# KENTUCKY VIRTUAL LIBRARY PROFILE

## Planning

### History and Mission

On Nov. 1, 1999, the Kentucky Virtual Library (KYVL) celebrated its grand opening. KYVL was founded with the mission that "All Kentuckians will have equitable access to quality library and information resources and qualified, well-trained staff to support the Kentucky Virtual University as well as meet broader needs for learning, working and living." (KYVL, 1998) Kentucky Virtual University (KYVU) was developed as a coordinated effort by the governor and legislature to improve higher education in Kentucky and to provide anytime, anywhere access to education for all citizens of the state. In October 1996, the Kentucky Commission on Higher Education Institutional Efficiency and Cooperation recommended the establishment of a statewide electronic library as part of the planning process for KYVU. Funding was appropriated for KYVU and KYVL through the Kentucky Postsecondary Education Improvement Act in May 1997. Building on the cooperation and collaboration of the Kentucky Library Network and the state-assisted Academic Library Council of Kentucky, 100 committee members formed 10 work groups to plan and implement KYVL over 18 months.

KYVU is a portal to distance learning opportunities in Kentucky, acting as a clearinghouse and common gateway to courses offered through various institutions. This arrangement allows students to register for distance classes using one common interface, transfer credits among institutions, and take advantage of opportunities presented by each institution in the state. KYVU provides faculty development and training, manages statewide contracts, hosts courseware, and provides one-stop customer service and round the clock technical help. In 2000, in a unique campaign to raise awareness and to add some fun to KYVU, the University added a fantasy football team called the @vengers complete with T-shirts and logo. The @vengers competed against five other teams from other virtual learning institutions in computer-simulated games with students lending their names or nicknames as players for the team.

Enrollment in KYVU has increased from 265 students in the inaugural fall 1999 semester to a record enrollment of 3,014 in the spring 2001 term, making KYVU the fastest growing virtual university of its kind. In addition to KYVU, the Kentucky Virtual High School, launched in spring 2000, provides courses in math, science, and foreign languages to remote counties in Kentucky. To meet the goal of increasing the high school completion rate in the state, expansion is anticipated to include adults seeking high school diplomas, incarcerated youth, home schoolers, and various alternative education programs.

Although KYVL primarily serves the KYVU community, it also has the responsibility of serving the population of the entire state, from K-12 students to higher education to the general public. As evidence of its

**Kentucky Virtual Library**
www.kyvl.org

**Kentucky Virtual University** www.kyvu.org

success, KYVL received the Multitype Library Cooperation Award as Outstanding Library Program of the Southeast from the Southeastern Library Network (SOLINET) in May 2001.

### Participation

As of December 2000, 1,432 Kentucky libraries were members of the KYVL user community, representing a total user base of 2,690,754. These libraries include 36 public academic (114,475 full-time equivalent (FTE)), 19 private academic (19,427 FTE), 116 public libraries (1,927,454 registered users), 1,259 K-12 school libraries (619,200 FTE), and 22 special libraries (10,198 FTE). From June 2000 through May 2001, public academic libraries represented the greatest proportion of KYVL use at 52%, followed by public schools (21%), private academic institutions (13%), public libraries (11%), and special libraries (3%).



**User Profile by User Community**

- Public Libraries
- Public Universities
- Private Colleges
- Special Colleges
- KCTCS

**Total Number of Institutions - 1432**

Public Academic Institutions - 36
    Public Universities - 8
    Community Colleges - 13
    Technical Colleges - 15
Public Libraries - 116
Independent Academic Institutions - 19
K-12 Schools - 1259
Special Libraries - 22

## Management and Funding

### Organizational Structure

**Kentucky Virtual University Organizational Chart**
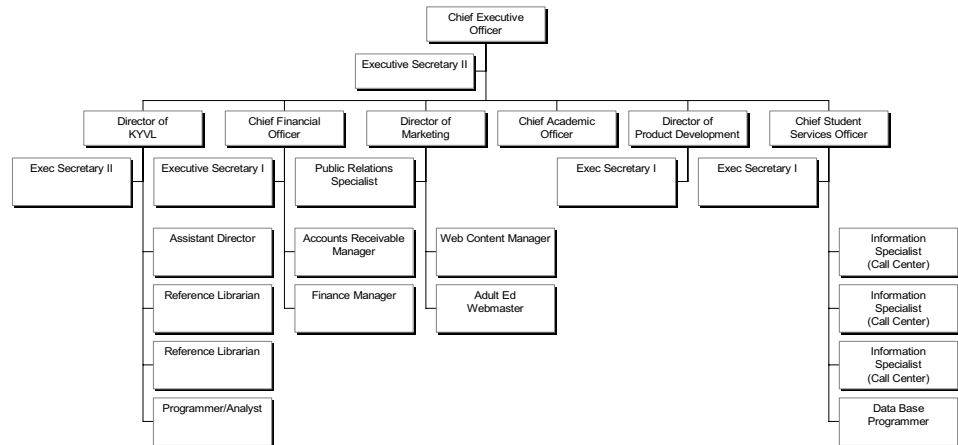


The Council on Postsecondary Education is responsible for the development and operation of both KYVL and KYVU under direction of the Distance Learning Advisory Committee; KYVL reports directly to KYVU with the KYVL Director reporting to the KYVU Chief Executive Officer (see KYVU Organizational Chart). The Virtual Library Advisory Committee (VLAC), consisting of 12 voting and four nonvoting members, advises KYVL on policies and programs. Membership on VLAC includes representation from all communities of interest: public and private academic institutions, elementary and secondary schools, state and public libraries, special libraries, the Kentucky Library Network, the Council on Postsecondary Education and

Kentucky Virtual University, and the Postsecondary Education Technology Advisory Group. Six full-time staff are responsible for running and managing the library, including a director, assistant director, executive secretary, programmer or analyst, and two reference librarians. Designation of the Kentucky Library Network as a KYVL users group is under consideration to facilitate communication and dialog among KYVL users.

Individual library participation in KYVL is voluntary and varies to some degree among institutions; the services and cost savings through consortial purchases and coordination of services have proven advantageous to libraries and an incentive to participation. Further, the technology provided by KYVL can enhance and, in some cases, improve on that offered by a local library so KYVL can offer services it would not normally provide under other circumstances.

Although other consortial or collaborative resource sharing opportunities exist, KYVL offers institutions the advantage of a clearly articulated mission and vision of serving the people of the commonwealth. It has also clearly articulated the need for a lean core management structure, working with volunteers from other libraries so that core organizational issues are managed centrally but participation and decision making are diffuse. This structure allows for buy-in and increased cooperation as it lends itself to involvement and a feeling of ownership among participating libraries and librarians. KYVL also has the advantage of strong legislative support—a key feature in its ability to acquire needed funding.

### Work Groups

Currently, 12 work groups, advisory in nature, have been designated by the Director of KYVL to provide support for programs and services. Current work groups include:

- Adult Education Resource Database Work Group, responsible for building a resource database to support adult educators and learners

- Collections Work Group, responsible for evaluating, recommending, and purchasing databases for KYVL constituents

- Endeavor Consortium Work Group, responsible for supporting the Voyager management systems

- Government Information Access Workgroup, responsible for evaluating, organizing, and disseminating Web-based government information

- Information Literacy Work Group, responsible for the promotion and support of information literacy

- Kentuckiana Digital Library Work Group, responsible for the creation of Kentucky-oriented digital collections, for representing special collections and archives, and for collaboration in digitization efforts to enhance research and lifelong learning

- KYVL for Kids Work Group, responsible for building a resource portal for Kentucky's P–5 students

- KYVL for Teachers Work Group, responsible for building a resource portal for Kentucky's K-12 teachers

- Marketing Subcommittee, responsible for marketing and public relations

- Resource Sharing Workgroup, responsible for assisting in planning, implementing, and evaluating current and future statewide resource sharing services

- Virtual Reference Desk, responsible for evaluating, organizing, and disseminating Web-based information resources

- WebZ Design Work Group, responsible for designing a user friendly interface

Work groups consist of volunteer members from participating libraries; these groups are productive and goal-oriented. An effective working structure has been established to facilitate development and enhancement of KYVL services. Ground rules were established for committee work that outline logistics, meeting behavior, decision making, and suggested guidelines for subcommittee composition. This work group structure has allowed participating libraries to feel invested in the project (Pattie, correspondence) and has led to improvement of the library and an increase in services. This type of work group structure also has its share of challenges: addressing time-consuming decision making, balancing participation from the various user communities, and working out leadership versus advisement issues.

The KYVL Web site is used effectively as a communication tool. Meeting minutes and documents related to KYVL are posted to the site, allowing for sharing of information not only among work group members but also among groups and participating libraries.

### Funding

KYVU's operating budget of about $8 million makes it the best state-funded virtual university in the country. The initial funding allocation for KYVU and KYVL allowed for the establishment of a technical infrastructure to include workstations, Ariel document transmission systems, server hardware and software, library management software, and Kentuckiana Digital Library server hardware and software and digitizing contracts. The annual operating fund for the library for 1998-2002 was $2.6 million, with $1.01 million contributed by participating libraries toward licensing fees for electronic databases (total licensing fees were $1.8 million). Libraries contribute to database subscriptions through a contribution scheme originally developed by the Kentucky Library Network and now managed by KYVL. The operating fund also covers server maintenance, courier service, the digital library, and information literacy programs. Personnel, travel, supplies, and overhead come from KYVU's budget. In 2000 KYVU unveiled a $1.5 million venture capital fund to provide interest-free loans to colleges or professors to start online projects.

### Technology Infrastructure

KYVU student records are downloaded and synchronized with participating institutions' information systems so students are registered students of their chosen college(s). A single application and registration process simplifies student access to education and eliminates the need to pay fees and complete forms for multiple institutions. In addition, KYVU has signed an agreement along with 27 other virtual universities from around the world to pledge cooperation in transfer agreements so students may seamlessly transfer credit from one university to another. This agreement

was the result of a two-day summit organized by KYVU in April 2000. Leaders of 28 virtual universities from the United States, United Kingdom, Canada, and Mexico came together for the first time. During the summit, 22 representatives signed the Memorandum of Agreement for an alliance for collaboration in e-learning (Young, 2000).

KYVL's technology infrastructure is provided by member institutions. Endeavor/Voyager is used as the online system by the nine public academic institutions within KYVL and is hosted by the University of Kentucky (UK) and University of Louisville (UL). Institutions may apply to become part of the KYVL Endeavor Consortium through guidelines established in April 2000.

New clients to the consortium may be *add-on* or *peer*. An add-on library is one in which data is loaded to an existing hub but no direct relationship exists with Endeavor; the hosting hub is responsible for both server maintenance and software. A peer library is one in which data is loaded to an existing hub and the library has a direct relationship with Endeavor; the hosting hub is responsible for server maintenance only.

New clients are responsible for providing onsite infrastructure support, sharing in the consortial operation cost (based on a set cost scheme), and establishing contingencies for new software or hardware support needed by the consortium. The consortium is covered by a service level agreement adopted in April 2000 outlining guiding principles and the responsibilities of all parties.

Two hub sites support the Endeavor system. Westlib, an IBM RS/6000® S70 Advanced Server running AIX® Version 4.3.3, is located at UL and supports the catalog of six institutions. Current hardware configuration for Westlib includes eight 262 MHz RS64-II 64-bit CPUs, eight gigabytes of system memory, and 273 gigabytes of disk (164 GB effective storage capacity). System maintenance includes backup every morning from 1-3 a.m., as well as scheduled maintenance every third Friday between 10 p.m. and 3 a.m. the following morning.

The second hub, Eastlib, an IBM RS/6000® S80 Advanced Server running AIX® Version 4.3.3, is located at UK and supports the catalogs of eight institutions. Current hardware configuration consists of six 450 MHz RS64-III 64-bit CPUs, eight gigabytes of system memory, and 216 gigabytes of mirrored SSA disk (108 GB effective storage capacity). System maintenance includes daily Voyager backup at 4 a.m. as well as scheduled upgrades and reboots. Both Westlib and Eastlib provide problem resolution information along with contact information on the KYVL Web site.

UK also hosts KYVL's gateway server with OCLC SiteSearch, additional catalogs, and the KYVL Web site. SiteSearch is the database gateway for 32 common indexes.

Database interfaces are accessible either through the vendor's proprietary interface or a common WebZ interface designed by the KYVL WebZ Work Group. Although the native interface allows for the flexibility of customization for the individual library, the WebZ interface provides the advantage of one common interface for both catalogs and indexes across KYVL libraries. Non-Voyager OPACs may be included in the WebZ interface if they are Z39.50 compliant.

Although a common interface has the advantage of allowing ease of use for patrons, it is not without problems, such as mapping attribute sets, matching indexing practices, and working with holdings data. Functional-

ity is lost whenever vendors upgrade and introduce new features, even when purportedly compliant.

The Kentuckiana Digital Library DynaWeb server is housed and managed on a Dell Poweredge 4300 at UK. UK also houses and manages a digital laboratory. The Ariel document delivery system is distributed throughout the public and private academic libraries as well as six public libraries.

## Content and Service Development

KYVL provides an impressive array of services to support education and to serve as a gateway for citizens of the state in the support of lifelong learning. These services include access to catalogs, indexes and other databases, resource sharing through a courier service and electronic document delivery, a digital library of material related to Kentucky, in-person training, an information literacy tutorial, and reference help. In addition, services are categorized into portals and targeted to specific populations of constituents so appropriate and relevant information, materials, and indexes may be easily located and retrieved. Portals include those for KYVU faculty, KYVU students, K-12 community, teachers, and Kentucky citizens. Each portal is managed and developed by one of the KYVL work groups.

### Portals

The KYVL for Teachers portal focuses on seven core content subjects established by the Kentucky Department of Education (KDE), with each further categorized into four grade levels. Resource sections within the portal include services provided by KYVL, professional resources for teachers, and teaching resources. A workgroup of six school library media specialists, teachers, and representatives from the KDE and KYVL coordinate the evaluation of content recommended by core subject specialists and by teachers in the state. An online form facilitates recommendations, and standards have been established for collaborative identification and evaluation. Previous to the KYVL for Teachers site, KDE sponsored 13 academic villages that were independently run by volunteers. This program was not structured and was not focused on teacher resources—two of the aims of the KYVL for Teachers site.

The KYVL for Kids Work Group is creating a portal for children to include a tutorial specifically designed for grades 1-5. The work group announced during its April 2001 meeting that it is collaborating with PowerCreative to design the tutorial and portal page. PowerCreative meets with the work group during its regular meetings to go over work completed between meetings, brainstorm, and discuss next steps. The tutorial and portal pages are targeted for implementation in fall 2001.

The KYVL for Faculty and KYVL for Students portals focus on resources of interest to these communities, mainly how to find materials and services. The student portal also includes how-to pages that enable students to take advantage of available services. The faculty portal includes academic information pages, including copyright and other educational resources.

The K-12 portal is further broken down into specific grade levels so appropriate resources are easy to find. "For Kentuckians," the portal for all Kentucky citizens, includes informational pages on using KYVL as well as on locating libraries within Kentucky.

www.powercreative.com

### Catalog, Indexes, and Databases

Selection of OPAC and database systems was facilitated by leveraging systems already in place at member institutions. OCLC SiteSearch was selected as the database gateway; it was already in use at UK. KYVL contracts with UK for 24-hour technical support and housing and management of the SiteSearch gateway server as well as the KYVL Web site. In addition, when KYVL was founded, UL had completed an RFP process with the resulting selection of Endeavor Voyager as its ILS, hence its selection for use by KYVL.

At the time of this writing, KYVL provided access to 32 Web-based indexes and databases through EBSCO and OCLC FirstSearch. Database access is provided to any library participating in KYVL and remotely to registered patrons of Kentucky libraries. KYVL has developed a common interface through WebZ for available catalogs and indexes, but individual libraries may choose instead to customize the native vendor interface for their institution. Trial databases are also posted to the KYVL Web site along with evaluation forms for comments and feedback to facilitate library participation in the selection of appropriate and relevant databases. Suggestions for new databases may also be made through the KYVL Web site.

Consortial purchase of and access to indexes and databases has resulted in a cost savings for Kentucky libraries. In a survey of Kentucky school librarians by Ruth Kinnersley (2000), several reported canceling their subscriptions to databases available through KYVL and using money saved to purchase additional books and popular reading material, hardware to provide more access to KYVL, or other electronic resources to supplement the KYVL materials. Although not a report of total cost savings, the amount reported by librarians redirected from materials no longer needed to purchase was $75,927.

### Resource Sharing

Resource sharing is provided through a courier service between participating libraries and electronic document delivery via Ariel. Both services began in August 2000 with 169 institutions participating in the courier service and 51 in electronic document delivery. Patron-initiated interlibrary loan through a common interface is being planned.

A Service Level Agreement laying out the responsibilities of participating institutions for ground courier and electronic document delivery services was developed in 1999. This agreement also defines performance measures, problem management procedures, and renegotiation considerations.

### Training

In-person training sessions are provided by KYVL to promote library services and familiarize constituents with available resources, services, and interfaces. From October 1999 through May 2001, 1,279 teachers, students, faculty, librarians, and citizens participated in 63 training sessions across the state. In addition, training materials are made available via the KYVL Web site. These materials include both basic and advanced exercises for the various resources available and are further divided into exercises by constituent area (public versus school versus academic).

## Information Literacy Tutorial

To promote lifelong learning and information literacy, an online tutorial was launched in March 2000. Consisting of five units, all of which include a self-test, the tutorial covered use of the web, search strategy, evaluation, citing sources, and copyright. Eduprise was originally used to create the tutorial since it was the course management software being used by KYVU at the time. KYVU has since migrated to Prometheus during summer 2001.

The tutorial was formally evaluated in 2000 by Paula B. Doherty (2000) with a formal report issued on Sept. 15, 2000. As originally written, the tutorial was a linear set of curriculum-based modules intended for those taking courses. However, KYVL's audience also includes the general public, individuals not required to learn nor interested in learning a full set of information literacy skills but rather those skills needed to accomplish an immediate task; that is, individuals more likely to reflect characteristics consistent with the general Web user rather than focused students. The report concluded that two versions of the tutorial should be developed, one using a course management system for use with KYVU courses and one available on the Web to serve the needs of a more diverse general public.

As suggested by the assessment, the KYVL Information Literacy Work Group decided to divide the tutorial into two versions, one basic version for the general public and a separate academic version. An instructional designer has been hired to work on the public version of the tutorial. In February 2001, work on an RFP for the academic version began. In addition, the KYVL for kids work group began working on a third tutorial targeted for release in summer 2001. Three versions of the tutorial will exist: kids, aimed at grades 1-5; general, focused on random access information; and academic, focused on class work and designed for linear progression through a set of modules. KYVL is working with faculty to integrate the academic version of the tutorial into their courses. In addition, KYVL is planning to create online training courses on using the library's services.

## Reference Help

Reference assistance is available through the KYVL Help Desk. Two KYVL reference librarians work in collaboration with other librarians in the state to answer reference or technical questions via a toll-free telephone number and via e-mail through an online form. KYVL attempts to answer questions using KYVL databases and Internet resources before referring patrons to an official contact at individual libraries. The reference desk is staffed 8 a.m.-7 p.m. Monday through Friday. Launched in August 1999, the service answered a total of 2,195 questions through May 2001. A new work group, the Virtual Reference Desk work group, is investigating other methods of providing reference help, including interactive real-time assistance.

## Digital Library

The Kentuckiana Digital Library provides access to shared digitized archival collections at 11 participating institutions. Before funding by KYVL, the digital library planning committee won funding from the National Historic Publications and Records Commission to assist in implementation and planning. KYVL funding opened the project to greater participation from other libraries in the state. The digital library project has two major goals: to digitize finding aids from participating institutions' Special Collections and archives and to digitize the objects and link to them from the finding aids.

In addition to researching other digital library initiatives across the country, the Kentuckiana Digital Library project hired consultants for four aspects of the project to review the implementation plan, provide onsite presentation and discussion sessions, and provide ongoing support through correspondence. To facilitate completion of finding aid work within the funding period, digitization was outsourced to a vendor. UK manages the technological infrastructure and conducts training on digital library technology in addition to performing conversion of materials to digitized format. UK also maintains a centralized metadata repository created with the assistance of OCLC and managed with OCLC's SiteSearch software. Full-text browsable and searchable resources are housed in an SGML/XML database with Enigma Corp. software and are managed on a DynaWeb XML/SGML Internet Server. Archival objects are linked through the metadata repository and the SGML/XML database. Materials available through the digital library as of July 2001 included e-books, oral history transcripts, and finding aids with descriptions of more than 3,500 collections from 13 Kentucky depositories.

www.enigma.com