

# Sample Application

## 2008 National Leadership Grants for Libraries

### Advancing Digital Resources

#### New York Public Library Astor, Lenox and Tilden Foundations

#### Homework NYC Widgets: A Decentralized Approach To Homework Help By Public Libraries

## **Homework NYC Widgets: A Decentralized Approach To Homework Help By Public Libraries**

### **Abstract**

New York city's three public library systems, Brooklyn Public Library, The New York Public Library (NYPL), and Queens Library, and project partner LEO: Librarians and Educators Online request \$366,336 in IMLS funding to support the creation of 'Homework NYC widgets,' a set of digital tools for homework help that will be responsive to young people's information-gathering tendencies, research needs, and expectations.

**PLANNING** – The proposed activities will implement the findings of an IMLS Collaborative Planning Grant awarded to the three library systems in October 2007. "The Information-Gathering Techniques and Online Behaviors of Tweens and Teens" sought to learn more about students' homework and research habits and online activities. The planning grant was managed by a project team consisting of NYPL staff and LEO: Librarians and Educators Online, an independent educational technology consulting and evaluation firm, and implemented by public librarians across the five boroughs of New York City.

More than 120 students between the ages of eight and eighteen participated in a series of focus groups that determined, overwhelmingly, that public libraries are not in the minds of young people as a place – physical or virtual – where they can receive homework support. Moreover, creating a web-based resource that takes students outside of their current methods of information-gathering will not work unless it integrates these existing habits and methods. The focus group findings suggested that if students find homework support within the tools that they already use, for example, Facebook or MySpace, they will more readily engage with the resource.

The planning project also investigated how young people would incorporate new technologies like widgets in their homework and research habits. A web 'widget' is a portable chunk of code that can be easily installed and executed within a third party web page or on a student's personal computer. Young people use widgets regularly as a part of their social networking lives because they offer the opportunity to personalize an information-dense online experience and integrate smoothly with their existing digital 'haunts.' The evaluation concluded that a homework help resource could better serve the needs of young people if it was designed to respond intuitively to the way they currently seek out information.

**MAJOR ACTIVITIES** – The New York Public Library and project partners propose a three-year project implementing an iterative process of user feedback and technology development, simultaneously examining and evaluating the widget tools against the ever-evolving larger digital landscape. A K-12 advisory group as well as several focus groups with students will inform the project staff and ensure that the Homework NYC widgets fulfill users' needs and expectations. Once the tools are created, education and outreach will play key roles in disseminating information about the new tools' availability and purpose to the city's public, private, and parochial school students, educators, and administrators. An outreach specialist will be hired to work with public librarians throughout New York City to institute Homework NYC widgets as the primary homework help tool for all three library systems. This specialist position will conduct in-person outreach and instruction at schools, conferences, and information fairs, and at all levels of the New York City Department of Education hierarchy.

**ANTICIPATED OUTCOMES** – This project's final product will be a set of tools that other organizations seeking to engage young people with library resources in a virtual environment will be able to repurpose and utilize. The project will acknowledge and respond to the new ways in which young people are processing and learning information by incorporating libraries' strengths into a new media format that is accessible and familiar to young audiences. The suite of Homework NYC widgets will be used by students to successfully complete their homework and, equally important, provide students with a more convenient and useful method of getting authoritative online homework assistance.

## **Homework NYC Widgets: A Decentralized Approach To Homework Help By Public Libraries**

### ***Needs Assessment***

In December 2005, New York City's three public library systems, Brooklyn Public Library, The New York Public Library (NYPL), and Queens Library, with the assistance of the New York City Department of Education, debuted a homework help website (homeworkNYC.org) for New York City students. The website, originally funded by a grant from The Wallace Foundation, is a digital resource built upon traditional standards of bibliographic instruction and with the authority of librarian-vetted content. The site provides students with a single entry point to the electronic resources of the City's three public library systems as well as content specifically developed for young people, including research guides and pathfinders.

Despite consistent outreach and education efforts, and the documented need for such a resource, feedback and usability testing of the website conducted in July 2006 indicated that students were having difficulty navigating the site and finding the answers to their homework questions. Overall, usability testing indicated that students found the site text-heavy, hard to navigate, and had trouble interpreting its resources in order to find the necessary information to complete their homework. Students were either unaware of potentially helpful resources like subscription databases or ignored them because they were difficult to search and operate.

Just as important, despite conducting research that informed the development of the site, librarians did not fully understand the online lives and interests of their student patrons. The static site that was planned and ultimately developed was part of a different worldview from students' norm and comfort level, one that is disconnected from their actual online lives. In addition, the creation of homeworkNYC.org in 2005 did not anticipate the burgeoning effect that Web 2.0, the new generation of web-based services that emphasize user input and collaboration, would have on the digital landscape. The evaluation concluded that a homework help resource could better serve the needs of young people if it was designed to respond intuitively to the way they seek out information.

To effectively connect young people with the vast wealth of resources that exist at the library, project partners seek to create a set of digital tools for homework help that will be responsive to young people's information-gathering tendencies, research needs, and expectations. These tools will move away from a static website at the same time increasing and improving access to the electronic resources of New York City's public libraries. The revised and updated tools and resources developed as a part of this project will also take into account the vital role teachers play in their students' education. The tools and project planning process will allow for the flexibility required to keep up with technology trends and the needs of students as they relate to those trends and uses.

### **Collaborative Planning Grant: The Information-Gathering Techniques and Online Behaviors of Tweens and Teens**

To learn more about students' homework and research habits and online activities, the project partners applied for and received an IMLS Collaborative Planning Grant, "The Information-Gathering Techniques and Online Behaviors of Tweens and Teens," which began in October 2007. The first phase of the project evaluated the online interests and habits of young people. The planning grant was managed by a project team consisting of NYPL staff and LEO: Librarians and Educators Online, an independent educational technology consulting and evaluation firm, and implemented by the homeworkNYC.org committee, consisting of representatives from all three library systems and the Department of Education. More than 90 students between the ages of eight and eighteen participated in the initial set of focus groups held at public libraries in the city's five boroughs during November and December 2007. Educators were consulted in both a focus group and written surveys.

The focus group findings determined, overwhelmingly, that public libraries are *not* in the minds of young

people as a place – physical or virtual – where they can receive homework support. In terms of physical access, students think of the library as a place to find resources for leisure reading and activities. Moreover, they are comfortable and feel successful in the ways they currently use the web to find information for homework and leisure pursuits. A majority of participants indicated Wikipedia or Google serves as their primary source for homework information. They also spend a great deal of time in social networking sites, such as MySpace, where they manage a wide array of personal and recreational applications such as email, music files, games, and instant messaging.

The focus group facilitators, led by LEO: Librarians and Educators Online, discovered that creating a web-based resource that takes students *outside* of their current traditional methods of information gathering will not work unless it integrates these information-gathering habits. Showing and telling teens and tweens that a website is available to them for homework help and support will not have an impact on their research methods. The focus group findings suggested that if students find homework support within the tools that they already use, for example Facebook or MySpace, they will more readily engage with the resource. When asked if they thought New York City libraries should provide online homework support, students overwhelmingly said “yes.” However, they were also unanimous in stating that they would need to be drawn into the tools/help through something other than homework support on their library’s own website, such as an application within another web tool or site.

The planning team concluded that in order for a homework resource to draw users, it must be available and accessible to young people where they spend the most ‘digital’ time. Any resource created by libraries must be incorporated into students’ online habits and be flexible enough to adapt with their changing needs and interests. The focus groups also helped determine that customization is a key component for teens using a homework help resource provided by libraries.

The new resource should provide functionality across students’ interests and educators’ needs, allowing users to import content that is important to them for a specific assignment or recreational pursuit. These homework resources must be easily accessible, have ubiquitous properties, and work the same wherever the student *chooses to use them*. In addition, the technology must be flexible enough to adapt to the ‘next big thing’ in the larger digital landscape.

One of the most important overarching themes resulting from the planning project was how integral young peoples’ input and participation is in the creation of a potential resource. In every focus group, participants provided thoughtful answers and suggested ideas that often engaged their peers immediately. In addition, a great majority of participants indicated that they would want to provide feedback on content and design for future iterations of a homework help resource. Focus group feedback showed that teachers play an important role in how students go about finding homework information. If a teacher suggests or provides a web-based homework resource verbally or in writing, students will, at least sometimes, use those resources before going to Google or Wikipedia. These findings informed the project of the important role that teachers must play in the success of a web-based homework resource.

Based on the feedback and information from the focus groups, the project team and committee decided to focus on creating and maintaining a presence in the resources that students are already using, such as Facebook, MySpace, iGoogle, teacher-recommended websites, Wikipedia, del.icio.us, and other tools/applications. This tactic will ensure that libraries are meeting young people where they are, as opposed to requiring them to come to their library’s physical or virtual spaces.

### **The Changing Face of Homework Help**

The planning team determined that the second phase of the project should investigate how young people would incorporate new technologies, like widgets, in their homework and research habits. A web ‘widget’ is a

mini-application, a portable chunk of code that can be installed and executed within a third party web page (like MySpace or Facebook) or on a student's personal computer (via Mac OS's Dashboard or Google's Desktop). Young people use widgets regularly as a part of their social networking lives because they offer the opportunity to personalize an information-dense online experience and integrate smoothly with their existing digital 'haunts.' During the second series of focus groups, participants were presented with an iGoogle page containing sample widgets to test. The page contained an NYPL calendar widget, the library catalog widget from Hennepin County Library in Minnesota, a bookmarking widget, a Wikipedia widget, and a variety of other communication and recreational widgets from YouTube, Pandora, del.icio.us, and AOL Instant Messenger (AIM). Students discussed how they would or would not use the widgets and how they would want to customize them.

Widgets can allow users to exchange information with classmates and peers, a characteristic that was looked upon extremely favorably by all focus group participants. The ability to customize widgets both in terms of content and integration with another tool is key to teen users. The second round of focus groups showed that students not only want to be able to use widgets within the tools that they use on a daily basis (such as Facebook and MySpace) but they also want to be able to move widgets around on the page and customize them for a particular purpose. Participants were asked to explore sample widgets via iGoogle, and to brainstorm possibilities for library-related widgets.

The following were suggestions from multiple students and will serve as the starting point for creating project (Homework NYC) widgets:

**Library Catalog Widget:** During the second round of focus groups, teens were extremely positive about the availability of a library catalog widget that they could access through sites like Facebook, iGoogle, their Mac Dashboard, or on their local computer. Desired features included basic search functionality; being able to set the search default to a zip code or specific branch; and the ability to rate, recommend, and review content found in the catalog. A search widget might pull a range of library resources, from digitized primary source materials (such as those featured in NYPL's Digital Gallery) to physical books and materials located at a student's local branch library to electronic resources, such as subscription databases, e-books, and webcasts.

**Cross-Searching Widget:** Focus group participants suggested being able to cross-search the library catalog, Google, and Wikipedia, which would allow a user to select the search tools he or she wants to search at any given time. (Wikipedia is currently the number one downloaded widget for Mac Dashboards, ahead of hundreds of other game, music, and communication-related widgets.)

**Resource List Widget:** Participants liked the idea of having a widget that would allow them to save links they find while doing research for a particular project. One suggestion for this widget would be to be able to click a button when on a web site and that action would automatically add the site to the list provided by that student's widget, a function similar to what del.icio.us already provides.

**Project-Based Widget:** One teen participant suggested a science project widget, an interest echoed by other participants. Within the science context, this widget would search only resources available through the library that provide helpful information for student science projects. Project-based widgets might be developed for a variety of projects on which students work – related to both school assignments and leisure interests. There are a number of library resources that provide assistance for curriculum requirements, such as Queens Library's video demonstrating the "The Exit Project," a required research project that all New York City eighth graders must complete in order to graduate to ninth grade.

**Events Widget:** Teens liked the idea of a widget they could use to keep track of events at their library (and at other locations) in which they would like to take part. This was another widget that teens wanted to make sure

included a “share with a friend” feature.

**Dial-A-Teacher Widget:** NYPL’s ongoing partnership with the Department of Education’s Dial-A-Teacher service will provide for a unique widget. Dial-A-Teacher offers students free one-on-one tutoring and homework assistance over the phone and Internet by local teachers who have a library of textbooks used in New York City schools. Dial-A-Teacher emphasizes teaching the concept behind the questions so that students are prepared to solve other similar problems. The most frequently asked questions are about math topics, and the service has a library of local school textbooks so they can answer very specific questions.

**Teen Interest Widget:** As a method of encouraging site usage, widgets may be created to engage the leisure time interests of young people, on topics exploring music or television.

Administrators and educators from the Department of Education (DOE) will play a pivotal role in both the development process of the tools as well as implementation and outreach. (Note: please see supporting documentation for letters of support from all DOE curriculum offices.) Teachers must be engaged through a variety of activities at all levels of the DOE hierarchy, including the Central DOE, which provides system-wide services such as curriculum implementation; the Office of Information Technology, which offers technical support as well as web-based professional development modules for educators; and the Department of Library Services, with whom the city’s public libraries have a long history of cooperation and information-sharing. The project will also engage organizations that provide professional development support for schools based on specific needs. Outreach will also be conducted to administrators and teachers in New York City’s private and parochial schools. Any special needs these institutions might have will be considered during the development of the project.

Grassroots outreach to local schools will be conducted by public library staff who will have also received training and encouragement to adopt the new tools. During class visits to local libraries and visits to schools, librarians throughout the city will become proponents of Homework NYC widgets. In addition, outreach activities at city-wide educator conferences such as WNET-sponsored Teaching and Learning Celebration and regional staff development workshops, will help inform educators about the new homework tools and encourage usage.

### ***National Impact and Intended Results***

Public libraries play a unique role in youth development. Libraries foster learning in an informal and supportive environment that encourages young people to connect to their peers and to library staff in positive ways. These audiences are particularly tech savvy and active on the Web; during after-school hours they flock to their local public library to join in gaming activities, check out their peers’ MySpace and Facebook pages, and see the latest videos posted on YouTube.com. Research points to the many ways in which libraries must respond to emerging technologies and their implications for how young people learn (MacArthur Foundation, 2007).

Because they are growing up in an information-rich, media-savvy environment, today’s youth think and process information in a fundamentally different way than their predecessors. Libraries must develop resources that respond to younger generations’ expectations, providing open access to readily available digital collections, encouraging communication, and, most importantly, existing where young people live their online lives. A survey of urban public libraries’ websites<sup>1</sup> focusing on homework help shows text-based, static

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<sup>1</sup> Urban public library websites offering resources for homework assistance include: <http://www.homeworknyc.org> (New York City), <http://www.chipublib.org/008subject/003cya/homework.html> (Chicago), <http://www.phoenixpubliclibrary.org/kids/hw.jsp> (Phoenix), <http://www.lapl.org/kidspath/homework/index.html> (Los Angeles), <http://www.brarydog.net/faq.asp> (Charlotte-Mecklenburg, NC), <http://bpl.schoolrooms.net/rooms/portal/page> (Boston), <http://www.stpaul.lib.mn.us/homework/homework-help.html> (St. Paul, MN), <http://www.hennepin.lib.mn.us/teens/DoYourHomework.cfm> (Hennepin County, MN)

resources that do not engage students outside of the library's website. Many sites feature access to tutor.com, an online resource that provides one-on-one homework help to students. However access to services like this can be costly, are often limited to specific geographic areas, and do not take advantage of the many resources available in a library's holdings.

There is some usage of widgets in academic libraries, such as the University of Illinois at Urbana-Champaign's UIUC Library Search widget, which provides catalog search results. Hennepin County Library in Minnesota features a widget on its FaceBook site that allows users to load the search widget onto their own FaceBook page. The Danbury Public Library, Connecticut, served as the first beta tester of LibraryThing for Libraries, a set of widgets that enhance library catalogs with LibraryThing data. However, these applications have not been made public yet, will most likely be fee-based, and do not focus on services to youth audiences.

### **Results/Goals**

This project's final product will be a set of tools that other organizations seeking to engage young people with library resources in a virtual environment will be able to repurpose and utilize. Project activities will engage all community youth stakeholders, including parents and caregivers, educators, librarians, and most of all, children and teenagers. The project will acknowledge and respond to the new ways in which young people are processing and learning information by incorporating libraries' strengths into a new media format that is accessible and familiar to young audiences.

### **Benefits for Library Public**

This project will focus on New York City students, educators, and parents seeking assistance with homework and research assignments on the Web. Through this website, students will achieve successful answers to homework inquiries, the school curriculum will be supported by a variety of resources, and additional independent learning will be encouraged. The proposed project will reflect how today's youth interact on the Web, and simultaneously build support for future generations' library usage. By engaging and responding to younger generations of library users on a participatory level, their perception of the library and its relativity to their own life will be dramatically enhanced. All widgets will be developed for all platforms under consideration, offering a seamless user experience across different systems.

### **Benefits for Libraries**

Actively engaging young library users on a virtual level is a major challenge for library practice, one that will make libraries relevant to a wider audience now and in the future. The proposed project will also address issues that libraries and other institutions looking at adopting these informal tools must face.

The project will be customizable for all three participating library systems. Ease of use will be a priority – students will log in once with their library cards, enter their relevant information, and save the password. As this information will be stored locally in the widget, at no point during the project will students' data exist on the libraries' servers. The project partners will actively explore the legal and practical ramifications raised by sharing information such as 'favorite books or music' or locating and using materials from NYPL's Digital Gallery. The iterative process for the project will address each concern as it arises.

Michael Zimmer, Visiting Fellow to Yale University's Information Science Project, will serve as an informal advisor to the project. The Information Science Project studies the emerging intersections between law, policy, and technology; Dr. Zimmer's research explores social, cultural, and ethical dimensions of new media and information technologies, with particular focus on how technological design bears on the values of privacy, autonomy, and liberty. He will participate in a series of advisory conversations about privacy and personal information issues; examine widget prototypes for ethical and legal issues, and participate in a focus group meeting to better understand other parallel issues in young people's lives. Based on Dr. Zimmer's

advisement, the planning team will work with the libraries' general counsels to establish guidelines for widgets that support social networking or sharing elements. The development of these resources will also focus on the roles that educators and parental involvement can play in this virtual environment. An advisory panel of educators will guide information-sharing aspects of the project.

All project code will be open source, and will be publicly accessible from the NYPL Labs source code repository. NYPL is in the process of determining its Open Source license, likely to be the GNU Public License, one of the most common open-source license schemes. Ultimately, other library institutions across the country will be able to replicate the project for their own users' needs. Because the digital landscape changes so rapidly, the project will build in a continuous feedback mechanism that allows for adjustment and adoption of the newest technologies. Educators and administrators in the higher learning community will also be interested in the project's effects on their users' capacity for visual and new media literacy (Weber, 2007).

### ***Project Design and Evaluation Plan***

The project partners propose a two and a half year project that will introduce 'widget' technology to websites that are used by New York City students. These widgets will be created to specifically support the libraries' goals relating to homework support services to young people. The preliminary step in this project was accomplished with the completion of the Collaborative Planning Project outlined on page one. The project's focus groups identified an initial set of widgets to be built, and project methodology will be based on an iterative process in which ongoing collaboration with the user audience will be a major element. The project will be overseen by a project director; day-to-day operations will be handled by a project manager and project partner LEO: Librarians & Educators Online, and a committee of representatives from participating libraries will serve as a sounding board and help advance the project throughout the city. An advisory committee of professionals in the K-12 educational community will serve as an important tool for both planning the project and outreach and dissemination once the project goes live.

The project manager will be responsible for convening partnership meetings and overseeing outreach for the project. The project manager and partner LEO: Librarians & Educators Online will develop evaluation procedures and protocols with the team, and plan and implement a student and teacher feedback process. LEO: Librarians & Educators Online will be responsible for developing a project timeline and process for product implementation and launch. So that the project remains current and relevant to its audience, trends in technology used by both teachers and students will be monitored regularly to guarantee the tools produced meet current needs. LEO: Librarians & Educators Online's experience with the homework project and knowledge about the information needs of school as well as larger digital trends invaluable informs the project. LEO: Librarians & Educators Online has been involved with the homework project since 2006, when it conducted the first round of usability testing for the homework help website. During the planning project, the firm's involvement was essential in formulating focus group feedback, informing project staff about the digital environment *outside* the library, and forming the next iteration of the Homework NYC project.

During the first six months of the project, the project team will design a first pass of the Homework NYC widgets, which will be presented to a student cohort for feedback and input. Once the core set of widgets have been designed (considering both interface design and functionality), a developer will implement each for use across the chosen platforms. Because the platforms themselves each have their own idiosyncrasies, this will require some recoding for each version. Google "gadgets" (Google's term for widgets) are written in JavaScript using unique Google libraries, while Facebook "Applications" (again, widgets) use a different set of JavaScript libraries, as well as a set of hooks that tie into Facebook settings.

The project will undergo beta testing during the following six-month interval. Team members will observe usage and students will keep track of their own usage through a Twitter diary (Twitter is a microblogging

service that allows frequent updates and instantaneous delivery, so that other participants can see students' experiences immediately). NYPL's Emerging Technologies Group (a group of NYPL young adult librarians who are enthusiastic and skilled in bringing new technologies to young people) will serve as active project facilitators. Student feedback during the beta testing will determine if widget design, appearance, and customization features respond to the needs of young people. If not, the widgets will go back for re-design or tweaking. *Note:* Please see supporting documentation attachment #2 for prototype widget samples.

The project will only be successful with collaboration from New York City teachers in public, parochial and private schools; education and outreach will be a major component of project activities. The advisory committee will help inform this aspect of the project greatly. By the seventh month, an outreach specialist will be hired to conduct grassroots outreach and education to the many layers of the City's Department of Education (DOE) administrative and regional staff and teachers throughout the city's five boroughs, as well as the staff of the three library systems. This position will liaise with a variety of DOE representatives and parochial and private school staff, presenting staff development workshops that instruct on the usage of Homework NYC widgets and, equally important, introducing and reminding educators of the wealth of authorized and accurate resources available through the public library. In addition, project staff will attend conferences and workshops for educators across the curriculum, including Department of Education-sponsored staff development days, the DOE Social Studies conference and school library conferences to introduce the Library's resources to school librarians and teachers assigned to school libraries.

To facilitate this education process, for the second year of the project, staff will build a web resource for educators that integrates resource lists, databases, and homework widgets. The site will feature videos and screencasts that clearly explain the project goals and demonstrate how the widget technology works. The web resource will also serve as a tool to inform teachers about the Library's overall resources, and provide recommendations for teacher to pass on to students on particular subjects (such as local history or science fair projects).

During the second year of the project, the tools will go public and another evaluation iteration will determine how timely and relevant the widget tools are in the current digital and education landscapes. Previous marketing of the homework help website demonstrated that targeted advertising and marketing to educators and students during the back-to-school season resulted in increased usage of the homework resource. During the 2009 back-to-school season, the Homework NYC widgets will be marketed to educators through paid advertising in professional publications such as *Education Update* and *New York Teacher*. Google keyword advertising, in which paid advertisements for the homework help resource appear after New York City users enter relevant search terms, will send students and educators to the widget resources. Also doing this time, project staff will hold another series of focus groups to see how effectively the existing widgets are serving students' needs, as well as if any new widget functions should be added.

The outreach specialist will focus on attracting new audiences through extended outreach to non-library user populations by encouraging library card registration. The project will launch a 'viral' marketing campaign through students participating Teens Advisory Groups (TAGs), consisting of neighborhood teens who meet frequently to recommend and partake in a variety of library-sponsored activities. TAG meetings take place at libraries throughout the city, and will serve as an informal network of communication and outreach to potential new users.

The third year of the project will consist of a survey of the digital landscape and users' changing online habits. The efficacy of Homework NYC widgets will be evaluated by project partners against these factors. Project dissemination to both user audiences and the larger national audience of libraries will take place through conference attendance and a publicity/information campaign. Training of librarians throughout the three years of the project will focus on sustaining project outreach once the education specialist departs. The training will

increase staff comfort in implementing the widget technology and also focus on increasing participants' understanding of the online lives and interests of students.

## **Evaluation**

Project partner LEO: Librarians & Educators Online will conduct an evaluation to assess the progress and success of the project in meeting the needs of primary users, students age eight and older, and their teachers. LEO: Librarians & Educators Online will work with project staff and employ evaluation tools such as surveys, focus groups, and interviews to measure the extent to which the Library is able to meet the following outcomes:

1. Students successfully complete their homework using Homework NYC widgets and cite an improved ability.
2. Students find Homework NYC widgets more convenient and useful than their traditional online information tools.
3. Students recommend Homework NYC widgets to their peers
4. Educators recognize Homework NYC widgets as a viable helpful tool that informs their students' homework.
5. Other libraries and institutions will be able to emulate the homework widget tools for their own purposes

During the tools' beta testing, the evaluator will determine the success of the user interface and functionality. Users will be asked to indicate, for example, whether they found the online search functions to be easy and helpful in locating relevant resources to complete their assignments. If the evaluation indicates that users have other preferences, the widget(s) may be redesigned.

Findings from the Collaborative Planning Project will serve as baseline data and will help determine increases in new research and information-gathering behaviors through homework widget usage. Project staff and the advisory committee will help assess the findings. These measures will enable the Library to determine whether the homework help widgets have made an impact on the targeted audience of teachers and students. They will also help the Library and other institutions develop strategies for the design and delivery of future widgets.

## ***Budget, Personnel, and Management***

### **Budget**

NYPL requests a grant of \$366,336 to build a suite of Homework NYC widgets that will provide seamless access for young people to homework help resources. NYPL seeks support for outreach activities related to the project and the work of project partner LEO: Librarians & Educators Online. It will share in the cost of the project by contributing the efforts of existing staff who will build the technology tools and implement the overall project. The Library will meet the cost-share obligation by allocating funds from its operating budget. Project partners Brooklyn Public Library and Queens Library will donate their staff's time as cost share toward the project's planning and evaluation process, as well as outreach to student and teacher populations.

### **Technical Knowledge**

NYPL is at the forefront among research centers in using digital technology to make special collections and unique research materials available to a worldwide audience. The Library has continually adapted to digital technologies to make its resources more accessible and available and to meet changing user needs and expectations. The Library's new Digital Experience Group seeks to respond to the need of a highly diverse patron base with new ways of accessing and utilizing its vast resources. Combining user analytics with explicit

research and development capacity, the Digital Experience Group plays a major role in encouraging access to new populations and facilitating communications between librarians, curators, and scholars.

### **Management Plan**

**Joshua M. Greenberg**, the Library's Director of Digital Strategy and Scholarship, will serve as the Project Director and provide oversight of the project. Dr. Greenberg came to the Library in April 2007 from a position as Associate Director of Research Projects at George Mason University's Center for History and New Media, where among other projects he helped to develop the NEH's Edsitement Learning Suite and co-directed the Zotero project (with initial funding from IMLS). Dr. Greenberg's role at the Library anticipates and responds to the unique needs of users who seek out information electronically and address; he specializes in evaluating emerging technologies and conceiving of how the Library could take advantage of such technologies to better serve scholars. He received his Ph.D. from Cornell University's Department of Science and Technology Studies in 2004, and the MIT Press will release his book, *From Betamax to Blockbuster*, in spring 2008. Dr. Greenberg, who reports to David Ferriero, NYPL's Andrew Mellon Director of the New York Public Libraries, will spend approximately five percent of his time on the project.

**Andrew Wilson**, Youth Web Editorial Coordinator, will serve as the Project Manager. From his previous work in the creation and marketing of the homework help website, Mr. Wilson has extensive experience in dealing with the public library environment and Department of Education administrators. Mr. Wilson will oversee day-to-day activities of the project, including maintaining and updating the educators' site, evaluating potential new tools, looking for new partnership and community connections, and coordinating content among the three libraries. He will serve as liaison with project partner LEO: Librarians & Educators Online. He will also be responsible for coordination among project team members, branch librarians, and contractors. Approximately 50 percent of his time will be spent implementing the project.

**LEO: Librarians & Educators Online**, an independent educational technology consulting and evaluation firm, will serve as the project's partner. Owned and operated by Linda Braun, LEO: Librarians & Educators Online has been involved with the homework project since 2006, when the firm conducted the first round of usability testing for the homework help website. LEO: Librarians & Educators Online's familiarity with the homework project and knowledge about the information needs of school as well as larger digital trends will invaluablely inform the project. LEO: Librarians & Educators Online facilitated focus groups for the IMLS Collaborative Planning grant, and has been an active member and participant in the project planning committee's meetings. As part of the proposed project, LEO: Librarians & Educators Online will direct the evaluation procedures and protocols and plan and implement student and teacher feedback process. It will keep the project team on track for product implementation and launch, and will advise on the development of new tools. It will play a key role in the dissemination of the project to a national audience.

The establishment of a grant-funded position, **Education Outreach Specialist**, is the most cost-effective means of carrying out the outreach component of project. Qualifications for the position will include a Master's Degree in Education or Library Sciences, knowledge of New York State and City learning standards and curriculum, familiarity with the structural hierarchy of the New York City Department of Education, comfort with interacting with students and educators, and possession of relevant organizational and technology skills. This position will travel throughout the five boroughs of New York City, making personal contacts with school administrators, educators, and students both in and outside of the classroom. The outreach specialist will also engage the staff of the three library systems in becoming familiar and comfortable with the new technology tools.

Other NYPL staff participating in the project include **Brook Berry**, Coordinator of Technology Training for the Office of Staff Development, who oversees and implements staff technology training at NYPL; **Hillias (Jack) Martin**, Assistant Coordinator of Young Adult Services, who coordinates youth programming for 89 NYPL

locations, administrates the Young Adult Emerging Technologies Group, and liaisons between sites and NYPL administration. Representatives from the Library's newly formed Education Office will supervise the outreach specialist and advise on the implementation of project outreach. Additional members of the project team will include staff representing the Brooklyn Public Library and Queens Library. While the particular individuals have not yet been selected for the planning project, these team members will be librarians with extensive background and experience in children's and young adult services. Together, these staff will be essential to shaping the framework of the project, guiding its outcomes, and stimulating library staff across New York City to participate in the project.

NYPL will also contribute the time of a User Experience Designer who will spend approximately 50 percent of his time over three months on designing innovative, comprehensive, and easily navigable widgets that are readily accessible from both an intellectual and a technological standpoint. An Application Developer will identify and define data models for the proposed widget applications. This person will spend approximately 100 percent of his or her time over three months implementing the widgets for use across the chosen platforms. Necessary qualifications of this staff include an excellent knowledge of web development using current tools, including PHP, (my)SQL, Oracle, Ruby/Rails, and JavaScript (Java, Python, preferred), and experience adapting existing open-source web software to a library context (such as Wordpress, Drupal, Lucene, and Solr).

### ***Dissemination***

Dissemination of the project's growth and online activities will be a major component of the project. Aside from the aforementioned extensive outreach campaign to the student and educator community addressed in 'Assessment of Need,' project partners will also focus on informing a national audience of libraries and similar institutions about the project. Research will be disseminated at meetings of teachers groups, educational forums, professional and industry events focusing on services to young audiences and/or digital libraries and technology, including conferences and meetings of the American Library Association (ALA) and Young Adult Library Services Association.

Because the development of this resource will be of major interest to libraries across the country, the Library will seek to publish documentation of the project in a professional trade publication national in scope. Through NYPL's website NYPL Labs, project partners will share lessons learned about the Homework NYC widgets with the global library and museum community and help identify best practices for similar digital projects and resources.

### ***Sustainability***

NYPL has made an institutional commitment to preserving and expanding access to collections through the use of digital technology and staff is charged with continuously monitoring the development of new information technology. In order to ensure that the value, integrity, and quality of data are preserved, planning for the systematic maintenance, upgrade, and eventual migration to newer technologies is considered an ongoing process.

Outreach and education efforts for the project will be ongoing. Training for librarians on the usage of Homework NYC widgets will be incorporated into the staff development calendars of the project partners, and librarians at the community level will continue to conduct outreach to schools and educators and encourage their young patrons to use the Homework NYC widgets. NYPL staff will monitor changes in application interface to adapt code where necessary. As new electronic resources develop, library staff will continue to evaluate them and gauge the feasibility of providing widget-based access. The city's libraries are committed to providing access to homework resources through new technologies. With a rapidly changing digital landscape, it's difficult to predict what new resources will be developed in a few short years. This project will draw on the adaptability of the proposed tools and the wonderful resourcefulness of young people to continue to provide services to students beyond the grant period.

