

Reinventing Library Buildings and Services for the Millennial Generation

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They are impatient, better educated, digital natives who read less, want more selectivity in their products and services, expect to earn more than their parents, play video games more often than they watch TV, prefer learning experientially, and already know that they don't want to live and work like their parents' generation. They are the Millennial generation, and they make up the demographic tsunami that will permanently and irreversibly change the library and information landscape.

This paper examines two main questions. First, what are the main characteristics of the Millennials that distinguish them from previous generations at the same age? Second, how can librarians and other library decision makers redesign and reinvent libraries and library services that effectively meet Millennials' needs and expectations?

Who Are the Millennials?

The huge demographic and generational shift, specifically the entry of the Millennials into and the concomitant retirements of Baby Boomers from the workforce, are the most important fundamental trends that will change libraries over the next ten years, through 2015. Millennials have such vastly different needs and expectations than Boomers that libraries are being forced to rethink and redesign library services, technologies, and buildings. Although this may seem difficult, libraries can, and indeed must, remain relevant to every new generation and its knowledge needs.

"Prominent sociologists note that a subtle but large-scale shift is quietly taking place in popular culture today."¹

Changing user expectations are more important than other trends that affect libraries, such as technology, organizational constraints, librarian expectations, library board expectations, building limitations, and traditional library services. Innovative technologies are extremely important and indeed *enable* most of the new products, services, and improvements that are introduced in libraries. However, Millennial expectations and demands for products or services will determine which of those technologies will flourish and which will flounder. In the future, all organizations will have to meet these demands in order to sustain their own existence.

Demographers and sociologists define the birth years of the various generations, but they disagree about the

end date of Generation X and the beginning date of the Millennials (see table 1). For the purposes of this paper, I am considering Millennials to be those who were born between 1979 and 1994. Howe and Strauss, in their book *Millennials Rising: The Next Great Generation*, use 1982 as the Millennial start date.² *The Millennials: Americans under Age 25* uses 1977 as the start date.³ 1979 seems to be a good compromise for the beginning of this generation. By the time the first Millennials went to first grade in 1986, the PC was already five years old and the Internet had already started.⁴ By the time they went to high school in about 1993, the Web was already two years old, and the White House had just created its first Web site.⁵

"They're variously called the Internet Generation, Echo Boomers, the Boomlet, Nexters, Generation Y, the Nintendo Generation, the Digital Generation, and, in Canada, the Sunshine Generation. But several thousand of them sent suggestions about what they want to be called to Peter Jennings at abcnews.com, and 'Millennials' was the clear winner."⁶

Although "Millennial" is the generational name they prefer most, Millennials do not like to have their generation labeled. This may very well be due to their defining characteristic of spirited individualism.

Why Do Library Decision Makers Need to Care about Millennials?

Millennials are the newest adult generation, approximately half of whom are already eighteen years old and can legally vote. Millennials will soon begin to affect national and local elections, although evidence from the 2004 elections indicates that as a percentage of overall voters, they have not yet begun to exercise their electoral power. Around 2001, Millennials began graduating from college and either entering the workforce or continuing in graduate or professional school. More importantly, the Millennial generation

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has already begun to enter our workforce with expectations that are very different from those of Generation X, Baby Boomers, or the Silent Generation.⁶ Millennials, particularly those already in the workforce, have become important consumers with disposable income. By 2012, all Millennials will be voting adults, and most will be in the workforce. Millennials will also certainly have a greater and faster affect upon organizations and services as they move into decision-making positions in the workforce.

The importance of the Millennial generation to library planning is not just that they have a different networked, interactive, multimedia-oriented young adult culture, it is that they have acquired their own new *lifelong culture*. Indeed, all generations at their age had different young adult cultures. Library planners must understand the permanent, likely lifelong behaviors and characteristics that distinguish Millennials from every generation before them. The most important Millennial behaviors and characteristics are those that have persisted in the workplace, were there in college, in high school, and even in grade school, and will be there at middle-age. Library planners would be making a serious error if they viewed Millennials only as exhibiting temporary young adult behaviors and characteristics, which are indeed fleeting.

Millennials are a huge population. They compose the second largest generation in U.S. history, second only to the Baby Boomers and far larger than Generation X, which directly preceded them (see figure 1). Because the U.S. infant mortality rate declined from 1958 until 2004 and because there has been a large increase in U.S. immigration, the number of Millennials entering the workforce will be very close to or even larger than the number of Boomers, who are expected to retire by the year 2010. Of course, Baby Boomers may retire slightly later than expected, and the overall workforce may have to grow to absorb the Millennials.

Learning from Focus Groups

In addition to researching the vast literature concerning Millennials, I have conducted more than twenty Millennial focus groups in Minnesota, California, New Jersey, Colorado, Wisconsin, Ohio, Pennsylvania, Florida, Kansas, and New Mexico in the last seven years, almost always in front of large audiences. The focus groups typically consisted of local Millennial college students, although one of the focus groups contained U.S. soldiers. This study was conducted for the U.S. Army Libraries. The Millennial behaviors and characteristics noted in this paper were derived from secondary literature searches, personal observations, and the questions, answers and comments gathered from these focus groups. Most of the behaviors and charac-

teristics I identified were exhibited to a higher degree or in a larger percentage of the Millennial generation than in those of the generations before them (e.g., multi-taskers or gamers). A few characteristics are de facto unique (digital natives versus digital immigrants).

The Millennial focus group participants responded to a series of questions. Typically there was a core group of questions that almost all participants were asked. These questions were open to revision. For instance, I dropped the question about whether the participant voted in the last presidential election because the percentage of focus group participants who said yes was far greater than the numbers reported in the polls for the youngest voting age adults in the general population. I could not determine if they were answering yes because they believed that they would look more engaged or because they really had voted. In any case, focus groups are not statistically valid, but they do give some insight into why people behave the way they do. They also are useful at validating formal research studies such as the Pew Foundation studies of college students.

I would, for example, ask when was the last time a Millennial participant had used a public library. The answer typically was more than a year. I also asked when a

Table 1. Generational Birth Years

Generations	Approximate age in 2005	MRSC*	Howe and Strauss**	U.S. Census
GI Generation	80–104		1901–1924	1901–1925
Silent Generation	60–79	–1945	1925–1942	1926–1945
Baby Boomers	41–59	1946–1964	1943–1960	1946–1965
Generation X	27–41	1965–1978	1961–1981	1966–1981
Millennials	11–26	1979–1994	1982–2002	1982–2000

*MRSC Municipal Research Services of Washington defines generations within the current workplace. Accessed June 27, 2005, www.mrsc.org/Subjects/Governance/DemogOver.aspx.

**Neil Howe, William Strauss, and R. J. Matson, *Millennials Rising* (New York: Vintage Books, 2000): 41.



Figure 1. Comparing Generational Births

participant had visited a Borders or Barnes and Noble superstore. The answer typically was within the last few weeks. There were questions relating to their communication style, such as when was the last time the participant had instant messaged. In more recent focus groups, I've asked questions like, "How many of you have an iPod in your pocket?" The answer was about 20 percent.

Millennial Expectations, Behaviors, Values, and Characteristics

In an important 2004 *Library Journal* article, Abram and Luther discuss nine Millennial characteristics (Format Agnostic, Nomadic, Multitasking, Experiential, Collaborative, Integrated, Principled, Adaptive, and Direct), all of which are included in the following lists.⁷ All of the Abram and Luther behaviors and characteristics have been substantiated by my own focus group research. The other behaviors and characteristics can be found within other literature and were also substantiated in the focus groups I conducted.

As Consumers

Millennials:

- expect more choices and selectivity;
- want more personalization;
- look for good buys at low cost;
- have less need to conform; and
- expect instant gratification and are impatient.

Perhaps the most important Millennial characteristic is this generation's expectation to be able to choose from a wide array of consumer choices. Millennials have always been given more alternatives in services and products than any group before them, and they actually choose from all the alternatives. Millennials expect a continuous improvement in products and services because during their entire lifetime that is what they have experienced. They are much less constrained by generational conformity. Millennials do not possess one common "generational music" nor do they share one style of jeans, for example. Their desire for a large array of choices has enormous implications for brands and marketing. Both Web services and consumer goods give Millennials many choices for customization and personalization. Millennials have come to expect personalization and customization down to the manner in which their cell phones ring. It is certainly much more difficult to meet their needs than those of previous generations who were satisfied with fewer choices.

*"We have no patience. The Gen Y consumer is brand-and-store loyal, she said, but the store must provide choices and have them in stock, or they will go elsewhere."*⁸

Millennials in the focus groups I conducted were asked to identify their preferred brand and style of jeans. They responded with "no-name" jeans more than any brand name. They were far more concerned with the cut, comfort, performance, and cost of their jeans than by the brand. Millennials expect more options in making their choices and are very practical about what they want. For example, if other Millennials liked a different type of jean, they did not feel the need to conform but wanted what they wanted and how they wanted it.

The library lesson is that Millennials expect to choose from many alternatives and are disappointed if the services or systems do not deliver such a broad array. For instance, in a recent focus group, several students said they wanted libraries to provide more audio music, books, and types of media. When I asked Millennials what was the last piece of music that they listened to, they responded with a wide variety of musical answers. They were as likely to say jazz as rap, pop as classical, rock and roll as heavy metal, and so on. It was abundantly clear that Millennials do not have one type of music that defines their generation as did older generations. The library needs to have a very wide selection of music, for instance, if it is to appeal to the very wide variety of Millennial music interests.

Another library lesson is that Millennials need the ability to customize or personalize their library services. With Millennials, one size definitely does not fit all. Unfortunately, libraries and library services typically are designed for little or no customization or personalization. For instance, library OPACs typically are not easily customizable to individual user needs. The OPAC doesn't remember the user's favorite books or searches, or the last place a user left off in a search, or a note left on a title by a friend who recommended it.

Lifestyle

Millennials:

- value education and training;
- expect an income to exceed their parents;
- are independent;
- practice a healthy lifestyle;
- are flexible;
- expect more balance between work and personal lives;
- are achievement-oriented; and
- believe in merit-based systems.

Millennials value education, and they expect their lives to be much better as a result. The percentage of all adults over eighteen with college degrees is now more than 33 percent. According to the 2000 U.S. census, twenty-five- to thirty-year-olds were more likely to have a college degree than older adults. Every indicator now points to Millennials comprising an even larger percentage of college graduates. The Millennials are expected to be the first generation in

U.S. history in which the majority has bachelor's degrees. Many more Millennials are enrolling in graduate school than past generations.

In the focus groups, the Millennials were asked if they expected to have a higher standard of living than their parents. It was not surprising that Millennials universally expected to earn more than their parents. One student said that he did *not* expect to have a greater standard of living than his parents, but expected it to be about the same. Then he told us that one of his parents was a medical doctor and the other had a Ph.D. in physics. Millennials usually have more education than their parents and even when they don't, they expect to achieve a standard of living at least comparable to their parents. They have very high expectations for their future.

There is a lot of evidence that Millennials are practical, independent, and achievement-oriented. Such high achievement, high expectations, and independence no doubt are due to the enormous pressure that Baby Boomer parents placed upon them as children. It may also be due to other factors such as the enormous amount of game playing needed to achieve some kind of goal.

"50 [percent] say having flexibility in planning a career around major life events is the most important element for achieving a good balance between a career and personal life."⁹

"When you look at the generation coming up now, I think the thing that this generation will value more than anything is flexibility," Friedman said. "People want to have a more balanced life."¹⁰

Millennials certainly want more flexibility in school, work, and their social lives. They don't expect lifetime employment with job security, and they will quickly leave an employer who does not give them merit rewards, practical training, and flexibility in doing their jobs. Not only do Millennials expect flexibility, but also they are more willing to adapt to changing circumstances.

As a group, they have experienced rapid change their entire lives. Because they are achievement oriented and have high expectations, Millennials expect to be rewarded on their own merit. They don't have much sympathy for decisions that are based upon seniority. Handling Millennials in the workforce is going to be much more challenging and different than Boomers or even Gen Xers.

Instant Gratification and High Expectations

Millennials, a generation raised on immediate gratification, are viewed as impatient, even by their own reckoning. They have grown up expecting instant access with immediate feedback. This has been a result of the immediacy they have encountered both with online services and their gaming

experiences. It consistently is now their expectation, particularly as consumers. As a result, they want as many services as possible to be available online any time they choose to obtain that service. Millennials are increasingly less tolerant of institutions that model the old paradigm, that consume more of their time in performing activities not part of their immediate goal. In college, they do not want to be present for all lecture classes during scheduled hours when they feel they could learn the material online any time. They particularly don't like standing unproductively in line, such as at a motor vehicle department. Although no specific focus group question addressed their impatience, at least one person brought it up in almost every focus group.

The library lesson is that successful library hours and service availability must be based upon Millennial needs, not the convenience of library staff. Libraries have only recently begun to improve user time savings and time shifting through such services as remote online journals, databases, e-books, and remote reference assistance. Delayed service is poor service.

Participant responses in the focus groups typically mirrored the literature regarding lifestyles. A very high percentage of the Millennials in the focus groups had exercised in the last forty-eight hours. One twenty-one-year-old Millennial panelist even came to the focus group at the ACRL Conference in Minneapolis on his skateboard. Participants often answered focus group questions with caveats that showed that they expect flexibility in their lives. They frequently stated that while overall salary was important, it was still less important than having a reasonable work week since they want time for their lives. Many times in the focus groups, participants said that they delayed really big decisions, such as their choice of college or their major, as much as possible to allow themselves the maximum flexibility in selection.

The library lesson is to carefully design jobs, systems, and services for Millennials. It will be difficult to institute merit-based systems, when union employees still want seniority, but libraries have to find a way. It is less convenient from a library management point of view to have to provide much more flexibility in our services, but it is possible. For example, at the New Jersey Institute of Technology (NJIT), library staff initially mirrored the software and formatting for all computers in the information commons because it was easier to administer. However, this was changed when the users, mostly Millennials, told us they wanted a few computers that could only be used for five minutes just for printing, a couple of computers only to be used with scanners, a few computers that could be used only for thirty minutes for quick jobs, and so on. The number of niches grew so that imaging all public computer software identically did not effectively meet their needs. Librarians must show Millennials how library work can be flexible, innovative, and intellectually compelling—not boring—and that they will learn important skills they can use in a vast array of future jobs.

Values

Millennials:

- respect and value intelligence;
- celebrate diversity; are more inclusive;
- are family-oriented; are largely children of divorce;
- value friendships and have more friends than their parents did;
- are socially liberal; and
- are patriotic and civic-minded.

*"[Millennials] identify with parents' values and feel close to their parents"; "Only 16 percent of adult Americans believe that people under the age of 30 share most of their moral and ethical values."*¹¹

*"The Millennial Generation, who turned 18 around the year 2000, show the smallest gap with the values of older generations that any teens have shown since the history of polling."*¹²

Baby Boomers often view Millennials as lacking basic values. However, the truth is that they actually share more of their parents' values than previous generations. Almost half of all Millennials are the children of parents who divorced. For example, the divorce rate in 1983 was more than twice the divorce rate of 1950. The U.S. divorce rate peaked between 1979 and 1981 and today is down 20 percent from that period. Many experts believe that Millennials value family more because they are children of divorce. Divorce also might account for why they have such strong friendships.

In focus groups, Millennials typically reported that they have more friends than their parents did at the same age, and they are in more frequent contact with those friends. Millennials stay in constant contact with their friends via e-mail, cell phones, text messaging, or instant messaging (IM) but also meet up frequently with friends to go have fun or work together. Millennials depend upon their friends to help learn new skills, particularly in the information, technology, or gaming arenas. In short, the byproduct of the many Millennial friendships is collaboration that improves their learning.

*"About a fifth of these echo boom children are the offspring of immigrants who arrived in the U.S. during the 1980s and who often had relatively large families. The ethnic profile created by these immigrant children is far different from the white and black 1950s and 1960s."*¹³

In the last thirty years, the diversity of the immigrant population has increased as has the birth rate. As a result, Millennials are much more likely to have friends of another

ethnicity or religion than themselves. In most focus groups the Millennial panels were asked how many of them had close friends who were of a different ethnicity than their own. About two-thirds answered that at least one of their friends is of a different ethnicity than their own.

The Millennials are, as a rule, much more tolerant than the previous generations on issues of race, religion, sex, or sexual preference. They have grown up with much more diversity in their communities and schools. Millennials have traveled globally much more and at a much younger age than any generation before them because airfares were comparatively cheap. They have experienced relationships with people who are very different than themselves at a younger age. For example, the vast majority have told me, when I asked, that they were in favor of legalizing gay marriages or domestic partnership. I would describe their attitudes as consistently "live and let live."

Experts believe that the Millennial interest in collaboration is based on the number of their friends, the various electronic communication options they have, the way in which they teach each other skills in gaming, and their experience collaborating in school. Millennials easily shift to being collaborators whenever that is more effective for them.

*"[Millennials] believe "it's cool to be smart."*¹⁴

There has been research that shows learning new skills, such as gaming, can actually "rewire" (through neural plasticity) human brains and that such learning is easier and faster in children than adults. Millennials think differently in many ways, perhaps in part due to gaming, perhaps in part due to pressure from Boomer parents, and perhaps just as a result of evolution. There are research findings showing that Millennials get higher scores on both SAT exams and standard IQ tests. Perhaps they are actually smarter, just as they are also bigger on average than their parents. In any case, it is not surprising that Millennials respect intelligence, since that also accompanies achievement.

One library lesson is to market libraries to all segments of society including those who speak foreign languages, have different cultural interests, and those who have not traditionally been library users. Library decision makers will need to develop and produce new services to attract these diverse Millennial groups, as first-generation library users. Of course, this also means that libraries need to recruit diverse employees, which requires more proactive strategies and tactics.

Information, Communication and Learning Experientially

Millennials:

- are digital natives rather than digital immigrants;
- are gamers; enjoy gaming and media;

- expect nomadic, anytime, anywhere communications;
- are collaborative and multitask;
- learn experientially and continuously; and
- read less than other generations.

“And we will never understand or use the technology in precisely the same way as the Natives do. This distinction is critical in education, because we are currently in a time where all our students are Digital Natives, yet the bulk of our educators, teachers, administrators and curriculum developers are Digital Immigrants.”¹⁵

Digital Natives versus Digital Immigrants

Most librarians and library administrators are digital immigrants because they learned to use digital services later in their lives. Millennials on the other hand are digital natives, because they were born into an era in which digitally provided services were commonplace. Millennial expectations, driven by favorable experiences with information technologies, will ultimately determine what, if any, library services they want or expect. Millennials think very differently, not only about technology but also about how services should be delivered digitally. They expect the flexibility, geographic independence, speed of response, time shifting, interactivity, multitasking, and time savings that digital networked services provide. In fact, planners must now recognize that digital networked services, where feasible, are preferred by Millennials as the primary, if not exclusive, information service delivery mechanism, more important than even the physical library. Indeed, the library main home page is already typically used more in most academic libraries than the walk-in lobby of the physical library. Thus, librarians must merge almost all library services digitally with the Internet to meet the expectations of the Millennial generation. For Millennials, the physical and virtual libraries must not just be intertwined, they must be inseparable. Librarians should expect Millennials’ digital information and communication expectations to remain forever radically different and in most cases far ahead of the Baby Boomers and even Generation X.

Gamers, Gaming, and Media

“Four-fifths of younger survey respondents say they were moderate or frequent gamers as teens, compared with only one third of older respondents.”¹⁶

Millennials already have very different digital expectations than current library users and have had as much as sixteen thousand hours of electronic gaming by the time

they graduate from college. In a remarkable recent book, *Got Game: How the Gamer Generation Is Reshaping Business Forever*, Jon Beck and Mitchell Wade explain that there are wide differences in the gaming habits of Millennials and Baby Boomers.

“You’re the boss. . . . You’re a tough guy. You can experience all sorts of crashes, suffering, and death—and it doesn’t hurt. . . . Everything is possible. The world is a logical, human-friendly place.”¹⁷

“Things are unrealistically simple. You can figure a game out completely. Try that in real life.”¹⁸

“Relationships are structured. People are simple. Most [people] in games are cartoon characters.”¹⁹

Gaming characteristics have a profound affect upon the behaviors and expectations of players and, for the most part, it is a young person’s world. Gaming implies that you can learn by making mistakes, and there are no long-term penalties for doing so. Gaming systems are typically designed for enjoyment, instant feedback and interactivity, multimedia, progressing in levels, analytical reasoning, multiplayer interactions, and a host of other activities and skills. Gaming gives quick feedback and requires a lot of analytical thinking. Many of these gaming behaviors can be converted into skills for searching, discovering, and gaining knowledge, the essence of libraries. By comparison, library searching today is mainly a solo activity, text-based, and with much slower interaction.

Incidentally, one of the myths that has already been dispelled is that Millennial women are not gamers. Indeed, some research suggests that women may play more games although they are less likely to be games of action and violence.²⁰

The focus groups reinforced that Millennials are heavy technology users, frequent gamers, and communicate using every available electronic device or channel. Virtually every library service must be built around these skills in order to appeal to Millennials.

“To embrace Gamers and bring them into the Santa Monica Public Library in California, Miguel Acosta, Principal Librarian, Information Management, organized a LAN (Local Area Network) party with the help of the library’s Teen Advisory Council. The idea was to connect with this new generation and begin grooming them as future library users. Three hours before the event, 60 Gamers lined a city block, the first time a library program had people waiting to get in. The success of the party led to poetry slams, animated festivals, Yu-Gi-Oh tournaments and a number of new members of the Teen Advisory Council.”²¹

There are many lessons to learn from the digital communication, gaming, and information habits of Millennials.

One library lesson is that libraries and their vendors will have to build gaming characteristics into their systems to be successful with this generation. Imagine an integrated library system that operates more like a game. The library “catalog” is itself full-motion, interactive multimedia permitting the user to browse more easily than entering a text search. It is a system that is both powerful and fun to use. The catalog resembles video games such as a flight simulator more than the virtual text-only searches available today, and it probably is incorporated into a future type of Google (or its successor) search engine.

Nomadic Anywhere, Anytime Communications

Millennials expect their technology to be mobile and to be able to get access anywhere, anytime they want. They dominate the current iPod phenomenon, although this trend is not limited to their generation (even President George W. Bush owns one). Millennials still are looking for an ultimate portable device that integrates all of their digital functions such as laptops, telephones, cameras, video games, TVs, and so on. In fact, they expect technologies to offer one-stop shopping for all their technology needs (including the convenience of integration) whenever and wherever they happen to be. The focus groups confirmed that Millennials own and frequently carry cell phones, laptops, and iPods, and they are much more frequent users of text messaging and instant messaging than older generations.

Today, users can't search most library catalogs and databases from a cell phone, PDA, or any other typical portable pocket devices that Millennials carry. Laptops still have limited access to wireless connectivity although connectivity is becoming much more accessible. As continuous wireless connectivity becomes available, library decision makers should expect that Millennials will be the earliest adopters. They should make their library database offerings available on portable devices as early as possible.

Collaborative and Multitasking

“[Millennials] gravitate toward group activity. . . . Their strengths include multitasking, goal orientation, positive attitudes, and a collaborative style.”²²

“They're sociable, optimistic, talented, well-educated, collaborative, open-minded, influential, and achievement-oriented.”²³

Millennials collaborate in school work, in sports, extra-curricular activities, and even in their gaming and personal

lives. The technology allows them to interact with each other more often and in more depth than any generation before them. Since Millennials are practical and are experienced natural collaborators, they will seek collaborative systems and technologies that produce tangible benefits such as a better quality results or overall time savings.

It certainly is possible for libraries to embrace such collaboration in their technology, systems, and library buildings. Today, one user at a time types in a search term and gets his or her results back, independent of any other searcher. Therefore, collaborative searching typically takes place face to face or verbally. Collaboration typically consists of one person at a keyboard searching and one or more people making suggestions. While this form of collaboration occurs frequently, it is not the most efficient method for speeding up the search process.

Software called “virtual reference desktop” (VRD) mimics a form of collaborative searching. This software was generally designed for librarians to assist a searcher, rather than for two or more searchers working together simultaneously. While VRD software is valuable for reference, it is not yet a real collaborative search software and is not yet very efficient or effective at improving group search speed, precision, and comprehensiveness. The current VRD process is not unlike three people working on a single crossword puzzle together. One person will have the pencil and the puzzle and hold it in a way so the other two can make suggestions. The crossword puzzle can be passed back and forth at any time, but it is nearly impossible to have all people filling in a word at the same time. Now imagine that the same simultaneous collaborative virtual crossword puzzle is in the hands of three people at the same time and on each person's networked computer. When one person puts a word into the puzzle, it appears on the other's crossword puzzle but in small colored letters at the top of each letter box. The big black letters are always that player's own letters; the small colored letters are those of the other players. Imagine that each word is automatically spell-checked and the computer is also automatically searching the keywords in the clues and reporting possible answers on the Web. Of course, this might result in speeding up the entire process of playing a crossword puzzle, and therefore this metaphor breaks down because it ruins the experience.

It is not difficult to imagine a future of collaborative searching and learning for Millennials, especially if it results in the same or better results in less time spent collectively. Millennials will not use tools, even automated ones such as collaborative search engines, for long unless they are effective. So how would a team of three or four Millennials collaborate conducting a joint simultaneous search? While simultaneous collaborative search engine software is not yet available in the marketplace, here is one scenario about how this process might work.

Let's suppose that two Millennials are sitting with their own networked laptops at a table in the library and

a third is somewhere networked remotely but is also participating in this search. The Millennial students decide to split up the work, and they agree to each start searching a different database. Two students have their own laptops in the library while a third student is linked with both instant messaging and an audio voice IP conference call so they can all hear and talk to each other. Each searcher can simultaneously see the search terms the other searchers have used and which databases were searched similar to the crossword puzzle example. Their results will also automatically be listed in combined de-duplicated results lists where everyone can also rate the relevancy of each of the results. Of course, they will also discuss (using IM or voice) alternate search terms or databases they might suggest for searching. In the background a computer is automatically analyzing their search terms and also looking for synonyms and other relevant domain databases by comparing highly relevant marked results with what might be found in other databases. The computer is using the same relevant results (for example, articles) to automatically search in a citation database and make recommendations to the students about other authors who have cited any highly ranked result. In short, simultaneous collaborative searching can make it possible for Millennials (or anyone else) to greatly speed up a search as well as make it both more comprehensive and more precise.

“So we now have a generation of students that is better at taking in information and making decisions quickly, better at multitasking and parallel processing; a generation that thinks graphically rather than textually, assumes connectivity, and is accustomed to seeing the world through a lens of games and play.”²⁴

Millennials are much more effective at multitasking, in general, than previous generations. In fact, multitasking is their preferred mode. Frequently, a group of Millennial students will work together at a table in the library; several of them will have cell phones, chat with others at the table, and work on wireless laptop computers at the same time. Millennials seamlessly weave their work and recreational activities, making no artificial distinctions. The computers, search engines, and information resources must enable and enhance their multitasking, whenever desired. Multitasking is, after all, a way to save time.

In the focus groups, multitasking came up frequently. For instance, one Millennial was asked by a member of the audience how she was able to simultaneously play a game, send an e-mail and talk on the phone. She responded that she really had no idea, she just multitasks. In short, multitasking is just a skill that many Millennials possess to save time, and they do it subconsciously.

Library decision makers must understand that multitasking is just another effective time-saving skill. The library lesson is that there are many ways that collaborative technology and multitasking can be built into library

technologies to speed up and improve searching as well as learning. Libraries need to promote the development of effective collaborative technology.

Learning Experientially and Continuously

Millennials display a strong preference for experiential learning through trial and error, rather than such activities as formal learning or reading. In the focus groups, it was very common for Millennials to admit that they never read the directions when they were trying something new, such as installing software. Millennials have a strong preference for constructivist learning. Millennials' preference for learning experientially suggests why the future of schools, higher education, and formal learning may be tied more to gaming.²⁵

Accelerated learning and increased learning productivity are the next Millennial library frontiers. The library lesson is that Millennials will expect a focus on learning rather than teaching. They will expect their educational opportunities to be based upon assessed knowledge, competency, and skill, not time spent on task as quantified in credit hours. They want their education to be more experiential, fun, collaborative, and game-like. Students want much more flexibility and learning options than just going to lectures, writing a paper, and taking a final exam.

Reading

The evidence is that Millennials are reading far less. A National Endowment for the Arts (NEA) survey, titled “Reading at Risk,” reports an overall decline of 10 percent in literary reading from 1982 to 2002, representing a loss of twenty million readers.

“The rate of decline is increasing and, according to the survey, has nearly tripled in the last decade. . . . Over the past 20 years, young adults (18–34) have declined from being those most likely to read literature to those least likely (with the exception of those 65 and older). . . . The rate of decline for the youngest adults, those aged 18 to 24 was 55 percent greater than the total adult population (minus 28 percent vs. minus 18 percent).”²⁶

“In short, the future of the U.S. news industry is seriously threatened by the seemingly irrevocable move by young people away from traditional sources of news.”²⁷

Millennials are not reading literature as much, and this has already caused a decline in those who read newspapers, according to the Carnegie Corporation. If reading is down among Millennials, will that also eventually cause a long-term decline in library use just as with newspapers? Will reading eventually plateau since it is a very efficient way to

pick up information? What are the societal consequences and costs of this decline in reading? Will future Millennial reading be limited to Internet use? Libraries must respond to the Millennial need for audio and visual media and monitor their reading to determine what mix will work.

Redesigning and Reinventing Libraries

*“Vannevar Bush beat everyone to the punch. In 1945 he published an article in the Atlantic Monthly on what he called ‘memex,’ an imaginary workstation that would easily store and retrieve troves of data. Now that memex is here, and as more and more of what we know is funneled into it, it’s conceivable that libraries someday will function more as secure archives, repositories of expertise and communal havens for Internet access rather than as physical dispensers of books and periodicals. And if that day comes, it means only that the library dream—of universal access to knowledge and information—has taken a giant leap toward becoming an every-day reality. Hallelujah.”*²⁸

The day of universal access to knowledge is still mostly a compelling future, although the need for libraries is already being questioned. The article quoted above appeared in the *Carnegie Reporter*, a publication of the Carnegie Foundation of New York. Happily, there are still many reasons people love their libraries in spite of the many alternative sources of information and entertainment available today. The question is, can library decision makers create libraries compelling to the next generation, the Millennials? The answer is yes, provided that library decision makers are willing to reinvent libraries for this new generation.

Steps Needed to Reinvent Libraries for Millennials

Maintain and organize digital institutional, community, and professional repositories. Libraries still have an important role in continuing to organize knowledge, since the Web is disorganized and strewn with inaccurate or outdated information. However, now the challenge is organizing information, not just containers of information, and creating and maintaining digital institutional, community, and professional repositories.

Libraries still need to play important roles in helping and stimulating people to find and learn authentic new knowledge. Every day, Millennials increasingly search Google more than they search libraries; increasingly people find more of the content they need free on the Web and less in physical containers in the library. In this environment, where information is more often available anytime, anywhere, libraries need to shift into helping and stimulating people to learn, that is, to effectively understand the new information.

Make local and published information searchable through Google and other Millennial tools and information sources. Millennials expect integration across all systems, and clearly Google is their current preferred first choice for their search engine. Millennials have told us that they want their information technologies and software to be seamlessly integrated so that they can use their time more productively. A Millennial student in one of the NJIT focus groups entered the term “library hours” in the OPAC search box, which resulted in, as you might expect, a poor result. Millennials are now conditioned to expect one search box gateway to all knowledge. This has become their *desired* future. If that NJIT student typed “NJIT library hours” in a Google search box today they would have been more successful than if they typed the same term in the library catalog search box. This suggests that the library catalog search should also be from a Google search box. Indeed, OCLC’s WorldCat is a first step in that direction, searching library catalogs through Google. In short, successful libraries must make all of their information harvestable and accessible through Google (or its successor).

Accelerate Millennial self-learning and make learning easier and more productive. Self-learning has always been part of the reason for libraries, but now libraries have the potential capability to accelerate that self-learning and even make it more productive. There is a growth opportunity for libraries in self-learning if the profession seizes it.

Present Millennials with a compelling vision to maintain their loyalty. Many of the Millennials suggested in the focus groups that they are not sure what the role of the public library is in the age of the Web and instant access to remote information. Nonetheless, they are civic-minded and generally supportive of the idea of public libraries. When they were asked whether they would support a library bond issue even if their taxes went up, the great majority were supportive. However, libraries cannot expect Millennials’ loyalty if they do not pay attention to them. A 2000 teen study conducted at the Center for Research, Department of Library Science, at Clarion University of Pennsylvania, asked, “Within the past six months, have you used the services of a public library or bookmobile in any way?” and found that more than half of the respondents had used the public library. In my focus groups, there clearly were far less than a third of the Millennials using the public library in the last year. Of course, focus groups are not a statistical survey. My twenty focus groups were made up of college-age students from ten different states, who did use their academic library and who did have a fondness for the public library although they were reading less. What has happened? Do the same twelve- to seventeen-year-olds from 2000 still use the public library? Do the same Millennials change their habits as they go to college and get older? Has reading declined more rapidly in the last five years resulting in far less public library use? I am not sure how to reconcile the apparent differences, but I think the questions are important.

Reinvent physical libraries with hours of service more desirable to Millennials. The Millennials in my focus groups typically reported not going to public libraries within the last year. However, Millennials did frequently report going to the local Barnes and Noble or Borders super bookstore in the last month. Such stores have become attractive local destination spots, social places to see and be seen, particularly for Millennials. Many of the Millennials use the super bookstores as they would a library, reading magazines or even bringing their own textbooks to study. The days and hours of service, location, décor, food and drink, and other amenities all appeal to and are much more convenient to Millennials. In addition to the super bookstores, Millennials can be found in many Starbucks or other coffee houses reading or studying. This is why many public libraries now have cafés, such as the Starbucks in the Ferguson Library in Stamford, Connecticut. A recent OCLC article made a number of suggestions for building libraries suited for gamers (Millennials).²⁹ These included creating zones in the library where noise and activity is acceptable and desirable, identifying each of the local cultures, expanding the audio-visual collections, and providing more access to global information. Libraries will have to create and test the kinds of library buildings and services that will most appeal to Millennials. Will the proliferation of remote information technologies and resources eliminate the need for physical library buildings? The answer is counter-intuitive, just as the growth of television did not eliminate people attending movie theaters. Millennials, like all the generations before them, need and still demand social and public spaces. Everybody has to be somewhere.

Provide many different types of library spaces carefully studied and marketed to Millennials. Millennials have said in many of the focus groups that they also would like quiet refuge spaces in libraries. Many libraries have turned a central area into a noisy collaborative space while reserving separate rooms or floors for quiet activity. Millennials want every type of space. The same people wanting quiet spaces also said they wanted spaces for noisy interaction, group work, performances, study, socializing, and so on. Millennials want different types of spaces at different times for different purposes.

Design library spaces that can continuously, easily, quickly, and cheaply adapt to new Millennial needs. There are many types of public building spaces that have been constructed to constantly, easily, and rapidly change, among them convention centers, theaters, hotel ballrooms, county fairs, and museums. Unfortunately, few libraries have been designed for continuous transformation. Imagine that at the entrance to your public library there was one such “transformational” space that morphed into a haunted house at Halloween, an aquarium in August, a flower display in April, a welcome wall honoring local citizens before big meetings, a mini-theater where a local “Abe Lincoln” gives his Gettysburg address, an exhibit of rare Chinese books, a radio studio during times of important local issues, an exhibit of new technologies, and so on. Millennial-

designed library space must be designed to easily, cheaply, and quickly convert to new functions even those requiring convenient storage, power, and technology.

Provide a wider selection of books, DVDs, and other physical documents specifically marketed to Millennials. Books are still needed since the market for general consumer e-books has not yet prevailed, although it will eventually. In the short term, say the next five years, books, audio books, DVDs, interactive, electronic games on CDs, and other multimedia products will still be in demand, and libraries are the logical provider. If libraries keep the Millennials in mind in their service offerings and product mix, they should remain viable for a whole new generation.

Partner with other campus divisions, community organizations, and businesses that appeal to Millennials. Libraries need to leverage partnerships to provide buildings and services with the widest array of Millennial services. Since Millennials want more alternatives and options, partnering may be the only way that libraries can provide them.

Use information and communication technologies to market library services and provide a broad range of multifunctional services integrated synergistically for multitasking and individual work, as well as collaboration. Libraries must master how to use systems and technology to market personalized, customized, anywhere, anytime, digital multimedia, interactive information services to local users.

Motivate and retrain current library staff. Take advantage of library staff, who are enthusiastic about Millennials, technology, and instructional design skills to get them additional training. Librarians like Steven Bell and John Shank created the concept of the “blended librarian.”³⁰ Blended librarians possess the skill sets of instructional design, instructional and information technology as well as those of traditional librarianship. Libraries are still viable in the age of the Millennials, but they will have to do a better job of providing staff with skill sets that meet Millennial needs. Librarians need to add value and even accelerate users learning.

Appoint adult Millennials into decision-making and advisory positions as early as possible in order to capture their tremendous energy, ideas, and developing interests. Millennials, gainfully employed, or even in graduate school, should be placed onto boards of trustees, Friends of the Library organizations, advisory boards, hired as participants in local focus groups, and even hired as consultants. There should even be a Millennial advisory board. (I do not recommend that those Millennials making the key decisions be those who self-selected into MLS programs, since they are more likely to think current libraries are just fine, rather than in need of major Millennial changes.) Generation Xers and Boomers (such as this author) will never understand Millennials as their peers will understand them. While local focus groups and surveys are recommended as useful tools to mine Millennial interests, they will never substitute for Millennials who make important service and building decisions. Empower Millennials to reinvent the library.

Hire Millennial (nonlibrarian) professionals, with excellent technology degrees and skills and empower them to make improvements and innovations for such areas as search engines (high collaboration, personalization, and customization), virtual library services and accelerated learning (multitasking, real time, interactive multimedia, gaming, integration, personalization, collaboration, etc.), and even innovative physical library spaces *specifically designed to attract other Millennials*.

Hire Millennials with MLS degrees but only those who are more like their peers than like current librarians. Hire Millennials with great information and instructional technology skills, who play games as much as their peers, and who constantly use iPods and other innovative nomadic information technologies. Library decision makers are likely to find that the hardest part of empowering such Millennials is getting out of their way.

Rethink and modify organizational structures and policies designed mostly for delivering physical documents to existing users in traditional ways, and rethink these in light of digital library environments serving Millennials. They are telling us, "Get us what we want, only what we want, in the format we want it, and do it now!" Existing library organizational structures and policies are part of bureaucracies that resist change and therefore improvement.

Conclusion

The library lesson is to plan for Millennials by reinventing libraries with different and better services and buildings, not by just incrementally improving existing services and buildings. Millennial characteristics and behaviors are far different from those of the Baby Boomers and the Silent Generation at the same ages and, more importantly, they will be permanent. Based upon their experiences, Millennials expect constant, rapid new services and far more options than they have been getting from traditional libraries. Library planners must respond with rapid, immediate new services that appeal to Millennials, and they must do so very soon. Each and every day more members of this huge cohort are entering colleges and the workforce and making decisions consciously or unconsciously about the relevance of libraries. Library planners must immediately target new, effective services to this generation and avoid delay.

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