for projects that took advantage of digital technologies, but few knew how to implement them.

Generally, the participants greeted the Learning Lab concept with enthusiasm and saw the Lab's potential to extend their organizations' reach. Some project ideas that surfaced during this meeting included datacasting tourism information to concierges and tourism desks, videoconferencing classes by famous artists, and virtual tours of inaccessible museum attractions.

Some members of the group were concerned about the Lab's focus on virtual experience and cautioned that virtual experience should never replace face-to-face interaction.

School Learning Meeting

Representatives at the school learning meeting were generally unsatisfied with their institutions' use of technology. Although the level of technology varied from classroom to classroom and institution to institution, in most cases, the technology that existed was underutilized. Teachers complained about a shortage of technology training and the fast pace at which technology changes. The more technology advances, the more untrained teachers get left behind, which contributes to a technophobic atmosphere and prevents many teachers from incorporating technology into their lessons.

Colleges and universities are better equipped than most K-12 schools, and many are engaged in distance-learning enterprises. Consequently, some representatives of higher-education institutions saw the Lab's potential to expand their existing services.

K-12 teachers and administrators saw in the Learning Lab a valuable tool for teacher training. Some representatives saw the Lab building as a place where teachers could learn to use the latest technologies. Others saw the potential for the Lab's virtual services, such as datacasting, to distribute training materials to thousands of individual teachers.

Representatives hoped that the Learning Lab could find ways to bring this technology to the other side of the digital divide, where it is needed most. There was also concern about funding for Lab services.

Public Information Learning Meeting

Many of the public-information groups represented at this meeting saw the Learning Lab as a way they could extend their reach, particularly to the elderly, disabled, and others with limited mobility. Some groups saw the Lab building as place to stage town meetings, in which people could participate from home. Others were more interested in the information-spreading capabilities of datacasting.

The group seemed to think the Lab could best serve two populations: young people, who tend to respond well to technology, and senior citizens, who could use digital technology to reconnect with society. By targeting these two populations, the Lab could help bridge the generation gap between the youth and the elderly.

While the group's response to the Lab concept was generally positive, some representatives reserved judgement until more information on the limits and capabilities of the technology was available.

Career Learning Meeting

Representatives at the career-learning session offered several ways their companies and organizations could use the Learning Lab. These ideas included technology training, remote meetings, large organizations sharing training with smaller organizations, datacasting continuing-professional-education materials, and beta testing new technologies.

Some representatives were particularly attracted to the notion of hands-on, project-based learning and thought the idea of learning production from production experts was highly marketable. The production-studio atmosphere of WHYY was also considered to be a draw, and it was suggested that the same design motif be extended to the Learning Lab. Representatives advised WHYY to target early adopters first and to try to reach the rest of the population only after the Lab had achieved some success.

Delaware Meeting

On the whole, the concerns and ideas voiced at the Delaware meeting did not differ markedly from the ideas and concerns expressed across the other four meetings. There were some interesting facts that surfaced, however: Delaware schools are particularly well equipped technologically. All Delaware schools are wired for the Internet, and there is one computer for every four Delaware students. Additionally, Delaware Technical and Community College offers distance learning and technical assistance throughout the state.

Several arts organizations saw the potential for interactive projects, such as datacasts of concerts where home viewers could request songs over the Internet. Community groups saw the Lab as a tool for training their employees and disseminating their message. Perhaps because all four markets were represented at the same meeting, guests warned that the Lab might be trying to be all things to all people, a goal which it cannot hope to achieve.

Internal Group Meetings

The Learning Lab concept was also vetted within WHYY during three group meetings with station staff.

WHYY staffers saw the Learning Lab as a way to refocus the station on its original mission of community service and lifelong learning. They recognized the timeliness of the idea and expressed that, if the Lab vision were to become a reality, it should happen sooner rather than later. Because the Lab would bring people into WHYY, it was seen as a tool for getting WHYY in touch with its members and the greater community. Some thought the Lab's draw would be strong enough to pull tourists in from the surrounding historic parks. It was also hoped that the Lab would attract strategic partnerships and a younger demographic. Because Philadelphia has no public access channel, some staffers thought that the Learning Lab could be a source of public access for the city.

Some meeting participants questioned whether it was necessary to build a new building at all. There was also concern that, with a renewed focus on technology, the station might lose sight of its primary services: TV12 and 91FM. Along the same lines, some staffers warned, after the Learning Lab is up and running, WHYY will still have to convince the public that the organization has more to offer than television and radio.

With regards to training, the staff stressed a hands-on approach. Although some staffers were not sure who at WHYY would do the training, others welcomed training opportunities as a break from routine. Overall, the idea of training was welcomed as a way to increase the production talent pool in Philadelphia.

Many thought the Learning Lab building could help fill gaps in WHYY's existing facility. Flexibility was stressed as the key to a successful building design, and the staff thought Lab visitors would respond best to a space that was as comfortable as their own living rooms. Parking was stressed as a top priority.

Individual Interviews

In addition to holding group meetings, the project team met with the leadership of several organizations throughout the region. These meetings yielded valuable information about current trends in digital technology and new ideas for future Learning Lab products and services. All of the organizations consulted during these interviews were excited by the prospect of partnering with the Learning Lab. Below are the major findings from these interviews.

The Mid-Atlantic Regional Technology in Education Consortium (MAR*TEC), Temple University

Located at Temple University, MAR*TEC is an outgrowth of the federal “No Child Left Behind” Act. Its mission is to “support teachers, administrators, and communities to use technology to create efficient and effective learning environments.” According to MAR*TEC, e-learning in public schools today involves little more than word processing and Internet searches. Whether technology improves the quality of education remains an open question. MAR*TEC leadership envisions the Learning Lab as a place where teachers can become “digital savvy.” The Lab would showcase the latest teacher training materials and would help teachers create their own digital learning tools. The primary function of the Lab would be “community-casting,” a sort of cultural sharing, where culture is created collaboratively. A pilot project for the Lab could bring MAR*TEC in as a partner to train teachers from the Philadelphia public schools Temple was recently assigned to manage.

Temple University School of Communications and Theatre

The university is building a four-story community and entertainment center, which will include WRTI public radio and Temple’s television channel, 55, for which the university is re-acquiring the license. Additionally, the School of Communications and Theatre offers an array of courses on digital technology, including broadband content, Web communities, and Web production. Department faculty see the Learning Lab as a way Philadelphia can compensate for the lack of a public access station and recommend the Learning Lab look to Access Tucson as a model for training ordinary citizens in the art of television production. The Lab could also present partnership opportunities for Temple and WHYY, including a research project where Temple faculty would study how the Lab’s users are experimenting with digital language and a co-hosted conference on digital technology, which would pull together current and potential users of new and emerging technologies.

The Curtis Institute of Music

The Curtis Institute of Music is a world-class conservatory that trains talented young people to become professional musicians. The institute’s master classes feature the world’s top talent and are open to the public. WHYY hosted a Curtis master class in February 2002, which was videoconferenced to schools in Burlington County, where

students were able to view and participate in the class. Curtis would be interested in partnering with the Learning Lab to datacast or videoconference future master classes. This type of partnership is ideal for Curtis because the institute can extend its reach without compromising its mission. Curtis would not be able to afford the technology envisioned for the Learning Lab on its own.

The Greater Philadelphia Secondary Mathematics Project

Located at LaSalle University, the Greater Philadelphia Secondary Mathematics Project is a federally funded program that seeks to improve professional development for Philadelphia-area secondary school mathematics teachers. The project has applied for a \$35 million National Science Foundation grant to fund a program that would provide professional development to between 7,000 and 12,000 teachers, instructing over 200,000 students in 54 school districts. The project sees datacasting technology as a tool to solve the logistical problem of distributing rich materials to a large number of teachers. The technology would be used alongside face-to-face interaction as part of a comprehensive development plan. The Learning Lab could be a place to train teachers to produce their own digital video to be viewed by other teachers. In this way, teachers can watch each other's classes and give each other feedback. Programs like this could be funded by the National Science Foundation, intermediate units, school districts, and other national and state grants.

The Pennsylvania Horticultural Society

The Pennsylvania Horticulture Society (PHS) is a not-for-profit organization that seeks "to improve the quality of life and create a sense of community through horticulture." Most notably, PHS produces the Philadelphia Flower Show, the largest indoor flower show in the world. PHS sees a variety of partnership opportunities with the Learning Lab at WHYY, including a datacast of its annually overbooked session on perennials; greater connectivity within Philadelphia Green, an outreach program of community gardeners; and a digital version of PHS's six-session workshop for neighborhood tree-tenders. However, PHS is not sure that digital technology is a high priority for the organization at this time.

The Free Library of Philadelphia

The Free Library sees great value in the Learning Lab's digital technologies, because they can enable more people to use the library's resources. The special collections, in particular, would become much more accessible if they were digitized. The automotive collection, for example, could be digitized, indexed, and made available to the general public via the Web. The Learning Lab could also train branch librarians in the use of digital technology; the librarians could then set up datacasts and other programs in their own neighborhoods.

The Philadelphia Daily News

WHYY has worked with the *Daily News* in the past on issues-oriented programming. Area newspapers, such as the *Daily News*, have much to offer the Learning Lab, including experts for digital town meetings and companion stories to Lab events. The *Daily*

News thinks a Learning Lab is good idea, but that there must be more to it than hardware. Funds must be available for journalists to research issues and for adequate promotion of Lab events and activities. The Lab should give cameras to people in the community to film meetings and events.

Congreso de Latinos Unidos

A not-for-profit organization supporting Philadelphia's Latino community, Congreso "is committed to providing innovative, bilingual/bicultural service programs that support and prepare families to live happier, healthier more peaceful lives." The organization's leadership sees digital technologies offering a great advantage in disseminating its message more cheaply to a wider audience. This would free up staff to spend more time preparing and less time travelling. Congreso staff could use the Lab to learn how to produce programs for use in job training, parenting classes, and other Congreso-sponsored community outreach programs.

The Pennsylvania Economy League (PEL) and the Philadelphia Metropolitan Policy Center

The PEL has experimented with videoconferencing twice, but the technology was so poor that it detracted from the content. Despite this, the PEL would use videoconferencing again to connect its six field offices and large board of directors. The technology available at the Learning Lab could be used for bar-review prep courses, Internet college courses, and annual forecasts prepared by professional organizations. These types of videoconferenced programs work best in "Ask the Expert" sessions with about 80 percent of the content broadcast out to the public and about 20 percent coming back as questions and comments.

Issues PA

Issues PA is a public-affairs communications project of the Pennsylvania Economy League that seeks to "raise the level of discourse around elections." It employs an integrated system of broadcast issues forums, a cutting edge website, and media relations to disseminate non-judgmental, non-partisan questions for candidates. There are a number of organizations around the country using digital technology in elections and public-policy initiatives in similar ways. Issues PA would like to partner with the Learning Lab and a print-media company on a digital town meeting. The meeting would be based on a broadcast/Web/print issues effort PEL developed for the 2002 gubernatorial primary and would be carried statewide via videoconferencing and PPTN broadcasts. Eventually Issues PA would like to see an entire digital channel devoted to public affairs that would cover state and local issues.

AARP Pennsylvania

AARP Pennsylvania is currently using digital technology in a number of ways. It uses e-advocacy instead of phone trees, e-mailing its members who then email their congressmen, and keeps its members abreast of current issues via email. AARP is interested in how the Learning Lab can help with its Community Service Initiative, which seeks to encourage senior citizens, especially baby boomers, to get involved in

community service. There is also a great demand among this population for a course on how to use computers and the Internet. Requests for this type of course are the second most frequently heard request at AARP. The AARP representative brought her nine-year-old son to the meeting with WHY Y, and he indicated he would be interested in a digital summer camp. He cited Animation Stewdio as an example of this type of camp.

University of the Arts

University of the Arts suggested an annual juried digital art show at the Learning Lab. The University currently trains its students in digital multimedia art. Work by students includes performance pieces, installation art, animation, and games. It is often displayed on the University's website. The Learning Lab and the University could present an annual show of student work that would be displayed at the Lab for a short time. The work could then be displayed on linked webpages at the Lab's and University's websites. The University's communications department would also like to partner with the Lab to help create production curricula.

Montgomery County Intermediate Unit

The purpose of an intermediate unit (IU) is to serve as an intermediary between the state Department of Education and the local school districts. IUs serve all teachers, and technology training is just one part of this service. IUs also aid in special education, non-public-school services, and legislative concerns. Each county in Pennsylvania has an IU, including Philadelphia County. According to the Montgomery County IU, the Pennsylvania Economy Network gave schools money to wire themselves. Now, other than the Amish schools, all Pennsylvania schools are Internet connected. There were plans to connect all the IUs in the state by fiber, but, since September 11, funding has dried up for this type of project.

The Montgomery County IU has great respect for WHY Y's access to various sectors in the community: political, cultural, and educational. Just as WHY Y crosses these borders, the Learning Lab can be a great force for community cohesion. Along these lines, the IU was receptive to the idea of the Learning Lab as a matchmaker between content producers and content receivers. The Lab and local IUs can partner politically as well as technologically. If IUs and the Learning Lab seek funding together, they can have access to the kind of money that makes projects work. The IU cited Berks County Community Television as a model for connectivity.

Focus Groups

Argentieri Marketing Research conducted three focus groups for this study, one with early-adopter teachers and two with WHY Y members. The purpose of the focus groups was to introduce and receive feedback on the Learning Lab concept and to gather opinions on digital technology.⁸

Early-Adopter Teachers

The teachers chosen for this focus group were all early adopters of technology from Philadelphia-area public, private, and parochial schools. They represented a range of ages and had taught various subjects over a range of years.

Teachers in the focus group were enthusiastic about the Learning Lab concept. They saw the Lab as a place to explore and create projects, a meeting place for students from different schools, a repository of public broadcasting-based content, an organizer of electronic field trips, a resource for remedial learning, a source of service-learning credit for students, and a forum for sharing ideas among teachers.

According to the focus group, most teachers have some access to computers, Internet connections, instructional television, and digital cameras in their classrooms, and many teachers, especially early-adopter teachers, know the basics of using this equipment. However, digital technology remains underutilized in K-12 schools for a number of reasons:

- Equipment is often outdated or broken. According to one teacher, “I think a lot of the time when we get grants, the school district...[doesn’t] buy service contracts with the equipment and when it is broken, it is just sitting.”
- There is a lack of educational content compatible with classroom technologies. The demand for quality, standards-based, multimedia content continues to grow as more emphasis is placed on technology and more equipment appears in the classroom.
- Teachers lack training in how to effectively integrate digital technologies into their lessons. Most teachers require considerable hands-on training since they fear looking foolish before their students and colleagues. “I’ve held workshops for teachers in my school,” reports one teacher. “But they are not very willing to come. I think they’re afraid of not knowing something.”

Teachers saw Learning Lab programs as an excellent way to secure professional-development credit. Comments made during the focus group described the current training paradigm and some characteristics of ideal workshops:

⁸ See Appendix C for a full focus-group report.

- Currently, Pennsylvania’s Act 48 requires 180 hours of professional development every five years if teachers are to keep their certification. If the Learning Lab becomes a registered provider of Act 48 training, some of these hours can be spent in the Lab developing a comfort level and expertise with educational technology. According to one teacher, “We have half or full days of professional development, and our principals are dying for something useful to do on those days. [The Learning Lab] could have an entire school down for each of these on a rotating basis.”
- Generally, teachers would prefer these workshops to be on weekends, particularly Saturday mornings, or in the early summer, just after school ends. They would also prefer hands-on, project-based workshops, where they complete products they can take back to their classrooms. Instructors should be “top-notch,” and the skills teachers learn in the Lab should be applicable to the technology available in their classrooms.

WHYY Members

The members chosen for the two member focus groups represented a range of ages, length of WHYY membership, and familiarity with digital technology.

Because their familiarity with digital technology was generally less than the early-adopter teachers’, many members in the focus groups found the Learning Lab concept difficult to grasp. They expressed great loyalty to WHYY and wanted to ensure that its broadcast mission remained top priority. They worried that the Learning Lab might draw funds and energy from the television and radio they regard so highly.

Members were divided among those interested in coming to the Learning Lab and those interested in accessing its programs remotely. Prospective Lab visitors were enthusiastic about offerings such as the opportunity to gain a behind-the-scenes view of broadcasting and presentations by authors, artists, and WHYY personalities. The few who enjoyed producing home videos or digital photos were excited about taking classes at the Lab. Other members preferred to receive Lab experiences via digital transmissions at home. Parking and safety were concerns because many were unfamiliar with WHYY’s neighborhood. Some members would prefer a ticket to a Learning Lab workshop in lieu of a premium item. Others said they would donate their workshop time to a deserving youth.

Overall, members believed the Learning Lab would help the causes they care about, the younger generation, and underrepresented students interested in technology. As one commented, “You [WHYY] are going to get an awful lot of interest in this new technology center. People will definitely want to be a part of it.” Members themselves seemed likely to take advantage of the Lab’s virtual offerings. Whether large numbers of members will come to the Lab building remains an open question.

Implications

The Learning Lab at WHY Y is not being created in a vacuum. It is entering a marketplace of digital learning labs and on-line services. It is part of a national trend in digital experiments in public broadcasting. It is moving into a neighborhood with some very special characteristics and will be serving publics with identifiable needs and preferences. All of these have important implications for the Lab's mission, offerings, and operations.

- The vision for the Learning Lab at WHY Y stands at the forefront of public broadcasting's digital experimentation. The Lab combines a number of trends: the emphasis on community consultation found at Connecticut Public Television; the connectivity function used by Cleveland; and the focus on the formal educational market employed by ChalkWaves, PBS, Nebraska Educational Television, and others. The Lab should track these experiments over time and incorporate their experiences into its program.
- The Learning Lab vision represents an advance over similar facilities in the region. While most of the facilities surveyed served discrete sectors of the community, this Lab will serve the entire community. The Lab's location at WHY Y – an institution with a reputation for excellence, a broad geographic scope, and established relationships with diverse sectors – makes this possible.
- The Learning Lab should not compete with commercial or not-for-profits in established, quality product and service lines. This includes training in basic computer applications, such as Windows, Web, and email. This type of training is already available to companies and individuals through a myriad of educational institutions and businesses across the region. Npower will soon be bringing similar services to area not-for-profits.
- Instead, it can establish a unique niche if it becomes *the* place where people can learn digital production from the production experts. The project-based, hands-on approach capitalizes upon WHY Y's unique role as the region's leading not-for-profit production and broadcast operation. And, as Digital Clubhouse Network, the Animation Stewdio, and Access Tucson have shown, hands-on instruction in video production has broad appeal.
- In-service training for teachers in digital technologies represents a strong and growing opportunity for the Lab. While some similar programs already exist, the teacher market is huge and integration of digital technologies into the classroom is a growing priority at the federal and state levels. The greatest gains will be achieved if the Lab secures certification as an official teacher-

training provider by state departments of education. This certification is required under Pennsylvania's Act 48.

- It is unlikely that the Learning Lab will become a visitor attraction, despite its proximity to Independence Park. Therefore, facilities that depend on high volume visitation, such as a new-technology exhibit hall or cyber café, should not be built into the Lab. While the Lab might feature some displays, they should be ancillary to other activities. Although an exhibit hall might initially draw interest from technology partners, these partners might soon be disappointed by the relatively low attendance figures.
- Instead of a visitor attraction, the Learning Lab should be seen as a regional destination for specific types of users. Its offerings and amenities should be designed and scheduled to accommodate these users.
- WHYY's neighbors, Center City residents, represent the precise demographics that can expand the station's membership: young singles and empty nesters with high educational levels, interest in local life, and substantial leisure time. With these markets in mind, the Learning Lab should take the cue from other successes and develop events where people can socialize as well as learn.

Recommendations

Mission

The mission of the Learning Lab at WHYY is

To share the power of digital technology to foster a more connected and informed community in southeastern Pennsylvania, southern New Jersey, and Delaware.

The Learning Lab will be the place where organizations and individuals come with an idea and turn it into reality.

Goals

The goals of the Learning Lab are to use digital technology to

- **Advance the life of the community.**
The Learning Lab at WHYY will be in service to organizations and individuals in southeastern Pennsylvania, southern New Jersey and Delaware. The Lab will serve the full range of sectors in the community: government; arts and culture; health and human services; tourism; and civic, economic, and community development. The Lab will help organizations in these sectors learn how to use digital technology to increase their power, range, and impact. It will also match those who need digital content with those who provide it. Through its efforts, the Learning Lab will demonstrate how digital technology can strengthen community organizations, foster civic engagement, and enrich the quality of local life.
- **Support lifelong learning.**
The Learning Lab at WHYY will serve learners and teachers at all levels and of all types. Those seeking to begin or advance their careers and those seeking to enrich their personal lives will use the Lab to further their education. Through an array of exciting learning experiences and training programs, the Lab will bring new life to public broadcasting's central mission of lifelong learning.

- **Expand WHYY's service to the community.**
The Learning Lab will share the station's digital capacities with the community. WHYY will assume a more vital community role as a venue for community events, a training site for students, an incubator for new ideas, and a creator of superior content. This will continue WHYY's transformation from a broadcast station into a multi-platform, locally focused Technology Center.
- **Advance the field of public broadcasting.**
The Learning Lab will serve as a model of community connectivity for public broadcasters nation-wide. It will advance the creative uses of digital technology in television and radio broadcasting as well as in new media. Finally, the Learning Lab at WHYY will demonstrate how the public broadcasting industry can use the benefits of digital technology to give new life to its historic mission of service to the local community.

Markets

The Learning Lab will serve four markets, representing four types of learning: school learning, career learning, recreational learning, and public-information learning. WHY Y members, spanning all four categories, comprise an additional market that will be served with specific products and services.

School Learners

Formal education at all levels, from pre-school through graduate school, will be a primary market of the Learning Lab. The Lab will serve teachers and students through the courses and workshops it offers and connections it makes.

Public broadcasting evolved from formal education. WHY Y currently serves this market via television broadcasts for pre-schoolers, telecourses, online courses, and internships for students in higher education. The station is currently experimenting with datacast projects directed toward day-care workers and students seeking high school equivalency degrees (GED). It has also been approached by two universities seeking to build courses around WHY Y's facilities and staff.

The K-12 market is especially promising right now. School districts are purchasing digital equipment, establishing learning labs, and installing ISDN telephone lines and fiber optic networks. Government at the state and federal levels is promoting the use of digital curriculum in the classrooms via grants and contracts.⁹ Despite district and government investments in hardware and software, many classroom computers remain underutilized because teachers are not trained and content is not available.

After considerable investigation, it appears that the most efficient and effective route to the classroom teacher is through regional media centers, which are charged with developing and distributing instructional and professional-development materials. Their staff is knowledgeable in educational applications of digital technologies and understands the challenges of classroom teachers. Although Delaware's central school system makes no use of regional media centers, they play a major role in New Jersey, where they are referred to as AVAs, and in Pennsylvania, where they are housed in county-based educational organizations called intermediate units (IUs). According to the staff of the Montgomery County Intermediate Unit, the IUs in this region work collaboratively and reach every school in Philadelphia and the surrounding counties.

The staff at the Educational Technology Training Center in Camden County points to several challenges that WHY Y should consider when approaching this market. First, training is essential, as many teachers are unfamiliar with digital technologies or their applications in the classroom. Second, schools need more digital content. Without trained teachers and adequate content, even the most up to date equipment will fail to

⁹ The Mid-Atlantic Regional Technology in Education Consortium (MAR*TEC) is one example of federal support for digital education.

be used. Third, with increasing emphasis placed on standards-based-education, it is becoming increasingly difficult for teachers to justify distance-learning programs. Coordinating distance learning between schools is further complicated by the varied operating schedules of different districts.

Target Markets

- Regional media centers in southeastern Pennsylvania, southern New Jersey, and Delaware
- Universities interested in training their students at the Learning Lab

Career Learners

Career learners are those who seek education to secure a job, change jobs, or advance their careers. This very competitive market is served by community colleges, non-credit courses at colleges and universities, government workforce development agencies, and a large number of human resources firms.

Career Learners are currently served by WHYY Advantage which focuses primarily on corporations; large institutions, such as the University of Pennsylvania; and individual entrepreneurs. Most offerings are in the area of “soft skills” training. Opportunities for WHYY also lie in Delaware and Pennsylvania’s government workforce development programs.

Target Markets

- Delaware and Pennsylvania Department of Labor
- Professional societies whose members are required to take ongoing professional education and who permit distance learning
- Human resources departments in large, not-for-profit organizations
- Broadcast radio and television professionals whose stations are going digital
- Businesses with many branches

Recreational Learners

Recreational learners are cultural patrons, cultural tourists, hobbyists, and students in an array of non-credit courses and enrichment experiences. School-age recreational learners go to content-rich summer camps in everything from art to zoology. Older recreational learners frequent Elderhostel programs. Recreational learners range in interest, age, and income but have one thing in common: they spend their leisure time learning new things.

Since the broadcast schedules of WHYY TV12 and WHYY 91FM are largely geared toward recreational learners, it is reasonable to assume that the station serves many of them as viewers, listeners, and members. Indeed, a focus group of WHYY members showed a substantial interest in recreational lifelong learning.

Target Markets

- Active seniors
- Arts, cultural, and hobby organizations
- College non-credit programs
- Parents who are interested in enrichment experiences for their school-age children
- Empty nesters and young people living near WHY Y

Public Information Learners

Public information learners are people who need or want to stay current in news and public affairs. They are ready users of information supplied by government agencies, political parties, and cause-related organizations spanning the gamut of issues and points of view.

WHYY serves this market via its ongoing television and radio news and public-affairs programming as well as its election coverage. The station has produced multimedia public affairs projects, including one on the future of the region in conjunction with the *Philadelphia Daily News*.

Target Markets

- Organizations that serve and advocate for senior citizens
- Government agencies that need to regularly communicate with residents
- Strong community organizations with constituents on the other side of the digital divide
- Public affairs, cause-related, and civic organizations with active information and outreach programs.
- Empty nesters and young people living near WHY Y

Members

WHYY members, while they span all four categories of learning, deserve special attention. The Lab will offer events and courses for members and summer camps for their children. It will offer training, community-casting, and creative services to the causes that members care about.

Target Markets

- Members interested in video, broadcasting, and other communications technologies.
- Parents who seek enrichment experiences for their school-age children
- Active seniors
- Empty nesters and young people living near WHY Y

The Learning Lab Building

The Learning Lab building must be sufficiently large to accommodate a variety of functions and sufficiently flexible to accommodate changes over time in the relative importance of these functions. Recognizing the rapid evolution of technology, the technology infrastructure should also be flexible and designed to “future proof” the building. The new building elements should complement WHY?’s current facilities.

The aesthetics of the building should take their cue from the Technology Center and evoke the excitement of a working production studio. This is one reason Civic Space has been so successful: people would rather attend seminars and events in a broadcast setting than a hotel ballroom. Continuing this design theme will marry the current building to the new building, form to function, and set the Learning Lab apart from its competitors.

The Learning Lab should have an entrance on 7th Street and also be accessible through the Technology Center. Exterior signage might add to the live ticker-tape theme on the Technology Center’s 6th-street entrance with electronically displayed images, drawing the attention of vehicular traffic along 7th Street.

Facilities

Studio stage

This space will be used for performances, demonstrations, lectures, and meetings. The space’s scale, acoustics, equipment, and seating configuration should be designed to augment the station’s current broadcast studios. Events held on the Studio Stage will likely be digitally recorded – at times before a live audience – and the recordings repurposed in multiple ways.

Training Space

This is the place where students receive hands-on instruction in digital production under expert guidance. The space should accommodate up to 16 people and an instructor. Maximum flexibility and freedom of movement are essential so students have room to learn by doing. It should be outfitted with digital cameras, editing equipment, computers, and emerging new-media appliances.

Project Shop

The Project Shop will be a place for innovation and experimentation, where community partners and Lab staffers will meet to brainstorm around new concepts, explore projects, and create productions. This is also where Lab staffers will offer advice on connection, production, and repurposing of content. Because project design is a collaborative process, this space should be equipped with special tables that allow up to four people to comfortably view a single monitor.

Digital Showcase

The original concept called for the Learning Lab to incorporate an area dedicated to exhibition and/or demonstration of new digital appliances. As noted above, this type of function is only appropriate in facilities like museums or shopping malls with high visitor traffic. Moreover, as the Franklin Institute's Future's Center, Epcot Center, and other futures-oriented attractions have shown, it is very expensive to keep such exhibits on the technological cutting-edge.

Instead of exhibiting digital technology, the Learning Lab should exhibit the digital content that is the *product* of digital technology. A Digital Showcase, a series of large panel screens, will present a changing display of digital art, PBS digital productions, school curricula, and products developed in the Learning Lab itself. It might be located in the Learning Lab's foyer/lobby and thus greet its guests. This kind of exhibition area tested well with WHY Y members during the focus groups.

Community-Casting Hub

The Learning Lab will be facilitating connections between multiple organizations and multiple sites within a single organization. The Community-Casting Hub is the place where these connections are booked and implemented.

Office and Storage Space

Learning Lab senior staff will require space for offices and storage of equipment.

Television Studio (optional)

If the Learning Lab becomes a two-story building, it could include a small studio with a large picture window framing the city's skyline looking west, for WHY Y use and rental to other broadcasters.

Amenities

Coffee Stand

The original concept for the Lab called for inclusion of a cybercafé, but research suggests this may not be viable. Food services, like exhibition areas, work best in places with a high, constant volume of traffic. Moreover, a 16-station cyber café is already part of the plan for the National Constitution Center, directly across the street from WHY Y.

Instead of a permanent cyber café, a small, mobile coffee stand, modeled on those in performing-arts venues, which will operate only during peak hours, should be considered. Focus group participants indicated they would like access to coffee while at the Lab but would not come to the Lab just to drink coffee.

Store

A small mobile shop, open only during peak hours, could generate revenue by selling premium items, recordings of WHYYPBS/NPR programs, and, perhaps, copies of the best Learning Lab productions, and reference books.

Parking

Parking seems to be a top-of-the-mind concern for potential Learning Lab users; it has already surfaced as a concern for current visitors to the Technology Center's Civic Space. Many unfamiliar with the neighborhood find it isolated and forbidding. People – especially suburbanites – have come to expect safe and convenient parking. Parking should also be a concern for WHYYP, as suburbanites account for 84 percent of its membership.

Because the issue came up so frequently among respondents, the project team investigated parking in the area. There are several public parking facilities that together can accommodate close to a thousand vehicles. These include a 650-space lot under Independence Mall, a 168-space lot under the National Constitution Center, and a private 136-space lot at the American College of Physicians immediately adjacent to the Learning Lab site. Most lots are busiest during weekdays and most available during evenings and weekends.

The availability of parking may soon change. The National Constitution Center is predicting one million visitors per year. It is reasonable to assume that when this opens and the Independence Mall renovation is completed, area parking will be at a premium.

There seem to be three ways to deal with parking. First, WHYYP could pro-actively provide visitors with information about parking in the area. Second it could explore using the private lot next door at the American College of Physicians during evenings and weekends. Finally, the station might explore construction of a lot under the new Learning Lab. Parking facilities are revenue-generators for destinations as varied as museums, theme parks, and hospitals.

Services and Products

Selection Criteria

There is a world of opportunity for WHY Y's Learning Lab; the challenge is to identify the opportunities with the greatest potential. To that end, the project team used the data gathered through its research to identify criteria that predict the greatest success. Thus Learning Lab services and products should

- **Meet the expressed needs of one or more markets.**
All Learning Lab offerings should be those that school learners, career learners, recreational learners, public service learners, and members tell us they want – and more importantly – need.
- **Use the new digital technologies.**
The Learning Lab will be an incubator for projects that use new media in innovative ways that make a difference. Experimentation using digital media to advance the community is at the heart of the Learning Lab concept and is what distinguishes it from other Technology Center activities.
- **Lend themselves to short-term and long-term financing.**
Funding for the Lab itself and its programs will be needed at many stages: research and development, piloting, evaluation, and ongoing operations. Learning Lab offerings should represent the type of activities that are typically funded by private and corporate foundations and government agencies. In addition, some products and services should be the kinds that users themselves would purchase.
- **Are mutually reinforcing and interconnected.**
People should be able to learn skills in one area of the Lab that they can apply in other areas. Connected products and services will enable staff to move seamlessly among assignments and will create a coherent identity for the Lab.
- **Build from what is best about public broadcasting.**
The Lab will build from a position of strength by capitalizing on core competencies and assets. These include
 - **Content distribution**
WHYY distributes content throughout the Delaware Valley and the entire state of Delaware via radio (91FM) and television (TV12 and DTV55) signals. Digital broadcasting greatly increases WHY Y's distribution capacity. Other platforms of distribution regularly exploited

by WHYY include its website, which received almost 93,000 hits in July 2002 and Civic Space, which hosted 60 events attended by 40,000 people in 2001. WHYY is also connected by broadband fiber to the other seven Pennsylvania public television stations and to PBS and NPR by fiber and satellite.

- **Content production**

Public broadcasting is known for excellence in sound and video recording, editing, producing, research, and interviewing. In 2001, WHYY produced 144 hours of original television news, feature, and documentary programs and 1,500 hours of radio programming.

- **Selection of quality content**

People trust public broadcasting to select high-quality, balanced, and accurate content with redeeming social value. This reputation for credibility should be cherished and fostered.

- **Connections to the community**

As noted above, WHYY has been actively strengthening its relationships with those that live and work within its broadcast range. Special efforts have been made to reach out to key constituencies: arts and culture, workforce development, education, and senior citizens. These efforts can be expanded through the Learning Lab.

Core Services and Products

Community-Casting

Community-casting describes the kind of connectivity that will be a hallmark of the virtual Learning Lab. Community-casting is about connecting one organization with others, connecting an organization with its constituents, and connecting a central organization with its many branches. Community-casts have lower production values than network broadcasts and are transmitted to specific audiences. Community-casts can be interactive, with approximately 80 percent of the content going out and 20 percent coming back.

Community-casts draw on a range of digital technology – digital broadcasting, webcasting, datacasting, cable, satellite, and bridged videoconferencing – individually or in combination. As these technologies mature, the community-casting delivery systems will evolve. The Learning Lab will be an incubator for conceiving and testing new technology combinations and connection schemes.

Moreover, community-casting will be the *raison d'être* of the virtual Learning Lab. Customers will contact the Learning Lab's community-casting technician via the Web, email, or telephone, and the technician will make the requested connection. In some cases the Learning Lab's hand might not be visible to the user at all. In other cases, technicians might be on site to assist the producer or receiver.

Work to Date

In February 2002 Curtis Music School produced a master class performance with brass players in WHYY's studios. The project was co-sponsored with Burlington County Community College. Via videoconferencing, students in four Burlington County schools were able to view the master class live and ask questions. The videoconference was conducted over ISDN telephone lines connected by a V-Span bridge. The event was also webcast via a special website WHYY created for this purpose.

In addition, WHYY and the Philadelphia Workforce Investment Board equipped servers at 15 Community Technology Centers (CTC) to receive digital broadcasts. WHYY then datacast a series of PBS-Literacy-Link programs to the CTCs, making the materials and updates accessible at any time from any computer at the centers.

Finally, WHYY's Wider Horizons program conducted an actual town meeting with many exciting virtual components. The event, which was held in Civic Space, was webcast to participants at home, who were greeted with instant survey polls, live online community chat and related webpage cues. The various technologies at work were tightly integrated to form an information-rich, highly interactive experience for all participants. The event was archived on the Web at <http://www.widerhorizons.org/archive/index.html>.

Project Examples

- The workshop on perennials at the Pennsylvania Horticultural Society's (PHS) annual Flower Show is typically over-subscribed. PHS leadership suggested that if the session were available via community-cast to its members at home, those who cannot attend in person would still be able to share in the experience.
- School superintendents, principals, teachers, and staff members of museums and other cultural attractions expressed enthusiasm for community-cast electronic field trips for students in classes and seniors in centers and assisted living facilities.
- The Executive Director of Eastern State Penitentiary Historic Site proposed working with the Learning Lab to hold a forum on prisoners' rights at the penitentiary, which would involve a community-cast with former Eastern State inmates, now at Graterford Prison, so they could converse live with Eastern State visitors.
- The Executive Director of the Philadelphia Bar Association is eager to pursue partnering with the Learning Lab to community-cast mandated Continuing Legal Education (CLE) courses to attorneys' computers at home and work.
- Representatives from the Chester County School District proposed developing and community-casting a series of live career development workshops to teachers, a project made possible by the District's fiber-optic cable network.

Production and Repurposing Content

The Learning Lab will be a center of new-media production and of re-purposing existing programs. Educators and representatives of community organizations and government agencies will work with Lab staff members to create new content. On some topics, the Lab might select and repackage the best programming and courseware available.

In addition, the Learning Lab will repackage and repurpose WHYY broadcast programming, such as daily news shows, specials, and content produced in the Lab. In the course of producing new television specials, WHYY producers could also collect additional content that would be repurposed for the Web, CD-ROM, DVD, or other distribution formats. To this end, the station will soon be investing in a digital content management system to enable the archiving and redistribution of content.

Learning Lab staff should avoid pursuing curriculum projects that require extensive pedagogical and subject-matter expertise that is not currently available at WHYY and would therefore add significant costs to the project. Instead, it should focus on providing enhancements that can enrich, enliven, and localize existing curricula.

Work to date

WHYY's new-media productions include a project funded by the Tuttleman Foundation where educational content supporting PBS children's programming was digitized and distributed for use by day-care workers. In addition, it produced a DVD edition of the original documentary *Thomas Eakins: Scenes from Modern Life*, which contained additional material not broadcast on PBS; a series of CDs repackaged from *Fresh Air*; and a sample datacast promoting WHYY Advantage. Finally WHYY Advantage is already selecting and packaging existing job enhancement programming and courseware.

Project Examples

- In collaboration with the Pennsylvania and/or Delaware Department of Labor and Industry, Learning Lab staff would produce "jobcasts," brief video profiles of area jobs that would be community-cast to students in workforce training centers. New Jersey Network performs this service for the New Jersey Department of Labor.
- A representative from Independence Visitor Center suggested that the Learning Lab could produce tours of cultural attractions that would be community-cast to hotel concierges, tourism kiosks and other hospitality industry staff.
- Npower, the Microsoft-funded organization that provides technology training and assistance to non-profit organizations, proposed developing courses on how to maximize use of computers and other digital technologies that would be community-cast to regional not-for-profit organizations.
- The Dean of Curtis Institute of Music suggested partnering to produce a DVD called "The Best of the Master Classes" selected from those staged in the Learning Lab.
- A National Park Service ranger suggested a partnership to produce a virtual tour of Independence Park's little-known sites that would be distributed to schools nation-wide via a special PBS/National Park Service partnership.

Training

Within the training marketplace, the Learning Lab's competitive advantage is that it will be a center for community production: an authentic production studio where people will learn hands-on production from production experts and leave with a product in hand. Instead of teaching the basics of computer technology, the Lab's workshops and courses should focus on creative production: how to transform ideas into quality products.

Potential training markets include community organizations, performing arts groups, teachers, and individuals. Some courses and workshops would be offered as member

benefits, some on a tuition basis, and some underwritten by professional organizations, government agencies, and foundations. One of the most promising areas is professional development for teachers, which members of the teacher focus group, school officials, and others stated as a top priority.

The best productions that result from the courses would be shown in the Learning Lab's digital showcase, on WHYYY's digital television channel, or the Learning Lab's website. Those who complete training would receive an official certificate from the Learning Lab.

Training Examples

- Radio and television professionals would update their skills and learn to create exciting digital productions.
- College professors suggested using the Lab as a site for courses in digital camera work and editing.
- Teachers, school technology departments, and education staff from museums, libraries, zoos, and other attractions expressed interest in learning how to create electronic field trips.
- AARP leadership suggested that active senior citizens might have an interest in learning how to use digital cameras and editing equipment to record their own lives or prepare family genealogies. This could be an Elderhostel program.
- Young people said they would sign up for summer workshops in production of video and music.
- Corporate human resource personnel and staff of social-service agencies are interested in learning video production techniques, so they can create content to tailor generic curriculum.

Pilot Projects

Selection Criteria

The Learning Lab would be launched with a small number of pilot projects carefully selected to test its capacities, establish its scope, and clarify its identity. To this end, the pilots must not only meet the criteria established for Learning Lab services and products but reach to higher standards. Accordingly, pilot projects would

- **Feature strong partners.**
Learning Lab pilots would be forged with partner organizations with the desire, capacity, and stamina needed for creating, seeking funding for, and implementing these projects. The partners would also be the kinds of organizations that might establish a long-term relationship with the station. Some potential partners have emerged during this planning study. Others have already worked with WHYY.
- **Represent evergreen services and products.**
These are the types that can be repeated over time for different markets. The Lab would seek to pilot services and products that can be created, tested, refined, and established as ongoing offerings. The pilots should also be scalable, the type that can begin small and grow over time.
- **Use consumer-ready digital technology.**
Pilot projects should test applications, rather than the technology itself. Accordingly, pilots should employ technology that has already been tested, thus avoiding the problems that arise from unreliable hardware and software. The pilot projects that follow use currently available technology as well as that which will be user-ready by August 2004.
- **Have easily identifiable sources of financing.**
WHYY needs to continue the momentum built through this planning study. Thus it should only select pilot projects where the funding or financing comes from a past funder or one that has a track record of funding digital projects. Section VIII, "Fundors and Partners," lists government, foundation, and corporate funders that fit this criterion.
- **Demonstrate how the Learning Lab integrates content development, community-casting, and training.**
The ideal pilots would tap into a number of Learning Lab services and products, thus illustrating the relationships among them and establishing the identity of the facility.

Sample Pilot Projects

Community-Cast Partnerships

A number of public-affairs groups with lecture series and performing arts organizations were very interested in performing at the Lab. A selection of these would be invited to present on the Studio Stage, and the performance would then be offered via interactive community-cast to schools, subscribers, or the memberships of both WHY Y and the partner organizations. This project will have to be refined over time. Below are two examples of how community-cast partnerships might work:

Digital Arts in Education Series

School personnel expressed strong interest in bringing the best of Philadelphia-area performance groups into the classroom via digital technology. With its connections in the arts and education communities, WHY Y is primed to accomplish this goal.

On a regular schedule, the Learning Lab at WHY Y would community-cast a program to participating schools throughout the region. The program would feature the following elements:

- Moderators
- Live performance before a studio audience of school children and datacast to regional classrooms
- Behind-the-scenes view of the performing organization, recorded in advance
- Interaction between the classes, moderators, and performers, via email, chat, and call-in
- Pre- and post-program activities for students in the classrooms.

Target Partners

Schools with the necessary networks and hardware. (Each year of the program, five school networks would be provided with datacast servers.) Performing-arts groups that produce signature lecture or small-scale performance series. Curtis Institute of Music's Master Classes would be one of the first pilots, based upon their use of world-class talent, ongoing relationship with WHY Y, and strong interest expressed by the dean.

Project Activities

- Selection of participating schools and performing arts organizations from those expressing interest during the planning study
- Supplying five networked school clusters with datacast servers each year

- Training sessions for schools and performing arts organizations.
- Creation of a project website, accessible from both www.whyy.org and the partner organization's site, with interactive features, such as chat, webpage cues, and instant polls
- In collaboration with the partner organization, the presentation and recording of the event at the Lab's Studio Stage before a live audience
- Live streaming datacast of the program from the project website, where visitors can access information about the performance, chat with each other, and request songs/readings
- Post-performance discussion, featuring questions from the live audience, and the datacast audience
- Archiving and repurposing the performance and discussion for a permanent Web feature and datacast
- Implementing a number of partnerships over a three-year period
- Evaluating and refining the concept.

Technology

Collaborative webcasting and datacasting from the Learning Lab's fully-outfitted studio space.

Staffing Functions

Community-cast technical support, Webmaster, media producer, broadcast technicians.

Financing

A three-year grant from a regional or national foundation or government agency concerned with the applications of digital technology in education and the arts.

Future

Once developed, the template would be applied to organizations such as Settlement Music School, Philadelphia Film Society, and Painted Bride Art Center.

Professional Development Courses

The Learning Lab at WHYY has the potential for serving as a producer and distributor of continuing education courses for a range of professionals: attorneys, accountants, medical and mental health professionals, government workers, etc. Professional education for attorneys seems a good place to start since, beginning in 2003, Pennsylvania attorneys will be able to take three professional education credits per year via distance learning. The Philadelphia Bar Association expressed interest in partnering with WHYY.

Continuing Legal education is taught by practicing attorneys with limited on-air experience and no experience in pedagogy. WHYY brings to the project its exper-

tise in on-air production, its ability to produce video inserts, and its multi-platform distribution capacity.

The courses would be streamed live from the Learning Lab via the Web and archived for later use on home and office computers.

Target Partners

Philadelphia Bar Association and perhaps an educational institution with distance learning credentials.

Project Activities

- Selection of course topics and presenters in conjunction with Philadelphia Bar Association.
- Developing one or more three-hour courses with the attorneys and an instructional designer.
- In collaboration with Philadelphia Bar Association, the presentation and recording of the course at the Lab's Studio Stage before a live audience.
- Live streaming of the program from the project website, where visitors can access information about the course and chat with the instructor
- Repurposing the course and distributing it to attorneys.
- Implementing a number of courses over a year.
- Evaluating and refining the concept.

Technology

Collaborative webcasting from the Learning Lab's fully-outfitted studio space. Datacasting can be added when more sites are equipped to receive the digital signal.

Staffing Functions

Community-cast technical support, Web design and maintenance, media production, broadcast, training, instructional design.

Financing

Courses will be tuition based.

Future

Once developed, the template would be applied to other professional associations. The courses will shift to datacast format, as the technology continues to mature and more PCs are set up with DTV cards.

Electronic Field Trips for Schools

During the planning study, teachers, principals, and regional-media-center staff from K-12 schools, as well as representatives from cultural organizations, were very enthusiastic about the concept of electronic field trips. During one focus group, teachers explained why: electronic field trips enable students to experience inaccessible or distant locations without the logistical problems and costs associated with transportation, chaperones, class-coverage, or parental permission. For teachers, the ideal electronic field trip would include a knowledgeable tour guide with whom the class could interact, pre-visit information, a demonstration, and a large screen projector so the entire class could watch.

With tourism down, the region's hospitality industry is focusing on re-introducing residents to all this region has to offer. Electronic field trips could be packaged to highlight the best attractions in the region. The following pilot example will bring area attractions into local schools.

On a regular basis, the Learning Lab at WHY? would offer programs comprising the following:

- Knowledgeable tour guides at the site.
- A tour of the site, perhaps pre-produced.
- Interaction via videoconferencing
- A chat room on the Learning Lab website

Target Markets

Regional media centers and/or K-12 learning labs serving a group of schools and area attractions, such as museums, historic sites, special collection libraries, and/or zoos.

Project Activities

- Exploring and refining the technical, logistical, and budgeting needs of electronic field trips
- Working with partners to create the curriculum for a training program for teachers and the educational staff of attractions in the digital production technology they need for electronic field trips
- Selecting a group of regional sites.
- Developing the content and format of the experience with schools and cultural partners
- Aligning content to state academic standards
- Determining how schools can be supplied with equipment: via purchase or loan.
- Implementing a number of electronic field trips over a two-year period
- Evaluating and refining the concept.

Technology

Videoconferencing using ISDN telephone lines or IP Web connections. Multiple schools could participate simultaneously with a bridge. Large projection screens, if possible.

Staff Functions

Management, community-cast technical support, outreach and coordination, instructional design, media production, training.

Financing

A three-year grant from a regional or national foundation or government agency concerned with the educational applications of digital technology. Focus group data suggests that an electronic field trip should cost schools no more \$100-\$125, plus telephone line charges.

Future

The program would be expanded to other attractions and experts, as well as other schools, school districts, and senior centers.

Digital Training and Production Partnerships

Traditionally, public television has produced content and sent it out to the community. Digital training and production partnerships will help community groups and individuals produce their own content on issues that concern them. Some of the productions created through these partnerships may ultimately be distributed through datacasts, the Learning Lab's website, or one of WHY Y's current distribution platforms.

The Local Access Unit (LAU) project is a training and production partnership that involves portable digital video and editing equipment, which WHY Y recently acquired. The equipment is on the "prosumer" level, more user-friendly than professional production tools but higher-end than consumer home video cameras. Individuals trained to use it can create near-professional-quality productions. In fall 2002, WHY Y began training community partners to use the LAU. Art Sanctuary in North Philadelphia has already used the equipment to film the Cuban dance troupe Cutumba, and other groups, including Bucks County PEG Channel(s) Access Corporation, the Chamber Orchestra of Philadelphia, and the Philadelphia Zoo, have either undergone training or are in discussion with WHY Y.

Target Markets:

Government agencies as well as cultural, human-service, cause-related, and neighborhood-based organizations with substantial capacity and interest, including those identified during the planning study.

Project Activities

- Selection of community partners from those expressing interest during the planning study
- Refining the course used to train Art Sanctuary
- Training partners in use of equipment
- Filming and editing of Local Access Unit production by community partner with WHY Y's assistance
- Creation of a WHY Y website to stream LAU content
- Possibly distributing production through DVD, CD-ROM, DTV, datacast, or local access cable
- Assessing and refining project.

Technology

Hand-held audio and video equipment, and non-linear editing systems. Web, DVD, CD-ROM, DTV, or datacast for distribution.

Staff Functions

Project coordination, instruction in media production, instructional design, WHY Y technical-staff consultation.

Financing

Seed funding for pilot projects is covered by a CPB grant. As future projects develop, community organizations and WHYY will seek funding together.

Future

The Local Access Unit project can be expanded to include more cultural and cause-related organizations, as well as educational institutions. Taking its cue from the Digital Clubhouse Network, the Learning Lab can develop courses for children on both sides of the digital divide, the elderly, and anyone with a story tell.

Digital Town Meeting

During this study, organizations expressed an interest in using digital technologies to communicate with their branch offices, members, and constituencies. One communications solution the Learning Lab can offer to these organizations is the digital town meeting. Employing a range of technologies, including videoconferencing, datacasting, and collaborative webcasting, digital town meetings will allow viewers in remote locations to participate in events held on the Learning Lab's Studio Stage.

Target Partners

Issues organizations with branch offices and/or widespread memberships and constituencies. Candidates for digital town meetings that emerged during this study include AARP, the Pennsylvania Economy League, and 10,000 Friends of Pennsylvania. In some cases a print media partner may be involved.

Project Activities

- Selection of participating organizations from those expressing interest during the planning study
- Creation of a project website, accessible from both www.whyy.org and the partner organization's site, with interactive features, such as chat, webpage cues, and instant polls
- In collaboration with the partner organization, the presentation and recording of the town meeting in the Lab's Studio Stage before a live audience
- Live collaborative webcast of the meeting from the project website
- The entire project is digitally archived as a permanent record.
- Implementing a number of town meetings over a three-year period
- Evaluating and refining the concept.

Technology

Collaborative webcast. For smaller meetings, videoconferencing technology may be used. Datacasting can be added as more sites are set-up to receive the signal. Some meetings may feature video produced at the Lab.

Staff Functions

Webmaster, executive producer, community-casting technical support, camera, sound, and lighting.

Financing

Foundations or contracts.

Future

This template will evolve, along with the technology, over time.

Digital Production Training for Broadcast Professionals

One of the greatest challenges facing public broadcasting is the dearth of skilled producers. Stations are in real need of quality producers and have no time to train existing staff up to the next level. The Learning Lab has the opportunity to step in and create courses that can advance the professional accomplishments of public radio and television professionals locally and nationally.

Project Activities

- Determining topics for pilot courses
- Development of curriculum for three-day hands-on courses taught by national-level independent and station-based producers
- Development of a process for screening and selecting participants
- Sending a “call for applications”
- Implementing a couple of courses over one year. As a part of this, producers would produce videos for review and critique by instructors and the class.
- Evaluating and refining the concept.

Technology

Hand-held video and audio equipment, DAT tapes, computers loaded with basic editing software, work stations. Access to WHY Y studios.

Staff Functions

Project director selected from WHY Y roster of national level producers. Sessions taught by WHY Y producers, possibly augmented by university faculty and award-winning independent and station producers.

Financing

Reduced tuition paid by participating stations. Most of the costs covered by a grant from a federal government agency or national foundation.

Future

Courses could be developed for television producers as well as radio producers. On-site workshops could be developed for entire stations. Content could be re-fashioned into courses for college or graduate students, presented in partnership with area universities.

Training for K-12 Digital Trainers

Technology staff from regional media centers expressed interest in a course that would combine video production and editing with integration of content into classrooms. Regional-media-center staff then would be equipped to take this expertise back to the teachers in their school districts.

Target Markets

Technology staff from regional media centers in southeastern Pennsylvania, southern New Jersey, and Delaware

Project Activities

- Developing, in partnership with a committee of IU staff, the format and content of the course. The curriculum should include hands-on training and production of a DVD for participants to take home.
- Implementing the course over six consecutive months.
- Evaluating and refining the concept.

Technology

Hand-held video and audio equipment, non-linear editing systems, computer graphics.

Staff Functions

Management, instructional design, instruction in media production. WHY? technical staff serves as consultants.

Financing

A two-year grant from a regional or national foundation or government agency concerned with the applications of digital technology in the classroom.

Future

Once the curriculum is developed, the course could be repeated in the future.

Digital Camp for Kids

Museums, zoos, private schools and other not-for-profits have developed popular and profitable summer camps for kids. The stunning success of the Animation Stewdio and the Digital Clubhouse Network proves that kids are interested in hands-on video production. The goal of this project is to test the concept of a digital production camp at the Learning Lab. Focus-group data suggests this type of program is attractive to WHYY members' children. Members in the group also indicated they would be willing to forgo premium items in order to cover the cost of tuition for low-income children.

Target Market

Children of WHYY members, listeners, and viewers. Children from the other side of the digital divide.

Project Activities

- Developing a weeklong curriculum in digital video and also digital audio production geared toward two age groups: kids 9-12, and kids 13-16. The curriculum should include a tour of WHYY, hands-on training, and the production of a DVD that the kids can take home.
- Advertising campaign over WHYY TV12, WHYY 91FM, www.whyy.org, and member publications.
- Implementing four camp sessions over a summer.
- Evaluating and refining the concept.

Technology

Hand-held audio and video equipment, non-linear editing systems, computer graphics.

Staff Functions

Camp counseling/instruction in media production, instructional design. WHYY technical staff consultation.

Financing

One-year grant for curriculum development and scholarship subsidy for low-income youth. Also offered to members via tuition.

Future

Once the curriculum is developed, the course would be re-shaped as an Elderhostel program, a non-credit college course, and a premium offering for WHYY members.

Course on Amateur Video Production

The Learning Lab would offer a course with three sessions: how to shoot video, how to edit video, and a screening of productions. The productions might be distributed on WHYY's secondary digital channel, the Lab's website, or displayed in the Lab's digital showcase. Courses on digital cameras and editing were frequently mentioned in a focus group of WHYY members.

Target Markets

Empty nesters and young people living near WHYY.

Project Activities

- Developing a three-session curriculum in digital video. The curriculum should include hands-on training and production of a DVD for participants to take home.
- Offering the course as a premium in a future pledge drive.
- Implementing the course over three consecutive months.
- Evaluating and refining the concept.

Technology

Hand-held audio and video equipment, non-linear editing systems, computer graphics.

Staff Functions

Instruction in media production, instructional design, WHYY technical-staff consultation.

Financing

Tuition. The course would also be offered as a premium item to WHYY members.

Future

Once the curriculum is developed, the course would be re-shaped as an Elderhostel program or non-credit college course.

Exhibition of Digital Art

The Provost of the University of the Arts expressed strong interest in an annual juried exhibition of students' digital artwork to be held at the Learning Lab. Digital art is an interactive form that includes games, animation, and multi-media site installations. The work could be up for a few weeks in the Lab and then some exhibits could be presented on the websites of the Lab and the university for an extended period.

Target Partners

The University of the Arts would curate the show in collaboration with the Learning Lab.

Project Activities

- Selection of art
- Creation of promotional materials and website
- Installation of art
- Maintenance of website as exhibits change

Technology

Plasma screens, Web.

Staff Functions

Webmaster, site installation. Curator to be provided by partner institution.

Financing

Although in-kind services would cover much of the cost, there may be the need for some grant support.

Future

The University of the Arts pilot could possibly lead to other exhibitions of digital art in the Learning Lab, giving the general public reason to come and enlivening the space for visitors.

Funders and Partners

Funders and partners will support the Learning Lab's activities.

Funders

The following have funded digital projects in the past:

Foundations

Rockefeller Foundation
Connelly Foundation
Annie E. Casey Foundation
Geraldine R. Dodge Foundation
Ford Foundation
William Penn Foundation
The Pew Charitable Trusts
John S. and James L. Knight Foundation
The John D. and Catherine T. MacArthur Foundation
Markle Foundation
Philadelphia Foundation

Corporations

AOL Time Warner Foundation
AT & T Foundation
Microsoft Giving – Community Affairs
Intel Education

Government

Delaware River Port Authority
Pennsylvania Department of Community and Economic Development, Office of
Technology, Digital Divide Program
Pennsylvania Department of Education, Office of Educational Technology
National Endowment for the Arts
Corporation for Public Broadcasting
U.S. Department of Commerce, National Telecommunications and
Information Administration
U.S. Department of Education, Preparing Tomorrow's Teachers to Use Technology

Partners

One of the greatest challenges of not-for-profit, technology-based facilities is how to keep the technology up to date. This challenge can best be addressed by establishing appropriate partnerships with companies that manufacture hardware and software. The Lab can offer a venue for beta testing products and a high-profile demonstration of civic commitment.

Technology partnerships can be short-term and project-based or extended in order to secure hardware and software upgrades. The optimum technology partners are those with a reputation for excellence, a willingness to provide ongoing technical support, an appreciation for the unique nature of a public broadcasting entity, and a perfect match between their product lines and the Lab's needs.

Technology partners for the Lab might include

- Providers of technology furniture, such as workstations
- Providers of equipment, including computers, operating systems, lines, video cameras, lighting, audio recorders, etc.
- Providers of software, including editing and educational software
- Providers of distribution technology, including cable and Web access.

Other commercial partners include

- Publishers of digital educational content
- Media partners, such as commercial radio and television stations and cable networks. These could partner on projects that require multi-media such as the digital town meeting described above.

Finally, there are not-for profit organizations that could partner for specific projects:

Educational institutions, service organizations, cultural organizations, and government agencies that might provide in-kind services, instructors, interns, and content.

Measures of Success

Within three years of full operation, the Learning Lab should be evaluated. What follows are indicators of viability and effectiveness suggested by station leadership. They are based upon the Lab having a strong relationship with WHY Y. If the Lab evolves into a separate not-for-profit organization, these criteria may change.

1. Financial viability and independence

All costs associated with operating the Learning Lab will be met by a variety of earned and contributed revenue sources. In addition, funding for the Learning Lab will complement, rather than compete with, WHY Y's existing fund-raising.

2. Number and range of users

The Learning Lab will see the users of its building and services increase over time. Its users will include individuals and organizations from a variety of markets.

3. Customer satisfaction

Learning Lab users will enjoy and learn from the virtual and actual experiences, as measured by user feedback and referrals.

4. Recognition

Greater Philadelphia, southern New Jersey, and Delaware will see the Learning Lab as a necessary and valuable service. The public broadcasting industry will see the Lab as a national model. Media coverage, awards, and increasingly larger and more prestigious grants are measures of success.

5. Membership benefits for WHY Y

The Learning Lab will foster loyalty to the station. It will help transform transactional members into institutional members. A member survey would measure the impact of the Learning Lab on member renewal. In addition, station members will opt for a Learning Lab experience instead of another premium item. Premiums are not tied to the station's mission; Learning Lab experiences are. This can be measured by a decrease in the ratio of total premium items to total members over time, or a decrease in the station's expenses for premiums.

Policy Decisions

A new facility of the magnitude of the Learning Lab raises a host of questions for WHYY's board and management. These include

1. What is the optimum governance structure for the Lab?

The Learning Lab might operate as a separate not-for-profit organization with its own board and 501 (c) (3) tax exemption. It might operate as a separate department under WHYY's umbrella. Or it could begin as part of WHYY and evolve over time into a separate not-for-profit organization. Each option carries benefits and costs, both for the Lab and the station. Ongoing operational funding will be the critical factor, whichever option is selected.

2. When should funds be raised to build the Learning Lab building?

In order to raise the funds, WHYY will need to demonstrate the community's interest in the Learning Lab and present a track record of successful digital projects. While the planning study documents community interest, the station has yet to develop a critical mass of successful projects. Happily, community-casting and the production/repurposing of content can happen without the new Learning Lab building, so the station can continue expanding its digital project portfolio.

In addition, the philanthropic climate must be right to raise the funds. On one hand, fund-raising for any new venture is problematic in this economic climate. On the other hand, digital technology projects are currently very attractive. It is therefore important that funds be raised before the digital revolution passes and the appeal of the Learning Lab declines.

3. Who will pay for Lab services?

This is a question that arose frequently in meetings with community organizations. Many educational and not-for-profit organizations and many individuals that want to use the Lab will lack the resources to cover the cost. Recognizing this, WHYY's leadership is already thinking about establishing a dedicated endowment to provide ongoing subsidies that can reduce costs for some classifications of users.

4. How will the Lab interact with the Technology Center?

Whether the Lab is an independent organization or a department of WHYY, it will have to interact with the Technology Center. Here, there are a host of issues that must be resolved, including flow between the new and existing building, use of distribution platforms, scheduling, technical support, equipment, staffing work rules, maintenance, and security. For practical and financial reasons, it seems important that the Lab does not duplicate elements available at the Technology Center.

5. What should the process be for selecting organizations with which to work?

If the enthusiastic response of groups interviewed during this planning study is any indication of the future, calls for the Learning Lab's services will dramatically exceed available resources. Moreover, some organizations – especially those on the other side of the digital divide – that could benefit the most might lack the resources to participate. The mission of the Learning Lab is *to share the power of digital technology to foster a more connected and informed community in southeastern Pennsylvania, southern New Jersey, and Delaware*. Open and equitable policies and selection procedures must be established to ensure that the Lab remains faithful to this mission.

6. Who will own the products developed at the Learning Lab?

As recent experience in e-commerce has shown, the issue of ownership rights is very complicated. The issue is further complicated in this case, for if the Lab retains some level of ownership over products, then these products must meet the standards of quality, accuracy, and balance that are the hallmark of public broadcasting.

Conclusion

For southeastern Pennsylvania, southern New Jersey, and Delaware, the Learning Lab at WHYY is a fresh, dynamic concept that resonates with diverse sectors, organizations and individuals.

Why is this?

- Because the Learning Lab is being launched at WHYY, a highly respected, visible, media outlet – the region’s largest not-for-profit communicator.
- Because the vision combines a facility that is open to the community with a service that connects it in new and interactive ways.
- Because the digital revolution is in the air and on the horizon. People know these technologies are in their future, but they don't know how. The Learning Lab puts the technologies in focus, makes them real.

Educational applications of digital technology are already gaining widespread acceptance. But the planning study proved that these technologies have a much broader scope, for they can revolutionize communications within and among a vast range of sectors. In fact, some of the most exciting applications mix a variety of technologies and connect a diversity of organizations.

Because of its standing, access, and technical capabilities, WHYY is the *only* place in the region that can spawn a Learning Lab that can bring the full digital pallet to the entire community.

Appendices

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Appendix A: People Consulted for this Report

School Learning

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Appendix B: Glossary

Analog: The technology used for more than 50 years to transmit conventional TV signals. The waves used in analog broadcasting take up much more bandwidth than do the zeros and ones used in digital broadcasting.

Bandwidth: The amount of information that one can send through a connection. Bandwidth is measured in bits-per-second (bps). A standard page of English text contains about 16,000 bits.

Community-casting: A one- or two-way connection over which content with lower production values than traditional broadcasting is sent to specific audiences. Community-casts can be used to connect one organization with others, an organization with its constituents, or a central organization with its many branches

Broadband: High-speed transmission of data. Broadband Internet typically refers to connections using cable modems, DSL, T1 lines, and faster devices.

Datacasting: The inexpensive process of sending large amounts of data to specific televisions and computers via a digital television signal.

Digital Television (DTV): Refers to transmitting a broadcast signal by encoding it as zeros and ones, the digital binary code used in computers. DTV can provide higher quality video and audio or provide four, five, or more channels in the same bandwidth required for one analog channel. In addition to picture and sound, digital broadcasts can transmit large amounts of data (see **Datacasting**).

Distance Learning: Using communications technology to create interactive learning experiences between educators and students separated by space or time.

Fiber Optics: Transmitting data through light pulses along glass or plastic fibers. Fiber cables can carry much more information at a time than regular copper wire. Long distance telephone networks run over fiber-optic cables.

High Definition Television (HDTV): A digital television format that offers approximately twice the clarity of today's standard television. Provides crystal-clear, quality widescreen pictures with compact-disc-quality surround sound. HDTV duplicates movie theater display quality.

Multicasting: Broadcasting several channels at once via digital signal in the same space previously needed to broadcast one analog channel. Eventually, a WHY-DT viewer might be able to receive Sesame Street or Nova at the same time and choose which program to view.

Streaming media: Multimedia content—such as video, audio, text, or animation—that is displayed on a computer screen at the same time it is being received from a source such as the

Internet.

Videoconferencing: The process by which two or more geographically-separated parties can communicate face-to-face via monitors and microphones. The signal used in videoconferencing is usually, but not always, digital and is most commonly sent over ISDN-telephone lines or the Web.

Webcasting: Using the Web to deliver a live or delayed audio or video broadcast.

Appendix C: Focus Group Report

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WHYY LEARNING LAB Focus Discussion Groups

REPORT

July 30, 2002

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BACKGROUND

Purpose

The purpose of this qualitative research was to obtain opinions from:

- > Early Adopter Teachers about technology and how they use it in the classroom and to learn their reactions to the planned WHY Y Learning Lab.

- > WHY Y Members about technology and how they and their family use technology in the home and to learn their reactions to the planned WHY Y Learning Lab.

Methodology

- Three focus discussion groups were conducted and included a total of 29 participants. One focus group with 11 Early Adopter Teachers was held on June 17, 2002. Two groups were held with WHY Y Members on June 17, 2002 (7) and July 11, 2002 (11). The second members group was held to verify findings from the smaller original members group.

- All focus groups were moderated by Mia Argentieri of Argentieri Marketing Research. Each group lasted two hours and was audio taped. The Members group on July 11, 2002 was also video taped.

- On behalf of WHY Y, Nancy Moses, consultant to WHY Y and Project Director for the Learning Lab Planning Study, presented background information on the WHY Y Learning Lab to each group. This set the stage for the group discussion on the Learning Lab which followed.

- Early Adopter Teacher Specifications:
 - All are full time teachers who have taught from three to 33 years.
 - Mix of men and women who teach math, science, or computers.
 - Mix of public, private or parochial schools located in Philadelphia, Montgomery, and Bucks counties.
 - Mix of high school, middle, and elementary grade levels.
 - All have at least one computer in the classroom.
 - In the past three years, all have done at least one of the following:
 - Received a grant in math or science.
 - Attended a continuing education course or workshop related to math, science, or computers.
 - Involved in a special project or event related to math or science.

- Mix of ages.
- All are Caucasian or African American.
- WHYH Members Specifications:
 - All were recruited from a membership list provided by WHYH.
 - Range of membership from one to 22 years; 61% have been members for six years or longer, 39% have been members for five years or less.
 - Mix of WHYH radio and television members.
 - All belong to various cultural institutions and have attended several cultural events over the past two years.
 - Mix of Philadelphia, Montgomery and Delaware counties.
 - Mix of income levels and educational backgrounds.
 - Mix of ages: 3 in their 20 to 30's, 8 in their 40's and 7 in their 50's.
 - Mix of Caucasian men and women.
- All participants received an honorarium in appreciation of their participation.

ANALYSIS

Qualitative research aims to provide insights and hypotheses for consideration in policy discussions or quantitative research. Although results from the research can be quite compelling, it should be understood that these findings are not based on a scientifically drawn sample and are not necessarily representative of persons in the target population, not even of all persons meeting the same qualifications as the respondents themselves. To gather information that can be projected to the population, a controlled, quantitative study would be required.

Quotations included in this report are intended for illustrative purposes only.

SUMMARY OF FINDINGS

I. EARLY ADOPTER TEACHERS

A. Teachers: Digital Technology in the Classroom

All indicate they have at least one computer in the classroom. About three quarters either have in the classroom or have access to an instructional television, digital camera, and video camera.

1. Computers: The number of computers in each classroom varies.

Several mention having one, three, or seven in the classroom. The Computer Lab teacher has 39 computers in the lab classroom. One teacher mentions bringing additional computers (on wheels) into the classroom. Another teacher brings her own laptop into the classroom to add to the seven provided by the school.

Examples of some routine student uses of computers in the classroom include:

- Research on the Internet investigating websites.
- Word processing for writing projects.
- Educational software as a reward if a student is finished an assignment early.

Teachers have implemented a variety of successful projects using the computer in the classroom including:

- Research project on the Philadelphia Zoo where kids searched the Internet to select pictures which they scanned, printed out, enlarged, and then used for their project.
- Students used digital cameras to put together a PowerPoint presentation on the Web which they accessed frequently.
- Linked computer to the graphic calculator. Students traced their hand, found equations for the hand, and did a scatter plot that showed the progression of the equations.
- Students completed other subject assignments in Computer Lab class.
- Computer Lab students took a class in Web design.
- Computer Lab high school students teamed with an elementary school teacher to introduce her class to working on the Web.

- Using the computer with projector attached to project student's presentation on a screen so everyone in class could easily see it.

- *Inspiration* software for mind mapping and reviewing for final exams.

2. Internet: Almost all teachers incorporate the Internet in classroom assignments for students.

Many stress the importance of using the Internet properly. One teacher speaks for others when he says:

> "First I want them to realize how easy it is to get a tremendous amount of information but second I want them to learn to differentiate worthy information from useless information. Because that seems to be the biggest problem."

> "I've really tried this year to get my kids to realize that it is a tool and not something you just sit in front of and play a game all the time. The games are okay for logical thinking but at the same time you need to teach yourself how to use it as a tool."

A concern for many teachers, particularly those who teach the upper grades, is the issue of copying information from a Web site.

> "My goal for myself for next year is to develop enough research topics that allow them to use the net but prevent copying. So the topic I give them is such that they can't download something off the Internet and present it."

One elementary level teacher told how she had the children do the research, and then stand up in front of the class and share what they learned from the research.

> "They were so thrilled to be able to tell me what they learned rather than recite what they saw on a piece of paper."

One teacher has students e-mail writing assignments to her. This way they learn how to use e-mail technology.

3. Digital Cameras: A few teachers use digital cameras in the classroom.

On the first day of school one teacher taught all the kids how to use the digital camera. They took pictures of each other, and put them on a disk. Then at the end of the year, they took more pictures, put them on the same disk, resorted,

matched them and printed the pictures out to see how they changed since the start of the school year.

Another project involved taking digital pictures, creating captions to go with the pictures and then putting it on the teacher's bulletin board.

4. Video Cameras: Few mention using video cameras in the classroom.

One teacher tells us that students who are part of the gifted program use video and digital cameras frequently to record school activities such as multicultural shows, banquets, and independent study groups. They then made a DVD which they sold.

As part of a History and Science project, students visit various museums and water companies. They video tape the visits and then use the material on the tapes to compare and contrast facilities and usage.

5. Instructional Television: Broken instructional televisions, inappropriate programming, and inability to obtain video copies of programs limit teachers' utilization of instructional television in the classroom.

Because the instructional television is usually broken, one teacher has taken to using instructional television videos like a lending library. A child takes home a video, writes a report and turns in both the report and the video.

6. Graphing Calculator: About half of the teachers use a graphing calculator and half of the remainder would like to use one.

> "Whenever anybody talks about technology in the classroom, they always just assume it is a computer. For mathematics and some of the sciences we use the graphing calculator. This is our technology. I mean I use it constantly."

7. Computer Accessibility: Availability of computers in the student's home varies.

Teachers think that zero to half to almost all of their students have a computer in the home. In addition there are numerous places in and out of school where a student can find a computer to use. Some locations mentioned include: school library, public library, classrooms, after school programs, computer labs, recess, and homes of friends or relatives.

One teacher only gives research projects that can be done in the classroom because she has received complaints from parents who do not have a computer in the home.

B. Teachers: Training in Digital Technology

1. Teachers learned to use the computer, associated soft ware, and the Internet primarily by teaching themselves, learning from a family member, colleague, or student and/or through workshops.

> *“For most of us in the room the computer is probably self-taught.”*

> *“A couple of workshops and then just exploring. The kids, they know more than we do. Just exploring.”*

> *“I’ve held workshops for teachers in my school. But they are not very willing to come. I think they are afraid of not knowing something.”*

2. Teachers have received technology training through various sources. Examples of technology training include the following:

- Computer center at the school for the cluster (administrative name for a group of schools). Workshops are held after school for teachers in the cluster.
- Forty hours of Microsoft training paid for by the school district.
- Perkins money which is federal grant money is often used for vocational training. It is frequently used for technology training. This type of training is voluntary, takes place in the school, and is taught by other teachers.

> *“One of the advantages of a high school is that you do have people that are specialists in those areas.”*

- Informal networks. Teachers are aware of which colleague knows a particular software program and will ask that person to provide help.
- The archdiocese often provides workshops in the summer and sometimes after school. One teacher mentions a nominal fee of \$10.00 per course. She also feels that most of the teachers in her school are “on their own.”
- State Act 48 mandates that teachers must take 180 continuing education credits over a five-year period In order to keep their certification. This is a major motivator for teachers to take classes.
- Compass Learning is an outside resource, located just off the Schuylkill, brought in by the School District of Philadelphia to help ready students for

the Pennsylvania System of School Assessments (PSSAs). In addition to receiving iMacs, teachers are trained in how to assess an individual student's strengths and areas for improvement relative to the PSSAs.

- Philadelphia School District provided courses on Cisco Networking and the new Mac OS X operating system.

3. Almost all of the teachers participated in technology learning in the last year. Learning about technology and earning continuing education credits are the motivators for enrolling in technology workshops.

> *"(Act) 48 credits."*

> *"I just want to know more about technology."*

4. Macs are not the only types of computers found in schools. PCs are common too. Some teachers mention having both types in their classroom.

> *"The ones that get donated to the school are generally PCs. So in my classroom I have two of each."*

5. Most teachers feel that the type of computer used in training is not an issue because the software runs on both platforms. Some feel they could use the information more easily and effectively if they learned on the same type of computer they have in the classroom. What seems to be more important is the ability to take what they have learned and utilize it with their students in the classroom. Integrating the material in a timely fashion is also very important.

> *"I have a tough time because I feel like I teach these kids how to do all this stuff on a Mac, but then...they can't even get the word processing open (on her IBM ThinkPad she brings to class) because it is different."*

> *"Can I take what you are showing me and can I make use of it? That is what would be important to me."*

> *"How to make it useful to the children."*

> *"There is so much you have to do to finish the curriculum... How do I integrate seamlessly so that it doesn't take over? "*

6. When asked about the greatest challenges they face in using computers and technology in the classroom, teachers mention the frustration of broken equipment -- particularly broken instructional televisions, the challenge of

keeping students focused on the computer assignment, and creating a system that allows equal access for each student.

> *“Broken equipment. I think a lot of time when we get grants, the (Philadelphia) school district will go out and buy these things but they don’t buy service contracts with the equipment and when it is broken it is just sitting.”*

> *“Kids want to play more than they want to learn.”*

> *“I think when you are doing that kind of thing (keeping students on task) you need more than one person in the classroom.”*

> *“Some of these kids know more than I do. It is hard to know what to do.”*

> *“If you use it for a reward for students, you always have the same student. So, you have to add a mix.”*

C. Teachers: Reactions to the WHY Learning Lab

These Early Adopter Teachers are genuinely excited about the planned WHY Learning Lab. They immediately start asking questions and thinking about ways to use the technology to benefit their students. They mention many ideas including:

❖ The Learning Lab could be a place to investigate and create projects for students. Teachers would like instructional time.

❖ The Learning Lab could also be the venue for teaming up with another school.

> *“It is such a hassle now to do something with another school... This might be a little easier.”*

❖ A Teacher who runs a summer camp would like to add virtual field trips to the activities. Others also find the virtual field trip concept appealing.

> *“I think the virtual field trip sounded great. I don’t need any chaperones. Nobody goes to the bathroom.”*

> *“Exactly. I don’t have to headcount 40 children.”*

> *“I think that is the greatest idea. I teach in North Philly. We talked about a farm and my kids were flooded. These are low income kids*

from low income families that may never leave Center City Philadelphia – to teach them that other things exist.”

> “The PA State Science Assessment that is coming out is very agriculturally based. We live in an agricultural state and my kids are being expected to know stuff about perk tests and other things that are totally alien. So, being able to take them out into the country to a farm or have them get to that (the Learning Lab) before they get to (the farm) would be even better.”

> “I asked my kids about a crocus on a test. Center City Philadelphia kids don’t know what a crocus is.”

- ❖ Others like being able to bring students to the Learning Lab.
- ❖ One math teacher who has a number of Chinese students would like to communicate with a math class in China to see what they are learning.
- ❖ Another wonders about accessing the library of all the great WHYY instructional tapes because his own copies (i.e. Annenberg Math and Annenberg Chemistry) are becoming worn out. Others would use the Learning Lab as a source of new video material for their students.
 - > “I have drawers full of video tapes that are aging and I don’t have access to get them renewed...Could I just go online to the library at WHYY and pull out that tape to show in the classroom?”*
- ❖ One Teacher can imagine himself visiting the Learning Lab for his own purposes.
 - > “I’d use it as a recreational lab, too. I will definitely go down there myself.”*
- ❖ Those who teach elementary grades see the possibilities for more than science related activities and materials through the Learning Lab.
 - > “Could we use it as a geography lesson to visit different countries? An art lesson?”*
- ❖ Another suggests the Learning Lab as a resource for students who need remedial work.
 - > “I just taught a lesson on the gas laws and we had a test and these five kids really didn’t get it. However, there are tapes and lessons in the library at WHYY and I can say go to this Web site, look it up and go over this material and then we’ll retest.”*

- ❖ A few envision the Learning Lab as a virtual and actual place for teachers to share information and ideas.
- ❖ Some envision taking courses or workshops to meet their continuing education requirements.

D. Teachers: Responses to Workshops and Courses at the Learning Lab

1. In general the Early Adopter Teachers seem to have a mind set that interprets the idea of coming to the Learning Lab as a logical and natural extension of how they perceive and interact with WHYY now.

Digital pictures: Courses in learning to use a digital camera, how to take better digital pictures, and learning what to do with the digital pictures (how to burn the digital pictures on a CD) are appealing concepts to teachers for possible Learning Lab workshops. Only one teacher says he would ask his students to teach him.

Internet: Some teachers express interest in learning how to burn a CD using information down loaded from the Internet.

> “Students would be able to go there, download whatever they might need...or the teacher could.”

At this point in the discussion, teachers raised concerns about copyright issues. They obviously care about the legality of reusing what they or their students would learn or make at the Learning Lab.

Teachers see many reasons to participate in a workshop at the WHYY Learning Lab including:

- Enrichment for the students
- Enrichment for the teacher
- Building connections with WHYY experts
- Building connections with colleagues
- Keeping up with trends in technology.

2. Ideal Formats for Teachers and Students:

a. During the academic year weekends, particularly Saturdays in the morning, seem to be the most convenient time for teachers to take workshops. They indicate a willingness to make a commitment of several hours for several

weeks. Physical and mental fatigue, dealing with rush hour traffic, finding convenient and affordable parking make after school or evening workshops unappealing.

- > *“That (Saturday) is the best time. Because by the end of the school day, teachers are burned out.”*
- > *“We are not coming downtown after school.”*

Summer time is also a good time for attending workshops. But the summer schedule can also be hectic because of vacations, teaching summer school, and taking courses. Some think the best time for summer workshops is June, just after school is out, or early July. They want a variety of time slots to choose from.

b. Teachers also are excited about a workshop at the Learning Lab as part of the professional development program each public school is mandated to provide. A workshop that fulfills the professional development requirement would take place on school time and be paid for by the school district.

- > *“We have half or full days of professional development and our principals are dying for something useful to do on those days. You could have an entire school down for each of these on a rotating basis.”*
- > *“This would be a wonderful professional development.”*
- > *“Considering what they (the school district) have paid for, this would be worthwhile.”*
- > *“You would need an introductory session, this is what you can do with this and people can go off from there.”*

c. Service Learning: Every student is required to have so many hours of public service in order to graduate. Many of the students work at hospitals and museums throughout the city for their service learning requirement. If students work with other students, they get credit for “co-op” service.

- > *“You could take a couple of interns for WHY? and they would get public service, their service learning. In addition, if you took a couple of students from each high school in a cluster and trained them, they would then take this knowledge and go out to the middle schools and elementary schools and that would be their service learning.”*
- > *“These students would get credit for giving information to other students. They are called co-ops.”*

Some suggest visiting the Learning Lab on a class field trip as part of fulfilling the Service Learning requirement.

> *“...Bring the kids in and sit them down and say look at all this great stuff we have to offer. Look at how you can use it. Now come back.”*

Several teachers suggest Friday as the best school day for student visits to the Learning Lab. Most feel that any day is fine. Some high school teachers feel Tuesdays, Wednesdays, and Thursdays are the best days as attendance is often lower on Mondays and Fridays.

> *“You wouldn’t get high school kids on Friday afternoon, they don’t hang around.”*

> *“You can have our elementary school kids on Friday.”*

d. Virtual Field Trips: The convenience and quality of the virtual field trip is very appealing to teachers. They definitely see the value of this type of activity. Main reasons for taking a virtual field trip include:

- No need for chaperones.
- No need for classroom coverage.
- Ability to visit places geographically too far away.
- Ability to visit places that are difficult to get admission to i.e. a nuclear power plant.
- Provides the entire class with the same experience.
- A 45 minute virtual field trip in the classroom keeps the students, especially the high school students, from missing other classes.

e. The first choice destinations for a virtual field trip include:

- A nuclear power plant
- A place with a supercomputer and being able to talk with the people who run it.
- Planetarium
- Outer space
- Space station
- A medical lab where they do experiments or research
- Kennedy Space Center

f. Key components of an ideal virtual field trip include:

- A tour guide to personalize the experience.
- A demonstration so the kids can see something happen.
- Interactive questions and answers.

- Having the workers/employees talk about what they do.
- Having a projector so the kids are not looking at a 25 inch television screen.
- Providing vocabulary and background information ahead of time, so students will be better prepared and the teacher does not have to take time during the virtual trip to explain things.

g. Cost of virtual field trip: The price should be similar to what it costs to take a class of 40 students on an actual field trip. Some teachers suggest that this amount is about \$100.00 or \$125.00 per field trip.

h. Cost for Learning Lab Workshops: Teachers would like the workshops and courses to be free. Actually this is not so surprising, since much of their learning is provided at no cost to them through the school district, archdiocese, or grants. In some cases, teachers are even paid to take a course or workshop. Through Title 1 monies, teachers are paid to go to class. In addition, subject and educational activities and materials are considered a business tax deduction.

> *“Zero is the best cost.”*

> *“Some of these things after school you get paid to go to.”*

In general, teachers do not seem to have any idea of actual costs of the school or district sponsored seminars or workshops.

> *“They have a department that writes grants and they might write a grant for \$250,000.00 and it is designated to certain schools that have requested certain things.”*

> *“In the archdiocese, there are workshops offered and they are free if their own staff is doing the workshops. There are a couple of workshops that I’ve attended, but the pastor of the parish school I teach in will flip (when he sees) the bill. It can’t be too much because they don’t have the money.”*

In other cases, companies that supply or want to supply products to the schools will provide a workshop and all the trappings for teachers. Again these types of programs are free to the teachers and a business or marketing expense for the company.

> *“In other cases, a company that wants to sell a product (i.e. textbooks or calculators) will put on a workshop and you will get Act 48 credit for that. They will feed you dinner and train you, and give you some goodies to take back to the classroom.”*

> *“If we get free stuff we are just happy.”*

E. Issues Important to Teachers

1. Teachers indicate their concerns about parking. Many indicate that lack of parking would not keep them from coming to the Learning Lab, but it would make them pause. Not surprisingly, the idea of parking lot right at the Learning Lab is appealing to everyone.

> *“If you have to deal with parking downtown after your workday and then have to struggle to find a place to park – that is going to keep you away.”*

> *“Parking is definitely an issue. Especially if you want to come down after school. In the winter, it is dark. Nobody wants to come out in the dark and walk four blocks to their car.”*

2. Teachers want a hands-on, product oriented workshop. This group seems very student oriented. They express concern for the students with low level skills and or low motivation. They are always on the look out for materials and ideas to take back to the classroom to help this type of student.

> *“It would have to be something very specific for me to take back to my classroom that is useable. I don’t hear anything that can work with me. I hear all this enthusiasm but I have very low level Algebra students and I am saying what is here for my students. Anything that makes it good for my students makes it good for me.”*

> *“I think you will find in a lot of Philadelphia schools we are dealing with a lot of low level kids and we want anything we can do to help us do a better job.”*

> *“Especially when it comes to math, because there is a group of students that don’t have that math sense.”*

3. Many teachers are concerned about not having the technology in the classroom to utilize materials they would create at the WHY Learning Lab. Availability of funds for purchasing and maintaining equipment is just one part of the larger budgeting issues that schools face.

> *“...I’ve seen a lot of programs come and go. And one of the problems I see currently is anytime you talk technology, you can start and throw ideas out there, but once it gets into the schools, it costs the schools money. And the schools don’t ever have enough money for the technology they*

would like to have. When we go down to WHY, the teachers want to come back and they want to say, can I bring it to the schools.”

> “If our technology doesn’t keep up with your (WHY) technology, then we are in trouble.”

> “This is an issue. You might be able to have the opportunity to create it (educational material), but then you need to be able to utilize it once you are back at your school.”

> “...It (technology) often leads to fights within the school as to what is going to happen with that money now. What programs does the school now want to do next year?”

4. Most teachers seem uncertain about a contact in the schools for the WHY Learning Lab. Some suggest the principal. Others do not think the principal has control of the budget. One person suggests talking with the technology coordinator.

> “With the district, you can talk to the principal until you are blue in the face. But the principal has got to go above.”

> “They allot the money now. This much money for staff, this much money for technology. It used to be very different. The principals do control the budget now.”

> “Philadelphia is in such a state of flux, it is hard to find anybody to talk to.”

5. The discussion about availability of funds for technology equipment quickly turned to the importance of grant writing. One teacher wonders if grant writing is part of WHY’s vision for the Learning Lab, or if it could be. Another mentions attending a workshop where they were given a list of available grants ranging from \$50.00 to \$5,000.00. Several others talk about the time and work involved in writing a grant proposal.

> “I think there needs to be a clearing house for people to learn how to write grants.”

> “It is a lot of hours.”

6. One teacher mentioned the significance of the time commitment to take a course and the importance of having a top notch instructor for the learning experience.

> *“This is a time commitment we make to do this and if the people instructing aren’t any good, we are going to fall away very rapidly. So you’ve got to get top people training us.”*

F. Teachers: Perception of WHY Y and its Value to the Community

Teachers have very positive attitudes about WHY Y. They describe WHY Y as a provider of excellent educational television and radio. They also express their belief that WHY Y is under funded. A few find WHY Y so interesting that they would like to have a tour and learn how programs are produced.

After hearing about the Learning Lab, some teachers see WHY Y as a “vision-ary.”

> *“I got the impression because they have to go digital, they are finding a way to use it.”*

> *“The other broadcasters have to go digital, but we are not hearing from them that they are looking to do anything beyond standard entertainment.”*

Teachers believe WHY Y’s value to the community stems from its ability to provide quality programming. In addition they see WHY Y providing broader experiences for their students beyond the classroom, and for anyone who wants to learn new things.

> *“Helping us to educate our children better.”*

Many like the idea of having a coffee bar and area available to them as part of their visit to the Learning Lab.

> *“I am there!”*

> *“Can we be the first ones to come down?”*

II. WHY Y MEMBERS

A. WHY Y Members: Digital Technology in the Home

1. WHY Y members have a variety of digital technology in the home. Some of it they use themselves, and some of it is used by other family members. Types of digital technology in the home mentioned by members include:

- CD players
- Computers
- DVD players
- Digital cameras
- CD burners
- DSL lines
- Cell phones.

Only a couple of members know how to edit photos taken with a digital camera. A few mention they would like to learn. No one has a digital television.

2. The top ways members use their home computer include:

- E-mail
- Internet
- Research
- Work-related (graphic design, dissertation, lessons, job hunting)
- Travel-related (reservations, tickets)
- Shopping
- Word processing
- Banking and paying bills
- Entertainment (plays, restaurants)
- Creating digital music
- Hobbies.
- One WHY Y member uses the Internet to get directions and telephone numbers.
- Another keeps up to date on what is going on by reading newspapers from other cities.

> *"I use it to shop sometimes."*

> *"I belong to a credit union and I do all my transactions on line."*

> *"I stay on top of a hobby. I am a knitter and have met lots of other knitters in the Philadelphia area by knitting bulletin boards and e-mail lists. And also there are fewer and fewer yarn shops around, so it is great to order on-line."*

B. WHY Y Members: Training in Digital Technology

1. Several members talk about how they basically taught themselves how to use the computer and other technology. Others learned from their children or spouse.

> *“Hit or miss. Sit down at the computer, screamed a lot in the middle of the night, and eventually it all came together.”*

> *“There was a group of us from my office; we just bought computers at the same time. We had fun teaching each other.”*

> *“I learned so I could help my children...Read the book and played with the thing.”*

> *“I learned because one of my boys was living at home while in college...and he showed me.”*

Others learned at work. Usually the training involved general programs like Word and Excel. A few learned software like Lotus and programming that specifically related to their work.

> *“So it was all company paid. Even though it wasn’t directly related to what we were doing, the training was very good.”*

One WHYY member who is self employed went through “about a year of really rough transition of learning computers.” Finding time to take computer classes was also difficult for her. She describes the courses at Berkley (Coral Express) and at the University of the Arts (Adobe Illustrator and Photo Shop) as worthwhile.

2. Many members indicate they have not had much computer or technology training in the last five years. The one or two members who are also teachers have had some recent training. One member took an adult education course but felt it was not a good fit for her needs.

> *“I knew more than the beginners, less than the advanced, and I guess the class was appealing to the lowest common denominator. It seemed a waste of time to be there.”*

Places members would look to for computer and technology training include adult night school classes, community colleges, and computer schools. A few think a community college would be less expensive than a private training institution. For several, \$50.00 fits the definition of affordable. Another mentions a

six week beginners computer course that cost \$50.00 that was offered to parents through the Catholic schools.

> *"They (private company) ran really great classes, but I am sure they were incredibly expensive as opposed to going to a community college."*

> *"I was going to say \$50.00. I just can't imagine paying more."*

3. Frequently mentioned areas members would like to learn about include:

- Web design
- Trouble shooting
- Cleaning the hard drive
- Financial services soft ware
- Programming languages
- Downloading music and burning CDs
- Using a digital camera and editing
- Downloading movies to DVDs and editing
- Ergonomics and setting up your computer area
- How to upgrade your computer "without blowing it up."
- One woman who uses her computer daily and considers herself reasonably knowledgeable talks about learning something new each time she reads the technology column in the *Philadelphia Inquirer*. She would like to see a course like that entitled "Everything you ever wanted to know about your computer but didn't even know how to ask."

> *"That (Web design) is something everybody seems to know how to do now. I don't have a clue as to how to do that."*

> *"What I need is a sort of a trouble shooting course so I can do some of those tech development support trouble shooting things myself."*

C. WHY Members: Reactions to the WHY Learning Lab

1. The following questions and issues came up during Nancy Moses' presentation on the Learning Lab.

- Choosing programs at different times would be a real advantage. Can you broadcast on demand? Could there be a program to teach us that when we wanted to learn it?
- How much of this is one way broadcasting versus interactive?
- Does this technology apply to radio or just television and computer?
- Do you have to upgrade your computer for any of this? How much does it cost? What is it called?

- Will the digital technology afford opportunities to improve closed captioning or other services for the hearing impaired?
- Do you envision the digital Learning Lab being a place where people actually come to participate, or is it more an environment for broadcasting out?
- Since you are considering forming partnerships with a technology company, have you considered having one area where people can interact – having a play room with the latest and greatest little gadgets? Technical things to try out that people may not want to spend the money on until they have played with the different software, games, that kind of thing.
- Hands on is definitely good.
- In the business world it may be a good idea to try to bring businesses in. It gives them a new place to display their wares.
- What if you got it digitally broadcast to your home, is it like pay per view?
- Being able to use it without paying for it. That is the key thing.
- How much of that (supporting the Learning Lab) comes from our pledges? - That (the broadcast aspects of the station) is their bread and butter.
- So if the public is going to use this facility then will they be charged a certain fee? How much of the cost will be passed on to the end user?

2. Initial reactions to the WHY Y Learning Lab:

Members' initial positive reactions are tempered by concerns about funding the Learning Lab and WHY Y's continued focus on its core mission as a provider of quality radio and television programming. They feel partnerships can dissolve, grant money can dry up, government funding can be cut, and they wonder about competition.

> "It sounds like it is incredibly expensive especially to keep up with it... Sony doing it in Manhattan that doesn't surprise me, or Gateway a commercial enterprise, but a public entity... That kind of concerns me actually."

If WHY Y does partner with a large corporation like Comcast , members wonder if WHY Y will lose control of the Lab or if it will become commercialized?

> "The big names have all the money and then you have to wonder how much is pandering."

> "From a technology standpoint there could be two different or several hundred different perceptions of what you have to have versus nice to have. I willingly and gladly contribute to WHY Y, but I don't want my money going to all these things which are nice to have versus have to have."

3. Motivators to Using the Learning Lab:

Members with children readily see opportunities and benefits to visiting the Learning Lab.

> *"It sounds appealing to me in the sense that I have four young children and I am starting home schooling. That would be something I'd want to do with my children."*

> *"I definitely would...I have twins that are going into freshman year and a four year old."*

One member, who is attuned to technology, has not had positive experiences with distance learning in the past and he also indicates his reluctance to participate in visiting the actual Learning Lab.

> *"I think my chances of visiting it are nil."*

> *"I don't feel the need to come in to learn this equipment...I guess it is the way I see television. With television I can relax, I can be passive and watch good programming. ..That fits with my preconceived notion of public television."*

D. Members: Responses to Workshops and Courses at the Learning Lab

1. Members feel they would travel to WHYY to see the latest in computer hardware and soft ware for digital television, hand held devices and communication devices. They want it to be an exciting and quality experience. They want the WHYY exhibits to be at the same level of quality and interest as the Sony exhibit at 54th and Madison Avenues in New York City.

> *It would have to be cool."*

> *"It would be great if the Learning Center could have virtual experiences like that (placing your hands in gloves and feeling a virtual earthquake). They were informative and educational and you had a lot of choice rather than just like video games."*

A few with children think their kids would visit the Learning Lab.

> *“What you just mentioned would get my child to go down there...He is so into that stuff. He would love it.”*

> *“Well I have two daughters. One is a grunge rocker and the other directs her school’s plays. They have cultural interests. They are into technology...They would be interested.”*

2. A workshop on taking and editing digital pictures is appealing to many in one members group and they indicate they would be willing to travel to the Learning Lab. This workshop topic elicited no interest from the other members group. One member feels that the cost of the workshop would be a determining factor in deciding to take the course.

3. A workshop on how to produce creative audio programs garnered little interest in one members group. This workshop title seemed confusing to some. They wondered if it covered writing songs, recording music, or mixing and creating digital music. Several in the other members group seemed enthusiastic about this topic.

> *“I’d do that.”*

4. Creating digital art is an appealing workshop subject for both members and their children. Digital art is described as “very, very cool”, and “pretty cutting edge.” Those who take the workshops could have their digital art displayed in the coffee shop at the Learning Lab.

> *It is low tech but an interesting use of technology. That sounds like something my kids would be really into.”*

> *“They could have a digital art gallery in the coffee shop.”*

> *“Very innovative ways of using technology. I think it can draw people in.”*

5. Most members of both groups like the possibility of a course on converting still photos, videotapes, and 16 mm home movies into a digital family portrait. A summer camp for kids on digital production and an Elderhostel program on digital production are also program topics that evoke a positive response.

> *“I bet you’d do very well with that...Because baby boomers are getting older.”*

> *“Forget the baby boomers, my mother is 78 and absolutely she and her friends are wired. They want something to do.”*

6. About half of all members would take a course on mixing and creating digital music. Several would like a course on the processes WHY? uses to produce television and radio programs.

> "I think a lot of people would like to do that (music). I am thinking the younger people."

7. Shooting and editing better home videos is seen as a fun informal activity and not a subject for a serious course.

> "Home videos we want to stay (as) home videos. He (husband) edits them a little bit but not anything massively. We are not trying to construct works of (art)."

8. Ideal Format for Workshops:

Weekends and week night evenings seem to be the more convenient times for members to attend a workshop because many work or are unavailable during the work week. Weekends, particularly Saturday mornings and Sunday afternoons, are good times. Many would attend a week night program.

One member is concerned about winter darkness, weather, and traffic and so prefers summer week nights. Another does not want to be inside in the summer time. For some driving is an issue.

> "I am not breed to drive long distances."

Members find that a course that meets for several weeks is more conducive to learning than a one time "crash course."

> "The three hours spread out... I have gone to classes at college for the whole day, and I am overwhelmed."

> "I think I would learn more that way."

9. Actual vs. Virtual Learning Lab:

Clearly people have preferences. Some prefer the "total convenience" of the virtual Learning Lab. These members envision being able to attend workshops and courses on demand and without the time and inconveniences of traveling.

> "Maybe it is just the distance. I live in northwest Philadelphia, so getting downtown at anytime can be from 35 minutes to an hour and a half de-

pending on traffic. So I am thinking of on demand learning or indexing where I can take a class whenever I want to. I don't know what I would really go down there for. I would like to take classes anytime I wanted to."

Other members prefer the people contact of the actual Learning Lab.

> "I am more with people. I am more hands on, seeing and doing than staying at a computer."

> I don't see myself going via a virtual technology for any kind of training I might need. I am more face to face."

Some members are concerned about being on the same technological wave length as the other workshop participants. They also want smaller size classes to assure they would have the best opportunity to learn.

> "The more exciting it is, the more people you are going to have and probably a lot of young people which would make it less accessible for some of the adults who would be curious about it too. I am not sure I would want to make the effort to go down there with crowds."

> "Have an old peoples night!"

> It would be competitive in a way, and you don't want it to be that way."

One member does not know what topic would motivate him enough to come into WHY? for a course.

Many like being able to go to the Learning Lab to "play" with the digital equipment. Several see it as an opportunity to experiment with new kinds of technology before deciding whether or not to purchase it. One speaks for others when he says:

> "That's a good idea to have somehow whether focusing on music or video where you can come with your own things and see how the technology works. You can bring in your old pictures and have them put into digital form and take them home and actually go away with something. You can decide if this is something you want to invest in on your own. Play with it there."

> "This is not so much like a class but maybe there are separate small learning centers within the Learning Center. So, if you want to learn how to burn CDs there are people there or maybe instructional videos or instructional digital technology there or maybe an expert."

An appealing format includes combination of a specific technology class followed by independent activity in that technology lab supervised by an expert.

Another member would like the Learning Lab to offer help to hobbyists move their hobbies into the digital age. She is a knitter and looks to technology for design/pattern ideas, learning about knitting machines, and keeping in touch with other knitters.

One member suggests a course on biotechnology. Others like the idea, too.

> *“What comes to mind is an article in yesterday’s NY Times Magazine section on putting spider genes into goats and making silk in the milk. It is fascinating.”*

One member would come to the Learning Lab for cooking classes. Over half of those in the group agree with her.

E. Reactions to Members Only Events

1. Half of the members find a lecture presented by the WHYY gardening expert is an appealing topic.

> *“Count me in!”*

> *“I’d be interested, except that I belong to the horticultural society and have gone to some of them.”*

2. A musical performance followed by a question and answer session by a Philadelphia Orchestra musician appeals to more than half of both member groups. One member has a small laptop with less than state of the art speakers so he would be more likely to attend this type of event in person rather than participate at home through his computer.

3. Events with an author catch members’ interest. A members only event with a WHYY radio personality is also appealing.

4. Several indicate they would participate in a workshop on selecting the right software and hardware given by WHYY’s computer gurus.

> *“I used to listen to them on the radio. They are unbelievably fascinating.”*

5. A workshop on home brewing and a virtual tour of a microbrewery elicits mixed reviews. Few respond positively. A few laugh and reject “virtual tasting.” Other suggestions for virtual tours include a winery, an MIT science lab, the ar-

chaeological digs in center city, a medical operation, and private gardens that are rarely open to the public.

> *“Been there, done that (microbrewery).*

> *“That might be something I wouldn’t do live, but if I could watch it at my convenience, I would do it.”*

6. Best time for Members Only Events:

If the members only event is a workshop, then the most convenient times are similar to the convenient times suggested for regular workshops – Saturday mornings and Sunday afternoons. A Weekend evening, a Friday or Saturday evening would make sense for a gala members only event.

F. Issues Important to WHY Y Members

1. Parking:

Parking seems to be a multi pronged issue. For many it is an issue of safety, cost, convenience or some combination of factors. Many say it is a factor to be considered in deciding to take a workshop or course at WHY Y. Several feel parking is always an issue, regardless of time or day, because WHY Y is located in the heavily visited historic district.

> *“Right around there it is awful.”*

> *“If you really want to do something, I would pay the \$10.00 to park.*

> *“I include parking in my budget even before I go out. I understand the city is expensive.”*

> *“If I really needed to, my husband would drop me off. Or I would try to get someone to go and switch off on driving.”*

Members deal with parking and parking costs routinely when they come into center city for cultural events. This is just considered one part of an evening of entertainment.

> *“We are going to make a night of it, go to dinner and a play or a concert. At that point the \$15-20.00 for parking which I still think is exorbitant is like a fraction of the overall cost.”*

Several would like to see a nice multilevel garage with free parking right at the Learning Lab.

> *“Instead of investing so much in the Learning center, why don’t they just put a parking lot over it?”*

> *“That would make life much easier.”*

As alternatives to driving, someone suggests taking the train to WHYY, another suggests a bike rack for those who might cycle over, and others suggest car-pooling.

2. Viewing Programs through the Computer:

Viewing programs on their computer screen generally is not appealing to most members. A few say they would be willing to watch a program on the computer, particularly if the topic was of special interest.

> *“I’d watch on my computer, it depends on what it is.”*

One indicates there is “not much” he would watch on a computer screen. Another says Instructional type programs would make sense on a computer screen but he would rather participate in person for a wine or cooking class.

One member expresses concern about capturing the true experience if viewing a program for the first time through the computer.

> *“It is like going to a movie and then watching the movie again on television. It is not the same experience to watch it for the first time on television. If I go to that performance then I put the CD in, then I can recapture some of that. But I am not going to capture that essence by putting that CD in the first time.”*

Watching something on television is easier on the eyes as most television screens are larger than a computer screen. And the television is surrounded by comfortable seating while most computers have less comfortable office type chairs.

> *“It seems like the TV would be a more comfortable place to watch something than the computer.”*

> *“I would prefer to see it on a larger screen than our computer, I would pay more attention.”*

A few express the need for a high speed Internet connection to handle the download volume.

3. Cost for Data Cast Programming and Market Niche:

This generates a mixed reaction. Some say there is “not a chance” they would pay for this type of programming. Others feel it would depend on how much they are interested in the subject and what the cost would be.

> “I think you would have to make it very enticing to be able to generate or draw people to something that is going to cost more than \$10 or 15.00.”

Issues are raised about course content duplication and competition with other providers of similar information. Some feel that the kinds of programs we had been talking about are already available through local night school programs, community colleges, certain institutions like the University of the Arts and the Franklin Institute, art centers, libraries, and the Internet. They want to be sure the WHY programs are competitively priced, more interesting and more convenient than what is available locally.

> “For me to go down to center city for a course when I could do it at the Main Line Night School which would be so much more convenient for me, it would have to be something really interesting that you couldn’t get locally.”

> “They (the courses) already exist.”

> “Are they replicas, or are they also new ideas? It is hard for us to see the separation sometimes.”

> “I do a lot of research on the Internet, so I think before I would pay to download some of these programs, I would search on the Internet to see if I could find the same information for free.”

4. Alternatives to Premium Gifts:

Several think that although a premium gift may not be an incentive to donate or to increase one’s donation, a visit to the new Learning Lab would be.

> “I think it would be because it is different for one thing. It is new. You are going to get an awful lot of interest in this new technology center. People will definitely want to be part of it.”

Providing a workshop instead of a premium gift could provide a reason for members to visit the actual Learning Lab.

> *"...sometimes you say you want to do it, this would be an incentive for us to get down there."*

Several describe the premium or workshop is an added value, or treat, but not the reason to pledge.

> *"It feels like a better value...Especially if ...I could choose what my premium was."*

> *"I don't think most people make donations to get premiums."*

A few like the idea of a coupon for the "technology workshop of your choice" redeemable any time during the year of membership.

Members in both groups express the sentiment that they would prefer to participate in a workshop instead of receiving a premium gift.

Some one in the second members group suggests donating the workshop to a worthy student or senior, in other words someone who might not know about WHY or might not be able to afford the cost of a workshop. This idea of designating the premium or workshop to someone else generates quite a bit of support. In fact, everyone likes the idea.

> *"I would be interested in donating it to a needy student."*

> *"I would like someone to go and use my premium because I don't need more stuff in my home."*

> *"I think to help kids with music that would be great. Some have the talent but not the equipment."*

> *"Not just kids but seniors."*

One feels it also makes good marketing sense to introduce people to WHY who might not normally have access to it. Another suggests partnering with a non profit organization to help students or seniors gain access to these resources.

Some might even be willing to increase their donation to receive the workshop instead of the premium or in addition to the premium. But most emphasize the premium does not influence the amount of their contribution.

> *"I give what feels right for me to give. I don't go more because I want the umbrella."*

> *"I agree. There was never a connection between the amount I gave and the handbag or CD that I was sent because I gave a certain amount."*

Others mention WHY Y is already doing this, i.e. lunch with a WHY Y personality.

> *"They have different levels of premiums for different levels of donation, they are already doing that."*

> *"I don't want all my money going to technology or courses. If there is a way to designate where the money will go. I might contribute more if say I want x amount going to radio, 20% going to technology, whatever."*

A concert, show or workshop sponsored by WHY Y would be an appealing alternative to a premium gift item. A work shop on digital technology elicits mixed interest. One member feels the term 'digital technology' is too broad and he is not sure what it means. Several find workshops on cleaning up your computer hard drive, a behind the scenes workshop on how a WHY Y program is produced

G. Members Perceptions of WHY Y and its Value to the Community

1. Most echo the sentiment that WHY Y is a well run, nationally respected provider of quality radio and television programming.

> *"Well respected nationally."*

> *"It has given me a great deal of knowledge and pleasure."*

> *"I don't know what I would do for my information. I am constantly saying I heard it on WHY Y."*

> *"I do think it is a reason to live in Philadelphia. Manhattan doesn't have a public radio station as good as WHY Y. And I depend on it enough so when I think about moving I actually think about radio."*

> *"I haven't lived in a lot of different areas of the country, but both radio and television seem to be real good."*

2. Some think the Learning Lab will not change or increase WHY Y's value to the community. Others believe the Learning Lab will increase WHY Y's connection to the community. In addition to WHY Y members, suggested beneficiaries include libraries, schools and people who normally would not be members.

> "Maybe an outreach for people with low income, people who cannot afford it (WHY Y membership). I could see that providing significant value...In 10 years we will have this stuff, but for the low income, they might not ever be able to go see the Learning Lab if you have to be a member of WHY Y to get in there first."

3. Several members would like to see more youth oriented programming without losing the current quality programming for adults.

> Yeah, I wish it could be more youth oriented. My daughters don't share that with me and I wish there could be something even if it were a tour of skateboarding centers in the area."

> "My perception is that WHY Y serves ...young children eight and below and 30 and over, and WHY Y needs to find a way to service those between eight and 30. I think it is a way to start serving those between eight and 30. Our world is going more technological and if they offer something that will get the teenagers involved with gadgets or video games or whatever, I think there will be more of a chance that you are not going to be depending on those 30 and above for donations or those with young children for donations."

In anticipation of the discussion group, one member went to the WHY Y website and looked up the definition of digital TV. He felt the PBS definition was clearer and that the color combinations were more appealing. He was concerned about WHY Y's role relative to digital technology. After participating in the focus group and hearing about the Learning Lab, he is confident WHY Y has its "act together."

> "I am glad to see that WHY Y is looking to the future."

> "WHY Y is the thinking person's radio station and TV station...I want something with an in-depth analysis."

4. One member feels the WHY Y radio station in particular stands out as providing community service and community information.

> *“There are a lot of local guests and there is a lot of discussion of local issues.”*

5. A few feel their perception of WHY? has not changed since learning about the Learning Lab. These members feel WHY? is always looking for ways to make the station better.

6. Coffee Bar:

The coffee bar makes sense as someplace to sit and have a non alcoholic beverage before a workshop or event. Members do not see it as a destination by itself.

> *“That is a legitimate thing. Even some of the bookstores are putting them in. You know they did their research so I think people do use that to get a snack.”*

> *“(Makes it) more inviting.”*

They want to hang digital art in the coffee shop.