



Googlenauts Are Turning the University Inside Out:  
Implications for Education, the University Library and Library Development  
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*Abstract: The arrival of the Internet in 1995 changed the world as we know it, and our understanding of the magnitude of this change is just beginning. We had thought the Internet simply implied digital repositories of information available online and tools that would allow students to attend class remotely. It turns out that it is much, much more. Life leaders, individuals who perform rigorous research throughout their professional and nonprofessional lives, are looking to their university library for support as they make purchasing decisions on everything from personal digital cameras to capital equipment and services for their companies. Engaging, serving and retaining these life leaders will provide the university library with high-value development opportunities while greatly improving life leaders' ability to meet success in their careers.*

Something is wrong, well, off. The usual students at the back of the room are typing on their notebook computers taking notes, emailing their friends or playing games—it's their nickel. But the pattern is wrong.

Each time I present my students with a concept new to them like Porter's Five Forces or Norton's Balanced Scorecard, the computer keys rattle. Could they be looking up the concepts online as we go along? I mention a new concept, wait several seconds and then call on them for the definition. Sure enough, they read the definition from their browser to the class. These people REALLY want to learn! The front lines of research have moved from the front counter of the library to the back row of the classroom.

On the other hand, students have told me they really aren't interested in memorizing the esoteric details of the material presented in class if it isn't something they will immediately apply or need to know to do their daily work. They don't need to, they feel, it's available online! And, they feel, when they do need it, the chance they will remember and know how to use it is unlikely. They definitely want to know what it is, how it works, how and when to apply it, and where to find it, but not take up valuable class time and brain width to master it.

*“The front lines of research have moved from the front counter to the back row.”*

On the other, other hand, when they need it, they need it. They need it in

full detail, well explained, and immediately—in seconds rather than minutes, live chat rather than email. They want it with all of the warts—differing points-of-view, offsetting studies, conflicting data. They also need support for it—which opinion is correct? How does it really work in practice? Which accessories are necessary?

What is going on?

### **Students have Become Googlenauts**

The university used to act as a creator and repository of information, furthering the knowledge of the day, and training future citizens and professionals. The university curriculum collected together a set of subjects. Sage instructors created courses in those subjects comprised of information they thought their students should know which they delivered through lectures, in-class exercises and assignments. The sage is under siege.

Students today, as they always have, often view instructors as too slow, uninteresting, outdated and borderline irrelevant. “Class is boring.” “I don’t care about this subject.” “When will I ever use this?” “This information is of such low value to me.” Historically there had been few alternatives. The Internet has changed all that.

The Internet has become their initial research resource, and Google its front door. They choose it because they believe they will get the information they need more quickly and understandably than any other source. And, it is available 24/7/365 everywhere. Other open-access scholarly search engines like the Directory of Open Access Journals, OAIster and Scirus, as well as their school’s own search tools often go unused.

*“The Internet has become their initial research resource, and Google its front door.”*

Students try to use their own universities’ online sources, but often find them to be a draconian accumulation of disparate subscription sources that may or may not contain useful, or entirely accurate, information. Searches require guessing what they contain and how their search tool works—every one is different. Many of these sources are visible via Google, though the content is often hidden behind firewalls for which the student does not have a password. (Though they may well be entitled to access because their university has a subscription.)

Students are also feeling a sense of alienation—freshmen for whom it is their first time away from home; students spending hours working on individual assignments. They are feeling shame when they cannot find what they are looking for and don’t want to ask for fear of being labeled as a newbie. “Educators often tell students that there are no stupid questions. However, in the blogosphere this is evidently not true: if you can’t find the information you need, you are labeled as stupid. . . . Students often think they should be able to navigate the online library world efficiently without help from librarians.” (Martin)

Physical artifacts (books, journals, etc. on the shelf) are even more cumbersome. They are heavy, often shelved in far-flung stacks or checked out (especially when other students have been given the same assignment at the same time) and must be returned within a certain time.

Card catalogues offer little insight as to whether the book contains the content for which the student is looking. The ability to browse the shelf makes up for this if the subject being researched matches the cataloguing schema—great if you are researching macroeconomics, poor if your subject is writers from New England. Unless the library specializes in the area the student happens to be researching, collections are often thin.

In-the-know students strike up friendships with back-room research librarians who have spent years cataloguing and using the resources, and have a pretty good idea of where to find what. They often have knowledge of and access to reference materials inaccessible to students. These relationships are time-consuming to develop and there aren't enough librarians to go around.

As one of my students said candidly, “I don't remember the last time I stepped foot in a school library - there is no reason to when everything can be found seamlessly (for the most part) online. Libraries are confusing, there isn't a good way to find what you are looking for, and many times they don't have the most up-to-date sources. By the time something is published, printed, and then put on the shelves it loses its importance. I hope Google does implement book digitization - that would make research so much easier.”

This sentiment was echoed by Dr. Joseph Janes, Associate Dean for Academics of the University of Washington, at the 2006 American Library Association's annual conference in New Orleans: “No one comes to libraries to search. Users come to us for learning, community, and other services.” (Albanese) And, if many of these students didn't have an assignment due, they wouldn't be at the library hiding from distractions—the resources they are accessing are for the most part available online.

So, Google is it; and more so when [Google's book digitization project](#) is completed: digitizing every book ever printed and making usable excerpts available through keyword search. This will fill several gaps:

- 1) Google will represent exceptionally deep collections in all areas of research.
- 2) All of Google's information will be constantly available 24/7/365 from anywhere via a single easy-to-use keyword search field.
- 3) All sources will be available to all students concurrently.
- 4) The excerpts of books it plans to provide should give students enough information to make an informed guess as to whether the source is likely to contain the information sought. If the book is not copyrighted, its full content can be displayed by Google. Otherwise, specialized search websites like Worldcat.org will help users find physical copies at libraries nearby.

In fact, the most effective way for the University to make its own collections available to its students may be to make them accessible from Google, where their students are looking. The fact that these resources would be accessible to others should be of no practicable consequence if the University's commitment is to make

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their resources available to their students in the most expedient way possible—in attempting to keep them from others, the University keeps them from their own students to whom they belong.

### **The Up and Down Side of Academically Valid**

Some argue that Google's search results are not academically useful, since they bring up not only scholarly works reviewed by scholarly journals, but also unreliable information anyone with a computer can post on the Internet and are clogged with corporate sales and marketing sites, a result of the millions of dollars these companies are spending to ensure their sites come up at the top of the list.

Google has responded with Google Scholar. Google Scholar searches across many sources of scholarly literature and returns results sorted by relevancy. Google Scholar's Library Links program can not only make the University's resources available to its users, but also, for those Libraries that participate in Worldcat, provide users with the ability to identify the physical location of the University's copies.

“Many users, both patrons and librarians, have the urge to search Google Scholar when they need to complete citations. And this is a good urge—the search often succeeds. But a Google Scholar search should supplement, not replace, a Google search, even when the article in question is scholarly. Google and Google Scholar have different databases of information, and citations that can't be found with one can sometimes be found with the other.” (Cirasella)

Though OCA/Internet Archive's OpenLibrary.org is proceeding down a similar path, it will ultimately be very difficult for them to win great numbers of users away from a well-financed Google Scholar. And, though Google Scholar addresses these issues, many students continue to use Google, which is already supporting so many of their non-academic needs.

And, Google Scholar is not perfect. There is an inherent flaw with restricting access to scholarly sources. Works that don't support commonly held norms, whether true or not (like the world is flat), may find themselves rejected or trapped in a stack of works awaiting deeper scrutiny which, in some academic circles, may take a generation due to internal debates and lack of funding for reviewers. (Thank goodness contrarian authors are no longer being put to death.) On the other hand, authors who wish to have their works recognized as scholarly may be tempted to falsify data or lobby on behalf of their works, thereby compromising the very impartiality that this process was designed to ensure.

Let's look at how Wikipedia, the open source online encyclopedia to which everyone is invited to contribute or edit, handles the same subject. When you post an entry, messages are sent out to any number of volunteer editors knowledgeable in your particular research area who, usually within several hours, either verify that the work conforms to currently accepted norms, or flag and open it to public discussion. If you have ever made a Wikipedia entry, you will know how quickly and decisively this process works. Anyone can throw in their two cents and, through intense collective ideation and scrutiny, sometimes existing norms are confirmed, other times new norms are formed. Google may add similar capabilities.

As to the accuracy of the information found online, *Nature*, an international weekly journal of science, published the results of a [study](#) conducted in December 14, 2005 that compared content from Wikipedia to an accepted standard, *Encyclopedia Britannica*. Experts compared articles from each, side by side, but were not told which site they were taken from. Wikipedia and Encyclopedia Britannica each had four serious errors in a total sample size of 42 articles. For less serious factual errors, while Wikipedia had more at 162, Britannica had 123. So, though the Internet may not be perfectly accurate, neither are those resources that we have been taught to trust so completely.

### **The Reality of our Future**

“According to University of California—Berkeley professors Peter Lyman and Hal Varian, the world now creates no less than five exabytes of information each year, enough to replicate the Library of Congress’s entire print collection 37,000 times over.” (Albanese)

The librarian’s ability to stay on top of what is available, let alone catalog this information for retrieval, has been completely overwhelmed. Google seems to be scaled to meet these challenges today, but what will we be using in the future as our information creation capabilities increase, especially in non-text form?

Socialization among humans, peer pressure, and the innate desires to be published and find errors, channeled through sites like Wikipedia, seem to offer the only cost-effective and time-effective way to concurrently sort the value and validity of these mountains of content and encourage new discovery without sacrificing creativity. Rather than attempting to block errors and biases, embracing them and letting the general public scrutinize, debate, rate and endorse them may be the better path to achieving validity.

### **Life Leaders**

The Internet may have conditioned students today to be healthfully skeptical of information, and more apt to verify accuracy than their predecessors, especially since the Internet makes confirmation quicker and easier. Students today, as a result, may be drawing upon more, richer information and triangulating more views on a subject before forming their own opinions.

This activity is especially true with non-academic pursuits. Students who purchase digital cameras will often consult several aficionado sites like [www.dpreview.com](http://www.dpreview.com) and [www.epinions.com](http://www.epinions.com) before making their selection, and then go to sites like [www.pricegrabber.com](http://www.pricegrabber.com) to find out where they can purchase at a better price. This is now the norm among university students.

They are becoming life leaders, performing high-quality research to help them understand the world around them, make informed life decisions and more ably compete for promotions at work against increasingly capable candidates. Students have been operating this way since 1995. Those who have incorporated this rigor into their daily lives are likely to be successful life leaders.

## Implications for Education

The arrival of the Googlenaut has broad and deep implications for education.

1. **KNOWLEDGE TRANSFER IS SHIFTING FROM PUSH TOWARD PULL:** The advent of the Internet is having major impacts on the DNA of the university.

Until recently, most educators had thought of technology in terms of “technology in the classroom” and technology as a way to enhance the learning and make class periods more interesting through the use of video, audio, web cams and animated PowerPoint. The Internet has moved us beyond that. Internet technology has made knowledge ubiquitous and instantaneous, and is turning the university knowledge delivery model inside out.

We are seeing a shift from a “push” model (telling students what they should know) to a self-service “pull” model (being ready to deliver the information quickly, understandably and accurately when students ask for it); and a shift away from an instructional knowledge dissemination model toward a knowledge library model. Student-directed work, student-designed concentrations, etc., are all a part of this new trend.

2. **GENERALIZED TO UNPRECEDENTEDLY SPECIALIZED:** While elementary schools continue to set the rules of socialization, deliver the basic information every child should know and build a spirit of community, camaraderie and citizenship, universities are becoming the loci of the collective exploration of extremely granular subjects, with students working in real-time with like-minded others around the world to make, debate and publish new discoveries at previously inconceivable speeds.
3. **INSTRUCTORS BECOMING GUIDES AND COACHES:** Instructors are becoming guides and coaches in this new paradigm, exposing students to new ways of looking at the world, while challenging and inspiring them through creative exercises to deepen their skills in problem identification, problem solving, and finding, validating, synthesizing, analyzing, correlating and modeling information. They point students in the right direction and put search results in context: Is this the commonly accepted view? Is this the only view? Is it holding up to scrutiny? How else have others addressed this issue? Who are the generally accepted experts in this area?

The core requirements of a common curriculum will continue to be set by the university. A degree will continue to revolve around mastery of a specified knowledge set, like marketing; however, the delivery system from which students gain this knowledge will become transposed. Students will be free to choose the path, method and timing to acquire this knowledge. The [Montessori](#) schools have been working on a not-dissimilar model, which may be of some interest to explore.

4. **MOVE FROM DEGREE-BASED TO LIFE-LONG LEARNING-BASED:** The concept of a university student is changing, from a person who attends a discrete few years, then goes on to take a continuing education course from time-to-time and contribute a few dollars here and there, to life leaders who understand that they are likely to change careers several times and

wish to have direct continuous access to the university's knowledge, tools and expertise to guide them through these transitions—the ideal customer-student from a community/ revenue/ development point-of-view! This is not to say that the concept of the degree is going away. The degree will continue to be the foundation of our professions.

Savvy universities will recognize the implications this change presents and begin the process of moving from the traditional degree-centric model to an advanced form of continuing education-centric model with associated access to the university's resources, of which the degree is but one menu choice. The student enrolls in the university for life.

5. **STUDENTS GETTING HIRED:** Now, let's look at it from the employer's side. Let's say there are two MBA candidates with equal work experience interested in a job the company is filling. One received their MBA years ago, the other more recently. The company may reasonably value the recent graduate with equal work experience more highly because their information is much more up-to-date. (Think of a business education that does not address the implications of the Internet.)

Now let's take it a step further. Suppose there were a third candidate who not only has an MBA, but is also a certified "Life-Long Scholar" (someone who has returned to school each year to bring their knowledge set up-to-date). This third candidate would have an advantage because, not only is their information up-to-date, but it will continue to be so throughout the time they spend with the company. The long-term learning relationship with the university, not the one-time degree, becomes the valuable commodity.

In addition, life leaders who enjoy continuous access to the university's resources would likely perform better in their work as in their studies, improving their likelihood to be chosen for advancement within their company.

### **Implications for the University Library ("Library")**

This new paradigm has great, beneficial implications for the university library as well. The Library is becoming an archeological research museum, preserving the original artifacts for posterity (books, clay tablets, phonograph records, etc.), extracting and making as many types of information as possible ubiquitously available for research online, while putting a small percentage of popular and unique works on public display. It is becoming the university's Internet center of excellence. It is repurposing its spaces into study rooms and forums for small group and full-scale debate, furthering the knowledge of the day by juxtaposing differing views and recording the interaction. And, the library is becoming the intellectual hearth: a comfortable, welcoming home online and in-person for anyone wishing to read a book, have a conversation, research or share an interest.

The Library may wish to focus on four duties to students as it relates to information:

- Make sure needed information is available
- Make sure it is "findable" to students using the techniques to which they are most accustomed (discovery)

- Make sure it is accessible only to those who have rights to it
- Help students to interpret it in the context of their culture and discipline

The Library may wish to partner with other libraries to:

1. **PRESERVE ORIGINAL ARTIFACTS:** Assemble, store, curate, restore and maintain original artifacts using museum practices in collective offsite storage facilities, with shops for restoration and study rooms for scholars. The artifacts can be ordered online by scholars for study and participating institutions for display. Artifact-centric websites like Worldcat.org allow users to locate physical copies in the collections of nearby libraries.
2. **EXTRACT CONTENT:** Create a digital version of the content of the artifact. For books, this would mean a high resolution image of the page as well as an OCR version of the text.
3. **ATTRIBUTE CONTENT FOR SEARCHING (METADATA):** Make the digital version findable by search engines—adding browsable attributes for easy category search—e.g., title, author, date, year published, subject, Dewey decimal #, library of Congress #, link to list of other publications by the author, link to books for sale on Amazon, etc., and hyperlinks to related subjects. Use Search Engine Optimization to ensure it comes up at the top of the list of search results for corresponding keyword searches.
4. **VERSION THE NEW AUTHORITATIVE TEXT:** The way we think of books is changing. Rather than published editions, the new authoritative text is becoming a conversation that is being constantly updated to correct mistakes and reflect newly available information, making it that much more authoritative by being continually relevant. And, rather than being written by a single author(s), new co-authors will join in over time. Books of the future are likely to be submitted in their digital form, with the authoritative text being designated as the most recent digital copy approved by the author. Google Scholar is already underway with the capability to store versions alongside the original.
5. **PRESERVE THE DIGITAL RECORD:** The responsibility to preserve the digital version and associated attribute information is as important as preserving the original artifact—perhaps more so, since the physical artifact may be lost or deteriorate over time, yielding a less information-rich digital version. Libraries must work together, taking a stewardship role in ensuring copies are maintained in several protected locations around the globe to ensure survival in the event of the catastrophe that befell Alexandria.
6. **MAKE INFORMATION ACCESSIBLE THROUGH GOOGLE:** Though the Universal Access Principle favored by some, “libraries should provide free access to all information to all persons all of the time,” (Bivens-Tatum) is being hotly debated, Libraries should make all of the information they possess searchable through Google and other search engines, protecting the content by subscription.
7. **HOST GLOBAL UNIVERSITY ACADEMIC COMMUNITY SITE:** In order to meet student needs for universal real-time research support, the university libraries should collectively host an academic community website oriented specifically toward the broader

global university community, not unlike Facebook.com, MySpace.com and SecondLife.com. Access can be restricted to those with a university relationship. How it could work:

- a. Each university maintains students, faculty, staff and alumni permission rights information in their own encrypted permissions table on the community site. These permission rights will identify which individuals have access to which online publications, research sites, etc. Privacy would be protected by referring to each user by a number, rather than their name.
- b. Each university's enrollment management system can easily be configured to automatically update this permissions table each time there is a change in the user's status.
- c. The permissions table can be very granular in nature. The permissions for alumni and friends of the university can be set to restrict access to resources that are university-owned and individual subscriptions that specifically allow access by the University's alumni and friends. Students and staff can be provided access to restricted subscription content. Faculty, in addition to these, can also be provided with access to teaching guides, exams and answers, etc.
- d. When the user accesses a protected site, the site will automatically communicate with the community site, check the permissions table and provide the user with the appropriate access. This will be done in a fraction of a second, making the experience seamless to the user.
- e. To get started, users would register on the community site, list the libraries with which they have relationships and create a Facebook.com-like profile describing their areas of expertise and interest, links to their other community sites, etc. The site would send a request for permissions verification to the appropriate universities.
- f. Our newly empowered community of users is ready to go!
  - i. Example 1: A new term is introduced in class, the user goes online to search for the term, it appears that it is a term specific to this particular instructor, the student that searches for past students of the class, looks to see who is logged in and sends them an instant messenger asking for clarification. The past student replies 10 seconds later with a quick definition, which the student is able to share with the class.
  - ii. Example 2: A researcher has a looming deadline. She/he puts out a call for help. A Student from across the world volunteers because they have a paper coming up on the subject and feels they can learn a lot from the researcher by helping.

- iii. Example 3: A student puts out a request on their handheld device while they waited in line for the bus for someone who can help them to understand how to do Net Present Value financial calculations. An alumni working in a bank on another continent writes back with an easy way to think about it.
- iv. Example 4: A person has just been promoted to a leadership position in their company and, though they have an MBA, it was years ago and business thinking has changed. He/she puts out a call for a recent b-school grad to tutor them on newly developed concepts. A user writes back, provides links to a set of current articles and schedules a time to get together. Online.
- g. Micro-forums will spring up in which students and alumni share information about a particular course, with the instructor's participation. Other forums will form around interests. Automated collaborative filtering will list other forums in which the user will likely be interested.
- h. Content can be carefully monitored and moderated to block inappropriate content.
- i. A technology partner like IBM can be enlisted to run the backend operations.

With these improvements, the academic safety net is in place and the university library is making it happen. University students now belong to a global "family" based around academic excellence in their own areas of interest that transcends the individual class. It is a family that offers a healthy academic haven from the daily distractions that keep students from reaching their potential. And, done in the way described above, it provides all of the benefits without the hacker and privacy pitfalls that have kept similar efforts from proceeding (Albanese), and without introducing new technologies that could be used to facilitate cheating or abuse of access privileges.

The Library itself may wish to:

1. **PUT AN EVEN MORE WELCOMING, TECHNICALLY SKILLED FACE ON SEARCH SUPPORT:** Make highly knowledgeable Googlenauts on staff available to support students online and in person.

Students tend to launch headlong into their studies, and eschew help when they arrive at an impasse: they ignore it, trivialize it, or make a guess and proceed as though it were gospel—all concerns that seriously compromise the building blocks of their education. Students eschew help out of shyness, not wanting to seem incapable or out-of-the-know, not knowing how to phrase their question, not wanting to bother a visibly busy person and, most importantly, not wanting to be delayed by an authority figure who isn't listening, is pursuing inapplicable, time-consuming tangents and has to be politely indulged as the final hour of exam preparation ticks away. An educational disaster in the making.

The Library staff needs to focus on nurturing learning and putting students' fears to rest. Being welcoming, available, actively listening and making it clear that they appreciate the constraints the student is under will help. Letting the student know that no question is a dumb question and that they will need to ask a few quick questions to pinpoint the answer or the needed resource will go a long way toward alleviating students' concerns. One-on-one scheduled sessions away from the distraction of the reference desk will allow the student to ask their questions in private, while providing the librarian time to pull materials together ahead of time. (Sonntag)

More importantly, the student needs the feeling that they know the Library staff personally. They need to be supplied with enough information to be able to strike up a friendly conversation and explore common interests, perhaps illustrated by a picture or personal object on the desk.

These relationship-building techniques must be complemented by a mastery of the full spectrum of search technologies and methods—knowing what to use when, and the ability to quickly and clearly impart this knowledge onto students.

And the Library needs to provide this same experience online. The picture on the desk may become a photo and short bio in the corner of the webpage that shows a different staff member each time the student logs in. Taken further, it may be a research librarian avatar on the Library's webpage and in the Library's virtual branches located in [www.secondlife.com](http://www.secondlife.com) - like websites. Giving the avatar lots of personality and a welcoming, fun-loving but serious nature, will build rapport and stimulate use. Done well, this avatar will deliver encouragement, wisdom and help, providing every student with their own personal research support librarian 24/7/365!

2. **PROVIDE REMEDIAL SEARCH TRAINING:** Students are receiving training in search methods and technologies, and methods for recognizing and validating authoritative content before they reach the university. New university students, as a part of their library sources orientation, could be tested for basic search skills and provided with individualized remedial training to fill the gaps.
3. **FOCUS ON TURNING NEW STUDENTS INTO GOOGLENAUTS:** There can be a tendency for staff to provide a disproportionate amount of their time to supporting faculty research efforts—they know each other, the faculty ask for help and are working on interesting subjects. (Who want to tell the umpteenth student from Professor Nightly's class that calculus books can be found by searching the card catalog, are located on the second floor and have already been checked out by other students in the class.)

Long-time faculty generally know where their subject matter is shelved, the positions of its proponents, the counterarguments to these positions, which sources are considered reliable and what tools to use when to access them. New users, on the other hand, stumble into this world blind. They don't know what's available, don't know how to go about finding out and don't know if it is a wise investment of their time and the Library's resources to try (vs. just consulting Google).

To correct this bias, staff should be asked to treat everyone performing research as equals. Staff should be incented to place special emphasis on bringing new users up to Googlenaut competency, and then facilitate and inspire Googlenauts to help each other, effectively making them extensions of the staff itself.

4. **PROVIDE A UNIFIED SEARCH ENVIRONMENT:** Until Google's digitization project is complete, its tools are improved and all of the Library's resources are accessible through it, a unified tool, ubiquitously available with a single keyword input field for searching all internal and external databases, subscriptions and search engines (also known as a federated search environment) will be needed. Additional tools—search narrowing, clustering, suggest alternative search terms, saving complex Boolean search queries, etc.—will ensure that the university library's search capabilities are the quickest, easiest, most intuitive and most powerful available. "From the user perspective, obtaining relevant information is paramount; whether it comes from the online catalog, the web, or a subscription database is less important." (Bell)

The Library should transition its population to Google when/if Google's capabilities become comprehensive and robust enough to become true alternatives to this unified search environment.

5. **ENGAGE AND SUPPORT THOSE OUTSIDE OF THE IMMEDIATE ACADEMIC COMMUNITY:** The Library should use its unique position as the center of academic thought to attract and deliver the full expertise of the university's broader community into this dialogue. Accomplished alumnae/alumnus, authors, researchers and friends of the Library can participate online or in-person using the Library's tools for interaction, incented with access to the university's resources, tools and those particular subscriptions for which the Library has been able to negotiate access as ad hoc research assistants.

### **Implications for University Library Development**

The University Library is supported by a development staff that has traditionally focused on attracting the capital necessary to augment the physical plant, collection and staff through donations from local corporations, parents and alumni. The many changes implied in this article will require not only additional funds, but also the use of new development tools and the participation by a new group of donors; those who understand, use and value the capabilities that the electronic tools and "pull" support discussed herein will provide students.

The Internet should be viewed as an extension of the development staff, reaching out to, engaging and receiving donations from persons who the development staff doesn't have the resources to call upon, visit or invite to lunch. It comes down to a formula of traffic + message + processing capabilities.

1. **STIMULATE INITIAL GIVING WHILE IN SCHOOL:** Offer students low-cost opportunities to give back while in school. Once engaged in regular giving as a student, they will be more apt to continue donations after graduation.

2. **ATTACH GIVING TO DISCRETE, TANGIBLE ITEMS:** Students, and their parents, may enjoy giving something tangible that they can show their friends and family. Campaign ideas: *“Digital Book Drive: Your donation will help us to digitize a book for our collection. Choose from the following list or donate one of your own!”*, or *“Name a Study Carrel—pick it out and pay for it online like an airline seat!”*, or *“Annual Library Deacquisition Live Online Auction Saturday Night featuring Garrison Keillor as our guest auctioneer!”*
3. **OPEN NEW ONLINE GIVING CHANNELS:** The digital world provides the means to open and support many more channels for giving. Users are easy to interact with and present donation opportunities to at a minimal cost when they access the Internet through the university library search page or its virtual branches on [www.secondlife.com](http://www.secondlife.com) –like websites.

Fundraising campaign banners hung on the outside of Library buildings can attract and direct interested parties to specialized web pages. The Library’s wish list, with an associated “I’d like to Donate” button next to each item, can be displayed across the top of the Library’s homepage, on the thank you page at the end of live chat sessions during which Library staff have provided valuable assistance, and on many student, parent and alumni-focused web pages throughout the university. The Library can be listed on [www.networkforgood.com](http://www.networkforgood.com) – like websites that list charitable opportunities for donors. Authors who have graduated from the university may be willing to post an attractive Library donation hyperlink on their own websites, as may current faculty, and students on their [www.facebook.com](http://www.facebook.com) –like websites. The Library could make valuable tools available through library lovers’ websites with a suggested donation. The Library could host a virtual scholars clubs or book clubs. The list is endless.

4. **PRESENT THE LIBRARY’S INITIATIVES AS FUNDING OPPORTUNITIES:** Any of the initiatives described in this document can be taken up by groups of donors e.g., building and operating off-site artifact preservation facilities, digitizing and attributing collections, building increasingly useful search capabilities, augmenting staff teams to support Googlenauts, creating a research librarian avatar, sponsoring lectures and open debates, and converting stacks to study rooms.
5. **PROVIDE LIFELONG ACCESS TO LIBRARY CAPABILITIES:** Students’ need for the advanced search capabilities doesn’t diminish upon graduation. They would welcome access to these familiar, constantly improving tools as they face the challenges in their careers. They may be willing to pay a fee if the cost was nominal— the iTunes formula. The very low incremental cost of supporting this additional population will be more than offset by the funds received to continually improve these same tools and services the students have found so useful; deepening the relationship with the Library over time.

If past students were allowed to continue to enjoy the Library’s online capabilities after graduation, they would become, “Persons who maintain a deep, ongoing relationship with the university library whose incomes are increasing and who are uniquely positioned to do well in their careers by no small measure of the value of the services they continue to receive from the Library.” A very good target population for university library development efforts.

And, moving beyond the population of past students, making the Library's tools available to all life leaders on a fee basis would greatly increase the size of this target development population at little additional cost. Graduated pricing models, group rates, etc. for different categories of member and/or content could be used to maximize net revenues. Access can be handled by either creating appropriate permissions roles within the Library's website or offering a "continuing library education" course series.

## **True Challenges**

"The implementation issues associated with the innovation and cost reduction strategy include some technical but mostly organizational hurdles. To succeed at this strategy, research libraries will need to master organizational change management and achieve unprecedented levels of collaboration with peers and external partners. The challenges of integrating research library catalogs with other discovery tools will not be solved by individual libraries working alone." (Calhoun)

## **Conclusion**

The university and the university library are in a unique position to take much more important roles in people's lives. They will fulfill this destiny by striving to constantly increase and improve the ways they help people learn and accomplish work.

## **Notes**

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### **Your Feedback**

Thank you for your interest in this piece about the university library. I welcome your thoughts, ideas, suggestions, quotes and citations. You can reach me at:  
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### **About the Author**

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