Phone Interview Summaries

Phone interview summaries are structured around the questions proposed to the persons interviewed in a script they received before the phone interview itself. To view the script for questions posed to CAO's, click here (goes to p. 71). To view the script for questions posed to library directors, click here (goes to p. 68).

The interviews did not adhere closely to these scripts, either in content or the sequence of questions. The interviews can be read as continuous texts; the questions guiding the discussion at a given point are indicated in capital letters at the beginning of many paragraphs (e.g., question 5 from the interview script for academic officers or, in the case of library directors, question 6 from the interview script, or question F from the interview call procedures).

CHIEF ACADEMIC OFFICER INTERVIEWS

Doctoral/Research Universities—Extensive

INTERVIEW 1: CHIEF ACADEMIC OFFICER
(for the comments of the library director at this university, see interview 8)

QUESTION 1: The interviewee emphasized fundraising as the key role he played in planning the library. He did not expect to have state funds for the facility and was convinced that endeavoring to build the "library of the future" was the only way to attract private funds. Moreover, the interviewee's involvement with the library occurred in a larger context. He was convinced

- that the rapidly escalating costs of libraries made it impossible to continue building libraries based on past models
- that at the same time the challenge of meeting faculty needs for research resources was growing more and more difficult.

Once funding was secured, the interviewee appointed "a bunch of really creative people," including some deans, to plan the facility. He said that his close involvement with the project ended at this point. The creativity of the planning was "very much grass-roots driven. It came from some really creative faculty and some very creative deans, and my particular role at that point was to make sure they had the money and to get out of their way." He did, however, strongly encourage the planning group "to push to the limits, to take some risks. You know, when the building finally came on line . . . , my suspicion was that there probably weren't over a dozen people in the university that had the foggiest idea what it was. . . ."

Asked about the risks taken in planning the library, the interviewee commented on his role in denying control of specific spaces to individual operating units in the new building. This has been important to fostering collaboration, but "it is a battle that you continually have to fight. Whether it's librarians or faculty that have particular projects going on there, or whatever, everyone kind of wants to have their space pinned down and then have it expanded as much as possible. . . . We always felt that this [space] should be something that was organic and would continue to evolve, just as the technology and the uses of it would evolve."

"We wanted to have hundreds and hundreds, and in reality we have thousands of students in this place at all times of the day and night." Mixed in with this are "really interesting spaces," including a sound stage, gallery space for artists, and the capability of producing opera. . . . "But what is missing is we still don't have the level of intellectual creativity—I guess I'd call it research—that I'd like to see. I always

envisioned one part of this being like the MIT Media Lab, where there'd just be lots of weird things going on. . . . We've never been able to stimulate that to the degree I really wanted to. We're right now in the process of rethinking, you know, where this place is going, and what I've strongly urged them to do is to try and get more in the way of research and active knowledge creation going on. Just to build the energy level. . . . Part of the challenge is to get the faculty comfortable with coming in to this non-traditional kind of space. Students have no problem with it; they take to it like ducks take to water. They walk in, and within half an hour have found what they need. . . . They navigate very easily. Faculty are very intimidated, particularly because there are so many students in the building all times of the day and night. So we haven't quite figured out how to get faculty here and engaged in it, and by faculty I also mean faculty bringing in their graduate student research teams. And I'm not quite sure what we need to do with that yet, but it's a conversation I'm having . . . right now. We may try some experiments."

QUESTION 4: The distinctive opportunity that the interviewee sees in library projects lies in funding. He believes there is a lot of "new money" looking for good projects. The money is in the hands of people who made or are making fortunes in technology and who deeply believe in the possibilities that forward looking libraries can present.

QUESTION 3: The interviewee could not comment much on the quality of the planning group's consultation with faculty and students. He emphasized that the planning group consulted very widely with performance companies (e.g., in Hollywood) and technology companies.

The project was informed by a "deep conviction . . . that students would drive the evolution of this facility. It was our belief that with respect to the technology, the students would also be somewhat ahead of the faculty. And for many years, we'd had the philosophy in other parts of the university that you build a very powerful and flexible environment, and then you let the students shape it. So for example, when we first built the place, we kind of built it in the traditional way in which each student would have their own workstation and so forth. And then we began to realize that's not the way students work these days. They work in teams, you know, where three or four students will kind of gather round, and they have three or four workstations. So we kind of reconfigured all of that, to let the students kind of define how they learned and how they approached their activities. And we'd always had a philosophy of not constraining them. That is, there were very few rules. I notice that the very last rule that I thought would almost be a necessity—that we don't allow food or beverages . . . —even that has gone by the wayside. . . . We felt that if we built the space, and did it in a flexible way, the students would define their own learning environment. I think that's what's been happening."

Describing the mechanisms for understanding student learning preferences, the interviewee said that the planning group let the students choose the chairs. It is possible to monitor how various pieces of equipment are used. "I think we're much more comfortable that we're watching students and monitoring what they need and how they're evolving, and we understand that better than we understand faculty. As I say, we're still frustrated that we haven't had more faculty involvement."

The interviewee spoke of the spaces that students can occupy and modify for their projects. "What we found is that a lot of that [i.e., building resources] the students can access quite easily, and they kind of pass the lore of how to access space, get the equipment you need, and use it, in a very natural way. Where we run into trouble is with some of the more sophisticated spaces; for example, the electronic recording studios or the sound stages, where you really need a permanent professional staff. And there we don't have the right financial model. From time to time, we'll have a major production come in and have the resources really to do it, but we need more in the way of seed resources so students can access those areas as well. They can do it on a small scale, but when it comes to much larger projects, we haven't quite figured that out yet."

"Another reason the students have adapted so well to the place is that the absence of visible faculty activity has ironically convinced the students that this is their space. And they take very good care of it. Of course they might feel insulted if they saw faculty beginning to take over certain areas of it, and that's something we'll have to figure out. Right now it's a very popular space because the students say, 'That's mine.'"

INTERVIEW 2: UNDERGRADUATE DEAN (for the comments of the vice president and library director of this university, see interviews 3 and 13, respectively)

QUESTION 1. "The fun part of the process" for the interviewee was "thinking through how to reposition, re-envision the library on campus, engaging in a process of thinking programmatically and functionally, and then taking that information and interacting with an architectural group who is skilled in and experienced in this area."

The interviewee was trying to do two things in helping to plan for library space. First, he wanted to help develop a general vision of teaching, learning, and research at the university and their integration as the fundamental work of the university. "The way we do our work has changed fundamentally, and that change then needed to be translated into a vision of a central resource [i.e., the library] for the university. . . .The second role was then to translate that more directly into what we were trying to do with undergraduate education, to make the linkage highly specific to a whole renewal process that we have been engaged in for the last eight or nine years."

The interviewee defined the institutional roles of the library as those involved in information management and in being "a place to provide the social context for discovery and learning and what I like to call the essential process of bringing meaning to information." "If we believe that the information itself doesn't contain the meaning, that one needs to bring meaning to this information, then the process of multiple perspectives and the interaction of those perspectives becomes as important there [i.e., the library] as it does on the whole campus, as it does in our classrooms. So you know we're committed to a diversity of perspectives. How does one bring that to bear? And I think it is the social context that provides us the opportunity for that exchange. I think also that as we understand learning more and more, and if we use the knowledge base about learning to drive what it is that we're doing, particularly in our teaching functions, we become impressed with the importance of not only the social context but of the relationship as a crucible for nurturing learning. And relationships happen in multiple levels, not just between faculty and students but between students themselves, students and staff, faculty and staff. . . . The social and relational context provides the opportunity really to push the envelope as to what the meaning is of any particular discovery or set of pieces of information, to exchange, and in that exchange process, to sharpen [understanding]. So if we believe that we're all involved in this process of inquiry and investigation and discovery and synthesis, and that that's the common core, what we need then are places for those processes to play out. And I think the library is certainly one of those places—needs to be more so than it has been in the past."

Asked what library space that embodies these ideas would look like, the interviewee said it should be welcoming and have the power to inspire and to "reflect the university at its best." The library would accommodate both solitary study and social interchange. The library should be "conceptualized as a lab, because identifying information and accessing it is just one element. Once you get it, you then have to do something with it, and increasingly that doing something with it is going to be in a collaborative way."

The library should be the place where learning processes are integrated: everything from initial discoveries, evaluation of evidence, to shaping the presentation of the student's work. The library would

give students the opportunity to talk with experts in databases, subject matters, analysis and synthesis, and presentations.

Asked about the value of bringing formal knowledge about student learning to bear on library space planning, the interviewee said his university has been focusing on pedagogical change. "And what's common across that [change] is the recognition of the power of active student learning, and of active agency on the part of the students, which then translates into a whole spectrum of experiential, problem-based pedagogies. . . . [This is] certainly a major change that moved through universities in general and I think research universities in particular, trying to pay attention to how one captures the student's interest and passion, with the recognition that if you get that, then you get the type of self-motivated, self-regulated learning that is what we all [aim] to achieve."

"One of the most underutilized and under-appreciated resources in undergraduate education is the expertise of the library staff in doing guided inquiry." The interviewee then described bibliographic instruction activities.

Asked about how one fosters the ability of students to mold their own learning environment, the interviewee said that the effort in the planning process was to "change the point of view from, 'here are the services I want to offer to you, therefore I'm going to array myself this way,' to 'what are the processes and functions that students and faculty engaged in inquiry would be looking to do,' and I think that was a shift of vantage point so that we would organize things that made sense from a functional processing standpoint—have that be a guiding principle. Also recognizing that it's very fluid. . . . The rate of change of those [learning functions] is very high. So we have to be able to be adaptive and flexible. And I think we've envisioned that there would be ways to reconfigure space. . . ."

QUESTION 3. The interviewee said it would be fair to characterize student involvement in planning as consumer oriented. He emphasized that students were particularly responsive to the incorporation of presentation capabilities into thinking about library space.

QUESTION 4. The interviewee said the library is unique in campus space planning in that everyone has a stake in it. The library brings all divisions of the university together.

He said that a few faculty participated in the "generative part" of planning, while others primarily made claims on planning outcomes. This latter behavior was seen as interesting but not constructive. Off-site shelving was a particular red flag for some faculty.

OTHER MATTERS: The interviewee praised the expertise of the architects. They deferred specific design activities until the programmatic and conceptual parts of the plan were formulated.

INTERVIEW 3: VICE PRESIDENT (for the comments of the undergraduate dean and library director of this university, see interviews 2 and 13, respectively)

QUESTION 1: Asked to define his role in library space planning, the interviewee said he is "an enabler of sensible academic plans. I tend not to get involved in the details, but I feel empowered to reject them out of hand if they're silly." His role focuses on campus planning, site selection, exterior design, and financial issues.

Asked if there have been any silly issues in the library project, interviewee said no, that "we came very early to understand that there is a finite number of books you could store in the center of campus, and

one had to make some choices about what was important to keep here and what could go elsewhere—and then where that elsewhere might be. So really, the first phase of the renovations was actually the building of the compact storage facility, so we could then get a fair number [of books] out of here during construction."

QUESTION 2: "We're tending to emphasize the sort of gathering use space over the simple storage space. Especially given the fact that 800 undergraduates live . . . [near the library], we really want it to be a place where kids go and hang out. So we're probably spending more money in that direction that I would guess most people do."

"One of the balances which has been difficult for us is this architectural issue [of hiding the original building], because it is very expensive to solve. And to what extent do you try to cram that solution into the price of the budget, or to what extent do you let the budget grow, and if you let the budget grow, who pays for it? We have a couple of projects like that, where trying to correct historical mistakes, we've imposed a price on a building that goes beyond what it would normally pay. And then trying to figure out how we broker that cost. I don't want it to come out of social or shelving space, but it does increase the price pretty substantially."

QUESTION 3: The consultation process on this project "worked better than most. The librarian was really dedicated to having a campus-wide consultation."

The interviewee commented that at his university, good learning happens for reasons intrinsic to the institution. He suspects that community colleges, by contrast, would want to pay close attention in space design to successful student learning behaviors, but at his institution such inquiries would produce improvements only on the margin. "I don't think we spend a lot of time thinking about marginal improvements in pedagogy, or things like that. We sort of take for granted that smart kids learn things . . . . When you look at the quality of the whole experience, that wouldn't be a place where I would spend a lot of time." That is to say, given the relatively low impact of such marginal improvements, there are better ways to spend people's planning time and energy.

QUESTION 4: Library planning is distinctive because it takes a long time. That is partly because of the constituency issue, partly because libraries are relatively expensive and require prolonged fundraising efforts. "It's also because, you know, librarians don't own libraries in the same ways that deans own schools. It's much more of a consensus conversation."

In the past, institutions expected to do a major library project once every twenty-five years. Now, with depositories to manage collection growth, we can expect to see library projects on shorter cycles (like scientific laboratories). "We're sort of deliberately trying to push that up, so I would hope the next one is not thirty years from now." Responding to a question about the expenses implied in this view, the interviewee said "we're in the business of losing lots of money elegantly. Some of them [i.e., board members] get it."

OTHER QUESTIONS: The interviewee is interested in the way that architects have come to occupy niches in their practice.

The interviewee defended the traditional view of library space planning. "Libraries are pretty traditional kinds of organizations, and probably ought to be because they are conservatories." He expressed some surprise that we continue to build monumental reading rooms, but acknowledged that people do in fact like impressive gathering spaces. "We're actually looking at being fairly aggressive about social spaces. Food and beverages have always been banned from libraries, and [we're going] to encourage it in certain parts of it."

INTERVIEW 4: CHIEF ACADEMIC OFFICER
(for the comments of the library director of this university, see interview 10)

QUESTION 1: The interviewee described himself as the person who makes the final decision, yea or nay, on the library's capital budget. When asked, he said he also has final responsibility for approving the library's strategic goals, which among other things includes the goal of securing the entire library building for library purposes. The recent project involved freeing two floors for library purposes; there is another floor and a half in the building still not devoted to library purposes. The interviewee focused exclusively on these fiscal and political functions and said nothing about himself fostering library designs that would enhance education.

Asked about the goals for the recent project, the interviewee emphasized student needs—for space that supports their use of information technology and for study space. In the evenings and on weekends, the library is now "close to full."

"I think at some level the library has also become a social place for students these days, in the sense that there certainly is a social interaction that's taking place, a lot of it of course related to the academic work they're doing. [Describing a room with perhaps 100 PCs, the interviewee said] you'd think . . . one student would be working on each PC, but that isn't the way it works these days. Students work jointly around the PC, so it's not unusual to see two, three students sitting in front of a PC working on a project or collaborating on a project together. And these kids aren't playing around. I've many times gone over there to see what's been going on in the library, and they're working. They're using the capability, but they're not doing it as single people; they're doing it as groups. And so that puts a whole new demand on the library. Now if you go on the other floors, where we don't have banks of PCs or something like that, we have study rooms and so forth, around the periphery, clearly collaborative study is a major thing. You walk by in the evenings, you'll see groups in there working on problem solving or whatever it may be that they're working on together. It's not unusual in the study rooms to see four, five, six students all working together in a circle, and rarely do I find them goofing around. They're usually very serious. It's a very interesting thing. . . . Our library is noisy, compared to what I'm accustomed to."

The interviewee said the library will need more shelving space in the future and more reading areas, especially for the sciences. There is not enough space in the building to meet all of these needs.

QUESTION 3: The interviewee believes consultation with faculty and students was successful, based on the absence of objections to the decisions that were made. He does not believe students and faculty regularly understood the rationale for those decisions and doubted that securing such understanding is important. The renovations produced high-quality space and generated much satisfaction with the project. This outcome validates the process that produced it.

QUESTION 4: The only thing unique or special to library planning that the interviewee identified is the provision of electronic capabilities. Otherwise library planning is like other planning, where it is important to take a strategic view of the future and provide for future changes. The interviewee wasn't sure how this latter was done in the recent project.

OTHER QUESTION: The interviewee commented on the difficulty of moving academic units out of library space, saying that success depended on providing them with space of equal or better quality than what they had in the library.

Doctoral/Research Universities—Intensive

INTERVIEW 5: UNIVERSITY PRESIDENT
(for the comments of the library director of this university, see interview 15)

QUESTION 1. Asked to describe his role in library planning, the interviewee said "I have never forgotten that I'm a faculty member and probably in my world view of myself I see myself first and foremost as a member of the faculty. And I just had the notion that the education we were providing our students was not going to be as worthwhile as it might be if we didn't have the resources available to them for study and research. It was during this time, of course, that the evolution of the electronic age was progressing quite nicely. And it also became clear to me that we needed a place on campus that could serve as not a library in the traditional sense but more as an information center that would be able to tap the resources literally of the world. So it was my vision that we would indeed create such a center that would be a repository for written materials but also an access point for our reach into the electronic media."
The interviewee spoke of a particular responsibility he felt to avoid failure in this project. Specifically, this meant
- overcoming a long history of being rebuffed by the state for capital funds for the library
- managing opinion in the local community, which takes a proprietary view of the university and favored a conference center and other projects over the library.

On the evening when the state bond referendum funding the library and other projects throughout the state passed, the interviewee publicly declared victory on the eleven o'clock news. From that point forward, he was somewhat less directly involved in the project. He worked with an advisory committee consisting of the architect and library director (both of whom he praised highly) and a group of faculty, deans, and library staff. The interviewee characterized his involvement as "supportive review" rather than as "critical analysis that would require change" in the project.

QUESTION 2. The interviewee described balancing attention to traditional and emerging needs as difficult, given the imperative need to provide additional shelving for the collections. He was conscious that major library projects occur infrequently, so that "if we were going to have a facility that was in any sense equipped to deal with future academic aspirations of the institution, we were going to have to incorporate that [electronic] access notion into the project." The interviewee spoke of having the "incredible benefit" of an excellent library director, on whose sense of program balance he could depend.

When asked about reader accommodations, the interviewee described how little students had used the former library. "The academic tenor of the institution was being negatively influenced by just simply the cramped physical conditions." The library director and especially one dean on the advisory committee made it their business to build excellent reader accommodations into the project. "That has worked out brilliantly. You go to the library now, and it is a very active and alive place, and I think that may be the singularly most important outcome of our project." Asked if he intended this going into the project, the interviewee said, "No. My most important outcomes were finding a place to put the books and secondly trying, again, to make sure that the library was the information center of the campus, both in terms of hard materials and access to the external media." The interviewee described the success with readers as "some form of serendipity, I guess." Asked if others were more focused on this outcome than he was, the interviewee responded, "yes, possibly." He referred to the library director, a couple of committee members, and the architect, who did a splendid job of eliciting campus needs as regards the library.

The interviewee re-emphasized that the building responded to "an incredible need, as I said earlier, to just simply having a place to keep the materials. That drove everything in my mind. Secondly was this notion of an electronic access point."

QUESTION 4. The interviewee said that what is distinctive about library planning is the extent to which "virtually every faculty member on this campus was actively interested in what the library would be." Generally, faculty interest is limited primarily to those who will occupy the building.

Baccalaureate College—Liberal Arts

INTERVIEW 6: CHIEF ACADEMIC OFFICER
(for the comments of the library director of this college, see interview 25)

QUESTION 1: Asked why he stayed so closely involved with the library project, the interviewee responded: "Well you know the library is a central part of the academic program; it is absolutely vital to the functioning of all of our academic departments. So I feel a strong need to be a part of the deliberations simply because of its centrality to the academic program. And also, I want to make sure—you know, in all projects like this there is a balance between academic priorities and ambitions and fiscal realities—and I thought that my participation would do something toward making sure that the academic priorities were not totally sacrificed at the alter of fiscal realities."

The interviewee wanted particularly to protect the library project against the view that library buildings are becoming obsolete with the emergence of information technology. He wanted to protect the idea of a traditional library as a vital component in the life of the college. "There are voices out there that would tend to feel that the library is something of an albatross around an institution's neck, and that's not the case at all."

The interviewee said it was "just interesting" to be part of the library deliberations. He found managing competing values to be especially interesting, especially given the relatively modest project budget.

The interviewee said his chief contribution to planning was at the high concept level.
- This was perhaps most evident in the decision to place the library entrance on the second floor, in effect making the ground floor a basement devoted primarily to shelving functions (given the ability of the ground floor slab to support high-density, movable shelving). This decision enabled the college to avoid off-site shelving and to keep the collection browsable.
- The interviewee described the new part of the library, which overlooks the main campus green. He described two reading spaces: one a series of large windows overlooking the green, and the other a large high-ceilinged reading room. The reading room was the brainchild of the president; the interviewee was responsible for the spaces overlooking the green. "They do give a connection between the academic program going on inside the library and the general life of campus going on outside the library."

QUESTION 2: Compromises in planning were driven by the limited funds available. The college did not, for instance, build a new library altogether, as was considered at one time. The interviewee's primary concern was that what they built would not give the college the three decades of collection growth space that was wanted; it may in fact give less than 20 years of growth space.

When asked whether he thought the collections might once more drive readers out of the library, as had happened before at the college, the interviewee answered: "It certainly could. It's probably ten years down the line . . . but I could see that happening. . . . It's just the realities of working within a fairly tight budget. . . . I will say that our reading room is likely to remain sort of sacred space. . . . One of the things that happened when we got done with the renovation and expansion is that the space got so much more attractive that the number of visitors simply doubled or tripled. It went way, way up. And so the question

is, can the library if it gets significantly more full [with print material] still accommodate that number of students? And it will be difficult."

QUESTION 3: The interviewee described faculty participation in planning as strong, while student participation was much weaker. Faculty worked in a collegial way with the architect, librarians, and administration; there was not much conflict. The most critical junction came with the decision to treat the first floor as a basement for shelving. Faculty "flexibility" in accepting this decision was critically important to keeping the library project within budget.

I observed that this describes the ability of faculty to be obstacles in planning and asked whether faculty played a more proactive role. The interviewee said the project was not faculty driven; faculty were reactive rather than proactive. "They were not on our committee what I would characterize as being the generator of ideas."

"The question is how much real investment do faculty have. And they're invested in the library, but it's not like where they live. . . . [The interviewee drew comparisons with planning for a science building.] And this is a building, you know, this is where these people live and work every day. So their involvement with respect to making suggestions and pushing various things is really noticeable. It's a huge difference. . . . With the library, I had the feeling that people don't feel as personally invested. . . . They want to have a good library; they want to make sure that we can continue to develop the collection and that students will have a good place to work . . . , but I don't see the faculty feeling like it's some place they're going to spend, you know, most of their working hours. And so I don't see them as having that kind of level of involvement with the project. If I look at where most of the ideas came from, they came from either the architects, the library staff, or the administrators such as myself and the president. The faculty were involved, and we wanted to make sure that it would work well for the faculty, but I can't say that they were the engines behind the planning."

The interviewee commented on the center for teaching and learning in the library, but faculty do not think of the library as a place where they "do teaching. I think they think of it as a place where they send students to work, but I don't think they think of it as a place where they do teaching." This response suggests the interviewee thinks of teaching space solely as a space for formal, faculty-led instruction.

The interviewee believes the library is "certainly a place for learning. There's no doubt about that. It is probably the most important place for learning on campus. . . . The entire building is created with the idea that learning will take place inside. . . . The entire thing is created so it can produce an environment for students to learn. . . . In a way, that sort of idea that it is a quiet space, a reflective space, almost is pulling in a different direction than making it a teaching space. Also, the fact that we don't have that big a library, so it would be difficult to make it serve both functions and have them not conflict. . . . But as we use it here at [college name], it is predominantly sort of a traditional place where students go and study and do research, as do faculty members."

To create a building to accommodate both the traditional uses of the library and teaching would have required a larger building than the college could have afforded.

QUESTION 4: "The library planning is almost more like the campus center planning we had. . . . It's a common space; it's not anyone's space in particular. And so as a result, people such as myself have more of an opportunity to make an impact than in a science building or in a . . . wing [of another named academic building], where it is really sort of owned by the faculty members in that particular discipline. And because of the common space, I think that I probably had a more substantial impact on the planning than I've had in any of these other projects. . . . Athletics is sort of like the library as well, because it's a

common space. And in a way, that's what differentiates the library or the student union or the athletics facilities from a science building or . . . [another named academic] building, which is really felt to be the sort of possession of the faculty members in that particular field."

OTHER QUESTIONS: The planning work was very successful. "I don't think the library is particularly visionary, but it's very, very functional. It's aesthetically very pleasing."

LIBRARY DIRECTOR INTERVIEWS

Doctoral/Research Universities--Extensive

INTERVIEW 7: DIRECTOR OF A PRINCIPAL LIBRARY UNIT

QUESTION F: The . . . renovation of the library [in the early 1990s] was the turning point for its engagement with electronic resources. This happened not as the result of foresight but because of coincident changes in librarianship and higher education while renovations were being done.

The project had two objectives:
1. Expanded stack space for the collections
2. Improved work space for library staff

QUESTION 6: As a case in point, the original planning for the renovations included only a large room for computing. During construction itself, it became clear that what was needed was the ability to distribute electronic resources. So an emphasis on networking emerged strongly. "These changes were almost forced by the teaching side" through changes in modes of teaching, illustrated by an increasing use of electronic resources in class assignments and the university-wide adoption of Blackboard.

The transformed character of the project came about because the bids came in 10% below estimates and because of the willingness of the university to use project funds to build an additional floor of shell space. The library was responsible for raising the money needed to fit out the floor for use.

Many faculty originally wanted the shell space used for additional shelving. A five-member exploratory committee was appointed to consider alternatives; the group included four newly appointed, younger librarians and was charged with "enterprise thinking" about the future of the library. Their recommendations (see below) won support in a vote of the other librarians. The library director at the time was initially ambivalent but was eventually convinced.

The new floor was designed as a scholarly communication center, which allowed the library "to move forward." It includes a large, technically well-equipped auditorium, information and data laboratories, and a research and development center that helps students use electronic resources effectively. The center depends on a fee structure to pay its operating costs, including the replacement of hardware and software.

QUESTION 7: Library staff addressed faculty misgivings about this design through individual conversations and through the conversion to the project of an influential American historian, who became convinced of the value of the auditorium and appreciated what the library was doing in developing online resources for state history, oral history, and . . . [another topic].

Teaching faculty "can block [a project] if they want to. And they have the power to convince students. . . . I learned about campus politics. You have to work with them [i.e., faculty] and through them, and you cannot lecture them. . . . [In a publication about the project], there are lots of articles we wrote in advance, but we always timed the time of publication. We didn't want to give the impression that we were the leading edge. . . . It just doesn't work in that way. . . . So even though we had a good idea, we kept it internally until . . . the leg work was done."

Other key elements in the political management of the project were excellent relations with the university's facility design office, the Trustee subcommittee concerned with facilities, and the university Senate.

The interviewee said that what students wanted from the project was good study space, more open hours, and—a more recently articulated need—group study space. Recently, the availability of electronic reserves has relieved the need for extended hours. Student members of the planning groups rarely attended. The interviewee regards students as transients with relatively easily satisfied needs who otherwise tend to reflect faculty viewpoints

QUESTION 4: The new stack space brought home to the librarians how poorly they were caring for the print collections. Renewed attention to weeding, to preservation, and to stacks cleaning date from the renovation project.

The growing use of electronic journals and of JSTOR has slowed the expansion of the print collections. Library renovations were expected to provide five years of collection growth, but current estimates are that in 2003 the stacks can still accommodate two years of growth.

Looking forward, the . . . project will probably be the last major addition of on-campus shelving. The university will either expand its own annex facility or foster a statewide or multi-state consortium for the construction of a shelving facility. Good retrieval services of material from the annex have quieted faculty concerns about off-site shelving.

QUESTION K: The interviewee emphasized that librarians should avoid short-term thinking in facilities design. She illustrated this point by saying her library had ordered some furniture tailored to large computing equipment. That furniture is now proving to be less useful. At present she would focus on traditional furnishings, especially chairs, that are comfortable.

The interviewee commented on decisions driven by the architect. One involved carpeting that has not worked well because of the difficulty of keeping it clean and because it has not worn well. The other involved architectural statements in the renovation. These include a slanting wall in one area and a spiral stairway. "I remember saying, . . . this isn't a concert hall. . . . Now I think it is one of the most beautiful things. And the students, at the end of the year, when the alumni get together, they actually use the stairwell as a stage for choirs [and other things]. And I am sure the architects did not think of the multiple uses. But they did it for the sake of beauty. . . . So some things will be much better in the next world."

INTERVIEW 8: DIRECTOR OF A PRINCIPAL LIBRARY UNIT
(for the comments of the chief academic officer of this university, see interview 1)

QUESTIONS F & G: The chief academic officer was determined not to build another "regular old library."

The key design idea for the new library was that its administratively independent units should work

"side-by-side;" the key measure of success is how "neighborly" these units are. The groups work in a federated approach without formal administrative ties. "But informally we have two or three groups that meet on a fairly regular basis. . . . [One group meets monthly with the chief academic officer,] and basically he's taken on the role of guardian angel. . . . And so we have these regular meetings and talk through . . . where are we evolving to. . . . It's amazing how casual conversations in that context wind up to being ongoing programs very quickly."

The "building doesn't belong to any academic school or college, and therefore it's open to anyone in the university to use."

QUESTION 6: The interviewee said that the question 6 hypothesis may well be true for most library projects, but it does not describe his library. "Space in the building was designed to be shared." Most fundamentally, what "side-by-side" means is that one often cannot tell what physical space "belongs" to what program. Typically in a branch library, for instance, the library occupies its own discrete, contained space within a building; it is a library enclave and manages its own space. This enclave idea is emphatically not operative in the new library, where the possibilities that proximity create are always being explored.

The interviewee exemplified this by talking about library staff interaction with the software evaluation staff of an independent group: "Proximity of is course the thing that really does it more than anything else. Proximity to the special things that exist in this building, as well as proximity to the other staff. For instance, we're just starting to redesign our Website for the library, so what I've got my staff doing is talking to the software assessment team. . . . So that's the kind of resource that typically isn't just down the hall in a library building. And therefore we can take advantage of that, and we can learn from their expertise. We improve ourselves, our knowledge base, while improving our Website. Now we also do things for them. And it goes back and forth. When we first brought all the public computing online in the building, the library was the one that made the argument that it would probably help students a whole lot—since we have lots of different kinds of computers . . . —if when the students sit down, regardless of brand, they find the same grouping of software available for them. In other words, a first pass at simplifying navigation, because we have lots and lots of software available for students."

"As staff group and faculty, we're constantly trying to explain all this [technical] stuff to each other, and justify it and stuff. And students just walk in and think, 'Yah, this is the way it's supposed to be. What's the big deal?' It's like, 'Why isn't every other place doing that?'"

Speaking further about the difference between his library and a branch library, the interviewee said that "in the planning process for this building, . . . the library was uncomfortable with basically being in a building that had such a large non-library presence, and probably felt a little threatened by that, and at one point said, 'Well, just give us our space, and we'll take care of designing that; you guys can go do whatever you want to do.' And that clearly was not going to be the way this was approached. It wasn't until really the library gave that up—and a lot of preconceptions were dropped by everybody, really— that things became much more integrated."

QUESTION 2: The library has a large atrium, lots of open study space, and some gathering space was self-consciously designed as social space for students. The full potential of this space has been realized only over time, as the originally sterile design has been softened and warmed.

Speaking of space with easy chairs and whiteboards, the interviewee said it "is quite amazing how, without having any particular prompting, students have always felt comfortable gathering chairs and using whiteboards and things. . . . The designers had wanted it to be even much more dramatic than

I think it was in reality. There was a lot of talk about just open space—leave furniture so students can rearrange it in ways that suit their needs. Projects could happen in that space and then go away—almost like an academic playground of sorts. . . . They very much had thought of something that would allow students to be very hands on. I don't think in practice they could figure out how really to make that work though."

QUESTION 11 (and 6): Staff talked about doing a formal post-occupancy assessment of the library after it opened, but nobody wanted to take the initiative to do it. Such an assessment might be done now, however, to help nurture the "constant evolution" of the facility.

As more and more resources are made available electronically, there will be less need for library shelving. Print collections can be moved out of the building, creating the question: how will the vacated space be used? Library staff want to preserve the greatest possible flexibility in the use of space, so as to build effective learning spaces. "Even if there's pervasive computing, so everybody's now got a computer on their belt, they're still going to want places to go. And the library is one of the few places on campus where you can be productive and social at the same time. And we can start to think about what kinds of environments are conducive then for study groups and study teams, and what would bring faculty into our building to interact more with students. . . . Here I don't know if we do know . . . [how to do this.] There are certain things that do bring at least certain faculty in—like again our production studios that double as theatre spaces. Clearly, [some faculty] . . . are in the building working side by side with students. That is great, really great! Now how do we spin that out, how do we work that for . . . [other] faculty?"

The interviewee described a pair of design labs on the main floor available for "programmatic leases" of from six to twelve months. Individual projects would gain space in this way; they were required only to find some way of sharing their program with others in the community.

QUESTION 7: The interviewee said that at least twenty different committees were involved in planning the new library, but very possibly (he was not at the university at the time) there was no systematic assessment of student needs. Such an assessment might have helped, but the emphasis was on introducing technology.

INTERVIEW 9: DIRECTOR OF A PRINICPAL LIBRARY UNIT

QUESTION F: The book stacks had become a year-round oven for the collections, and the building had no networking capability. In the 1980s, the library's first computers regularly blew the library's fuses.

The primary goals of the addition were to provide good HVAC in the book stacks, to accommodate collection growth, to create a robust technical infrastructure, and to provide flexibility for future changes. There is no reason to believe there will ever be another addition to the library building. The project has made the library a "high-tech tree house in the woods."

QUESTION G: The interviewee emphasized the complexity of getting state projects funded. Projects are subject to shifting political priorities and many delays. The interviewee hopes to bring the addition and renovation project, started in 1986, to completion within 18 years.

QUESTION 9: Responding to a question about how the conception of the library project changed over its long gestation, the interviewee said the premium from the first was on flexibility. Planners knew (correctly as events have shown) that spaces would be used differently from the plan, even though there

was no way to predict the nature of the needed changes.

Asked if the 1986 argument for the project needed to change in 1996, or today, the interviewee responded: "Sometimes buildings are planned in a vacuum . . . because of funding streams and long gestation periods and things like that . . . and because we're a complex organization. In some ways it would be nice to think of the library in the larger context at the university level. And [to] think what other services would be appropriate for the library and to build those things into the library. Sometimes I think those discussions don't always take place, and I think they should. What happens within the library world is that you worry you're going to lose your space. It becomes 'your space,' and you're giving it up for some other function instead of thinking, well, what are the services and programs we'd like to put in this central campus building, and how do we design them cohesively."

In the past, the library had some features not common in libraries of its time: a café and a computing center. "What we were limited by was the building's structure. . . . [The new addition is an open building and few things have been put "in concrete."] Walls are really your limiting factor, I think. . . . By putting in walls, you make things definite when you live in a very indefinite world."

QUESTION 6: Explaining the conservative, evolutionary character of library space design, the interviewee said: "I like to think of the library as an intellectual and social commons on the campus. You know we have a big campus at [university name. At this end of the quadrangle] there is no student center or gathering spot. So the library becomes a place where a lot of different activities take place. . . . [The library was] a place where you have . . . [a] club selling flowers and activists signing petitions and bake sales for a sorority. You have a sense of it being a community commons, and then on another floor you have it being a place where people could get help with whatever they needed help with, and in another place it could be a place where they learned how to do something. So if you think about those things in the most generic ways, we are still trying to capture that sense of social commons and intellectual commons in our buildings. . . . We're never going to get another building. We're never going to get another addition, and I don't see our collections growing at the same rate as they have. . . . There are going to be major changes in the way we store printed materials. So you have that thought. On the other hand, you have to make a compelling case to a funding provider as to why you need a new building. And there still is a need to preserve and make accessible your print collections. You still see, at least until I retire, the need for some printed materials on campus. We're designing to functions that I hope will still be imbedded in the library of the future, in terms of intellectual and social commons for students and faculty."

Information technology itself evolves, and we are still dependent on a lot of printed volumes. "I think of us as living in a hybrid world right now."

The interviewee said she thinks library management systems should in concept be revolutionary, not evolutionary (i.e., they should present the information world in a much less fragmentary way). Asked if she sees any opportunities for revolutionary change in library space design, comparable to the need for revolutionary change in library management systems, she said: "If I had a blank piece of paper and the promise of some funds to be able to do something different, the first thing I would do is work with the office of student services, the [university] technology folks, and say, what are the services we want in this building? And how do we achieve some synergy among our programs to be able to provide that? That would be my starting point, and I think that is perhaps revolutionary in that libraries haven't shared their space necessarily with other campus entities. Or their thinking."

QUESTION K: The interviewee emphasized the importance (and pleasure) of working with an architect who listened to the library and respected its views, so that the architectural design and the artistic gestures of the project developed as a part of the library's vision of what it needed.

INTERVIEW 10: LIBRARY DIRECTOR.
(for the comments of the chief academic officer of this university, see interview 4)

QUESTION F: The project had two objectives: the provision of more seating and more shelving capacity. The project involved the conversion to library use of two floors in the building that had previously been assigned to non-library functions.

QUESTION G. More than anything else, the interviewee wanted to create an atmosphere that would attract students to the library. He wanted students to be eager to come to the library. He turned to furniture and lighting to achieve this effect.

QUESTION 7: The interviewee surveyed both the faculty's and students' interests as part of planning library renovations. Faculty did not show much interest, even in the focus groups he convened, beyond expressing the need for faculty carrels. They also showed little interest in student needs, though after the fact faculty have been impressed with the improvements secured for students.

The survey of students confirmed the library staff's sense of what was needed. The provision of small group study space was "one of the key developments that we picked up as to how the students teach each other and learn from each other." Students have valued these spaces highly. They are self-policing in their use of these spaces, in that groups can always readily evict individuals who are using the rooms.

QUESTION 8: The interviewee maintains very strong working relations with the university's chief academic officer, president, and treasurer. These relationships have been critically important in winning support and approval for library renovation. These officers look to the library director to guide renovation (and other library activities) in ways that support the institution's academic mission.

The interviewee also cultivates good relations with student association officers. The willingness of these officers to support library renovation and its goals was important.

QUESTION 4: The interviewee expects to cap the collections in the library building at 750–800,000 volumes. In the future, student study space needs, instructional space, and a facility for training faculty in the use of electronic resources will be strongly favored. The library will depend on an off-campus shelving facility to meet future shelving needs.

QUESTION 10: The library did a post-occupancy assessment of the renovation by surveying students as they entered the library. The survey identified one or two things that had been done wrong, but otherwise the library was encouraged by the survey responses to believe the direction taken in the renovations was the right one.

More generally, the renovation project has been much praised and is widely regarded as a "tremendous success."

QUESTION 2 (focusing on social spaces): Socialization "is really one of the reasons students come here . . . whether we like it or not."

The library tries to direct social activities to the lobby areas on each floor and to its café. Beyond that, the interviewee encourages the use of the building for other purposes, notably the exhibit of student art and a series of library-sponsored lectures and programs. "We have two . . . [events] a year, where . . . [in] our twenty-four hour room [we] completely take out the furniture and convert it to a huge coffee house with

free coffee and pastries and with walk-up entertainment, like an old-fashioned coffee house: reading poetry and singing songs, and stuff like that. And it's really very popular. And this is run in conjunction with the student program board."

The interviewee established a student advisory board and a student liaison position. The latter is a paid hourly position (now also earning tuition remission) functioning as a kind of ombudsman. Students apply for this position. The liaison position is also involved in arranging activities and in strategic planning for the library. The position has "been very, very successful." The position has a board and open meetings, with agendas, that students are invited to attend. "We listen to them [i.e., students] as they tell us what they like and don't like about the library. . . . We get their input on budget issues. When we go to our advisory board, we lay out a whole series of things and talk with them about what they sense the priorities are. And that has really been very helpful. We have learned so much about what the students are thinking that it has helped us tremendously." The campus-wide value of this position was evident, for instance, in the decision to charge for printing services across the campus. Given the use of course management software, the decision to start charging for printing in the library and elsewhere would mean that students would have to pay for large amounts of material that they had previously received free as it was distributed in their classes. This would be a significant cost for many students. "We learned about this from one of our student advisory boards, and as soon as we heard about that, I sounded the alarm with the labs and the administration here on campus. And we postponed everything and took a year to figure out how we were going to do this. And I got all the libraries to work together on this. And fortunately, by the time we came up with the implementation, the impact was just a whimper. We got practically no negative impact because we worked with the students; we were able to work with the student association and everybody else to try to come to some accommodation and get our message across and hear what their reaction was. And if I had not learned that [i.e., the negative impact of charging for printing] from my student advisory board, we would have been up the river and gotten into this thing and had a tremendous political problem here."

QUESTION 6: The interviewee agreed with the hypothesis about evolutionary change in library space design. "What I've struggled with here is the challenge of trying to be responsive in a faster way to what clearly everyone of us here realizes is happening." Much of library design reflects the campus environment and the traditions of libraries. The interviewee is trying to position the library so that it represents central academic values and commands ready support. Interestingly, "the library is much more aware of what is coming down the pike in terms of changes in instruction and technique than the administration or even our information technology people outside the library. And so we do have influence in terms of identifying that, but what we don't have is that kind of power, that kind of influence that would result in having support to make those kinds of changes. There are so many kinds of things that the university needs to change, they tend to have shorter-term goals than having the longer-term perspective."

INTERVIEW 11: LIBRARY FACILITIES MANAGER

QUESTION F: Library renovations were driven by two factors:
1. The imperative need to add shelving for the growing collections. This was done by constructing compact shelving in the basement, thereby increasing the shelving capacity by 30%.
2. The wish to consolidate and enhance specific services, such ILL, reserves processing, circulation, and the privileges office. These changes themselves have underscored the need to rethink the reading rooms, the focus of current space planning.

QUESTION G: The recent project was to be the first in a number of phased renovation projects. Those next phases have been delayed because of staff exhaustion after the first project and by changing campus priorities for capital spending. The library agreed to focus for the present on working with an architect to understand options for renovating the reading rooms.

QUESTION 4: At one time, library staff thought the new compact shelving would give them 10 years of collection growth. After the collection was shifted using the new shelving, it became apparent the library would not have that much capacity for growth. At the same time, readers have been very pleased with the improved, rationalized access to the collections made possible by the new shelving.

It is apparent that the need for more shelving must be a major concern for the library. The library has financial support from the campus administration for studying options for meeting future shelving needs. These options include adding a shelving wing to the existing library and building an off-site shelving facility. The library did *not* want just to assume that an offsite facility was the appropriate response to future shelving needs at the university.

Whatever is built will have environment conditions designed for the preservation of library material, rather than the comfort of readers.

Library staff and the advisory committee are considering the likely impact of electronic journals on shelving needs, but no policy decisions have been made. The library will remain a library of record with a large print collection. It has not thought about enhancing ILL and document delivery services as a means of controlling rates of collection growth.

QUESTION 6: The library has worked closely with the teaching technology group, a unit of academic computing, which could be located in the library as a result of the renovations. This brought library systems staff and the teaching technology group together in very productive ways, especially as regards planning for the reading rooms.

The library is likely to create a technology-enhanced reading room in the library, modeled on the very successful computer cluster in another campus library that features lots of space for students to work collaboratively with one another, scanning and multimedia equipment, and places for TA's to work with their students.

The interviewee agreed that at his university, library design has changed incrementally, through the observation of what works well, and by talking with users about their needs. The library has observed, for instance, that students like to have large work surfaces with technology capabilities very prominent at them.

QUESTION 11: In the past, people at all levels in the library and in computing services worked together easily and successfully. Nonetheless, bringing the teaching technology group into the library demonstrated how many opportunities for fruitful collaboration were being missed or under-realized. The fact that the two groups are working in the same space has made for much stronger collaboration, as for instance in the campus implementation of Blackboard and in the digitization activities of special collections.

QUESTION 2: As a part of planning for library renovations, the library hired consultants to do surveys and conduct focus groups with faculty, graduate students, and undergraduates. There is no culture of formal assessment at the university, but library staff learned a great many specific things about the manner and extent of library use from the survey results. They learned, for instance, that people liked the

way the library facilitated their work and that the actual occupancy rates of the library were lower than the staff's visual impressions suggested.

The library has good data (from automated operations) about who enters the library and about the use of the print collections.

With the renovations, the library has become a very attractive, a very pleasant place to work. "A lot of these students can do their work elsewhere, but they appreciate being with others like themselves who are doing serious work."

INTERVIEW 12: LIBRARY DIRECTOR

QUESTION F: The library had space for about 600 students in 1992, down from space for 1,600 in 1982. Collection growth was dominating the use of library space, even with the provision of some off-campus shelving.

QUESTION G: The library consisted of three different buildings, constructed over a 65-year period, that were not well integrated and that were all underfunded when they were built. The library was "among the worst in the United States."

QUESTION 8: A 1982 consultant's report found little need for additional space or improved accommodations. There was little disposition to act on the part of campus administrators or the state legislature. A new provost arrived in [date] and students organized a sit-in to complain about the library in 1988. The students called themselves [organization name]. Student activism caught the attention of the president, who authorized another consultant's report.

The library project was quite lucky in that overall the state fiscal condition was good at the time. The governor resolved to use some one-time money for buildings, and the library project became one of them because the university was ready with a program statement and cost estimates.

Students were centrally important to getting the project going. Student leadership was involved in all planning for the project. Students wanted places to study and air conditioning. Before the project, students were "overall appalled. In general, the student view of things was 'Don't go there; you won't find anything you need.' We were just sort of a place that did not figure in students' lives." As the project gathered support, the student senate authorized a referendum, which passed with a 97% affirmative vote; it called for a $5 million allocation of student fee money to the library project.

Student desires for the project were "relatively visceral." They included a study space open 24 hours a day, access to food and drink, and group study space.

QUESTION 6: The interviewee agreed that the library project, guided by a program statement written in 1992, was quite traditional in its basic concept. Librarians were not confident they could predict library space needs between 1990 and 2020, their planning horizon, and they built "pretty traditional space." They particularly wanted to create a flexible, open space, which in fact has lent itself to many subsequent alterations; they were equally concerned to provide a variety of spaces available for students.

"Ultimately the thing that has saved us is just the opportunity to be flexible and to change with the needs of time. Probably the most outstanding thing I can say about our project is that it has given us the opportunity to be completely flexible and grow with the needs of students."

The interviewee would not today plan for library space differently from the way he did it earlier. The library is not in a space bind on any issue, partly because change is relatively easy. The library has, for instance, recently collaborated with campus information technology staff to create in the library a media center, where classroom presentations and other education and teaching materials can be developed.

QUESTION 10: The interviewee said that a formal post-occupancy study would likely be useful, but the clearest measure of success is students voting with their feet. Students now come to the building twice as often as in the past, and they stay perhaps four times as long. A more recently developed information commons has contributed significantly to this result.

"Just the most notable thing about usage is . . . the extreme growth in group study. . . . [The interviewee described a large open area with a capacity for 250 filled with tables that seat 4–6 persons each.] We're seeing that virtually all of [the tables] are filled with students working together, and . . . the thing that makes us happiest is that we somehow stumbled into a really high-use kind of thing here that reflects how people function within their classes and work with their fellow students. . . . [This space] will be filled, literally every chair, . . . and they're all talking at the same time. And the hum that rises above this is just amazing. And they don't care. . . . There's all this din that occurs [from] hundreds of students in this same space, all working together and all talking at the same time. While immediately adjacent to a typical space like this is a space with like 60 computers, and they're all clustered around the computers as well, working together in some cases. Somehow it just all came together as a very useful space for students. . . . We just beam with pride. Every time I come down the elevator to leave, and I see these hundreds of students out there—that just never happened before."

QUESTION 4: The library has a satellite shelving facility that is being upgraded to accommodate about 425,000 volumes. Compact shelving was extensively used in the renovated library, and further compact shelving can be installed in some parts of the building. The interviewee believes the library has perhaps thirty years of collection growth capacity.

Preservation conditions for the collections were poor in the old buildings. High-quality HVAC was installed as part of the project; there have been no reader complaints about HVAC.

QUESTION K: The interviewee emphasized the following items:
- The project provided a 24-hour study space for 200 students, which has proved too small. This space offers vended food service.
- Students wanted increased library hours. The library remains open until 2:00 a.m.
- Students want computing facilities wherever they go on campus. The library offers the biggest single computing facility, including one open for public access.
- The chief problem with the project related to the security of external doors.
- "Integration" is the library's watchword guiding the balance between print and electronic resources. Everyone seems happy with what has been achieved.

INTERVIEW 13: LIBRARY DIRECTOR (for the comments of the vice president and undergraduate college dean of this university, see interviews 3 and 2, respectively)

QUESTION F: Library renovations will be done in three phases over the next several years. Project objectives are to:
- Restore collection and user spaces that over the years have been taken over by other functions
- Improve the aesthetic quality of library space, to match that of other campus buildings
- Institute more intelligent planning for technology, especially by designing the technical infrastructure

so that it can adapt quickly to change
- Consolidate and rationalize library services, now offered in seven different locations on four floors
- Configure the three buildings that constitute the library so as to make a rational sequencing of the collections possible.

QUESTION 7: Planning began with a campus-wide committee of faculty, graduate and undergraduate students, information technology staff, and librarians appointed by the provost and charged to re-vision the library. The committee worked for eighteen months, "putting a stake in the ground about what this place should look like." Its report was very widely reviewed and commented on throughout the campus. An architect was hired only after this process was completed.

One of the things that strongly emerged in the report was the rich set of opportunities the library has for collaboration. These opportunities spring fundamentally from the new curriculum the university recently put in place starting with the freshman class, featuring new requirements for writing and research that had library implications. The undergraduate college has established a center for teaching, learning, and writing to offer tutorial assistance to students. The center has a satellite operation in the library. This drives the need for group study space, not adequately provided elsewhere on campus. The new curriculum also includes some information technology competencies. The library needs to create "spaces where that can happen."

The provost's new strategic plan for the campus also created opportunities for the library to tailor its plan to mesh with the campus plan. This had implications for space planning with regard to the ubiquitous presence of technology and the mandate that faculty use technology in the classroom.

The interviewee said that no formal assessment of student learning modes was undertaken as part of the re-visioning study. This omission results from "a level of [faculty] complacency about thinking we know how students learn. . . . We run up against it all the time with the instructional technology piece of what we're doing. The new curriculum forced everyone to rethink what they were doing in the classroom. . . . There were certain kinds of requirements in terms of research and other competencies that we're trying to develop within the curriculum . . . . For some faculty, this was incredibly threatening because it was seen as a challenge to what they were traditionally doing in the classroom."

QUESTION 11: The library aims to build a strategic partnership with the center for teaching, learning, and writing. The center has so far focused primarily on the writing program. Library staff are team teaching with a group of post-doc fellows who implement the center's activities, helping to integrate writing and research skills.

The center has a studio in its home building, not convenient to the center of campus. The library provides parallel studio space in its building. The studio is a small consultation room that is (or will be) technically equipped like an electronic classroom.

The center's next thrust will be to provide technical and pedagogical expertise for faculty who are introducing technology into their teaching. The interviewee wants library staff to benefit from these learning opportunities for their own instructional activities.

The library will need to provide technically equipped consultation and seminar rooms for these center activities.

QUESTION 8: "One of the most refreshing things for me, having spent my entire [professional] life at [university name], is how easy it is be here at [university name]. It's not a constant battle of trying to

insinuate myself and the library into the academic enterprise. We are at every table; if we're not, someone asks the question, 'where's the library?'. . . Every major planning activity, the library has been part of. And it's not because of me; it's because the library has always been a central part of what goes on here at [university name]. And the fact that we have something we can contribute and can deliver in each of these situations makes it an easy sell to the senior administration."

Donors have been remarkably responsive to the academic goals of the library's renovation planning.

QUESTION 2: The existing coffee shop in a library corridor is "probably the most abysmal space you've ever seen in your life, but it is the most vibrant space in the building. . . . What we want to do is capture that same spirit and function in grander space."

QUESTION 6: The interviewee commented that most library projects he sees are traditional in fundamental concept, but he is working hard to make his renovations otherwise. He is trying to be especially thoughtful about technology planning. Technology planning is now a separate effort carried forward in a series of events, with some outside experts, helping them to envision what technology will look like over the next ten years. "What we're trying to do is to figure out the physical requirements, the space requirements that the new role we see the library playing [will produce] in terms of the creation and management of digital information. The need to educate and train students and faculty on use of the technology and the ways of creating new digital products are all things that we're trying to think through in terms of space requirements in the new library. We don't have the answers there, and we haven't found anyone who has the answers. The architects aren't helpful, because it's not an area where they've had a whole lot of experience. What you describe [i.e., the question 6 argument] is exactly what we see around us in terms of how other people have gone about thinking about the technology piece of what they're doing. And we're looking for some better support, some better advice. It's part of a larger campus problem that I've identified here everywhere. There's a tremendous amount of construction going on on this campus right now, compensating for twenty years of neglect on academic facilities. And there is such a huge disconnect between the architecture—the design of the space—and the technology piece. Those two pieces have not been brought together."

QUESTION 4: The university has just built an off-campus shelving facility that it might share with other universities. The library is now planning on having on-campus collections of two million volumes, with all growth above that accommodated in the shelving facility. Preservation was an important issue in the design of that facility. The library is just now creating its preservation program and plans to have a conservation laboratory in the new facility.

QUESTION K: The interviewee wondered about where technical services figures in current library space planning—are they included in the main library or moved elsewhere.

INTERVIEW 14: LIBRARY FACILITIES MANAGER

QUESTION F: The objectives of the project were to:
- Return one library unit to the main library building
- Improve reader accommodations
- Make the building a more self-explanatory and more efficient work environment for readers
- Upgrade the network infrastructure (this was essential)
- Rehabilitate the HVAC system (essential)
- Consolidate special collections and give it more prominence.

Significant funding limitations meant that, except for the network infrastructure and HVAC, renovations were largely confined to only some parts of the building.

Adequate shelving was not a significant issue because of a recent installation of high-density shelving and the commitment to build an off-site shelving facility.

Renovations resulted in a net loss of seating capacity (to date, perhaps a 25–30% loss) but a significant gain in seating quality. Reading accommodations were made more spacious, more functional, and (as regards the carrels) more private.

Some services were reorganized to make them more rational and self-explanatory for readers.

QUESTION 7: The library director and associate director were responsible for shaping the case for library renovation, an effort that took about four years. The availability of some state funds instigated the effort.

Although plans were put before the faculty advisory committee, the primary audience for the library's planning efforts was the administration and the university's facilities management unit. The effort here was to get the project costs to align with the project budget. Because planning aimed conceptually at making the library a teaching library, library staff were also a significant audience for planning documents. Staff were not enthusiastic about the teaching library idea and were glad to see this emphasis die with the departure of the library director who advocated it, before actual renovation work began.

The library contracted with a prominent library consultant to survey faculty and staff on their use of and views about the library. Low response rates and faulty statistical procedures employed by the consultant made for unreliable data. The report was delayed and finally an associate director took responsibility for writing it. These data underscored the importance of the library to science and engineering departments and to the university's continuing education program. But it had little impact on library space planning.

There was no other consultation with students. In the event, however, the single greatest impact of the renovations lay in improved reader accommodations. The library's gate count increased by 50% in the first few years after renovations were complete.

QUESTION 8: Changes of library director had little impact on renovation plans. An interim director was largely concerned with the off-site shelving facility and the implementation of a new library management system. The new permanent director emphasized the information technology aspects of the renovation plans.

QUESTION 6: The interviewee responded with a "yes and no" to the proposition that the renovations were evolutionary and conservative in outlook.

The director who left argued (unsuccessfully) that the library should reconceive itself as a "teaching library."

A younger librarian had been hired to lead a bibliographic instruction program. Among library staff, he had perhaps the most acute sense of the potential impact of information technology on teaching and learning. This librarian and a couple of graduate students were instrumental in broadening the information technology agenda of the renovations, from infrastructure to other things—to (as it turned out) an electronic text and information center as a principal new space in the renovated library. A few faculty came to see the potential of information technology for teaching.

Looking back on these efforts, they now seem linear—i.e., as reasonable and predictable lines of evolutionary development. At the time (very early 1990s), they looked more revolutionary. Many library staff regarded the younger librarian as a kind of Wizard of Oz, all smoke and curtains. That view applied particularly to some of the library's research and development efforts.

QUESTION 2: Some (much?) of the increased gate count might be attributed to a new food service, which certainly has brought more people into the library. It gives many new opportunities for social interaction between and among students, faculty, and library staff. One sees such interaction "all the time" now.

After renovation was complete, the library continued to upgrade the quality of reader accommodations in unrenovated parts of the building, continuing to sacrifice the quantity of seats. This trade favoring quality over quantity has been "worth it all."

Subsequent space planning has not benefited from systematic consultation with students, even for a particular reader space where that might seem most appropriate. There have been some meetings with student government, but the library has depended more significantly on an actively used suggestion box to understand reader views.

The library mixed large tables and individual seating on one of its floors, a combination that has made it impossible to manage noise there. A culture clash between undergraduates seeking group study space and graduate students seeking individual study space has developed. Ongoing efforts to solve this problem have not been successful.

QUESTION K: The interviewee feels that the library accomplished a great deal with the money it had for renovation. The positive impact on readers has been remarkable. The project was a "big success for the community."

He emphasized that one of the most successful aspects of the renovation was the reorientation of the science library on one level of the building. One now has a true sense of arriving somewhere, and a clear view of the services and accommodations that are available, so that the science library is now truly a library within a library, as it was not before.

The library's electronic classroom has been a "big help," but the idea that the library should be a teaching library has evaporated. For long periods, the library operated without a bibliographic instruction librarian, and there is no formal or systematic bibliographic instruction program. Instead of attempting to reach as many people as possible, bibliographic instruction is now focused on individual courses and programs.

Doctoral/Research Universities—Intensive

INTERVIEW 15: LIBRARY DIRECTOR.
(for comments of the president of this university, see interview 5)

QUESTION F: The library project was driven by the need to provide library seating for a rapidly growing student population and shelving for the collections. The project was driven not by a vision statement but by a consultant's report of 1985, which was based on systematic measures of each area of the library and discussions "pretty exclusively" with library staff. The consultants did not confer with reader constituencies.

QUESTION 7: Toward the end of construction, the library director and library staff conducted a series of focus group interviews with undergraduate and graduate students, with staff, and with faculty. The objective was to plan for a reorganization of the library staff. These focus group discussions had two major conclusions: the library should significantly enhance bibliographic instruction, and it should develop explicit policies to undergird its collection-development activities.

A number of consultants were employed to help guide the staffing changes identified in the focus group discussions.

QUESTION 8: Planning and decision making for the project were in the hands of the president, the library director, and the planning architect. The library was the only academic building project on campus in the 1990s. It competed chiefly with a new recreation center, but in the end both were funded by a special bond issue. The library was the centerpiece, but both projects helped one another to gain support. The president was very actively involved with the project, which was the "real hallmark" building of his tenure.

QUESTION 6: The interviewee agreed in general that there has been little fundamental change in the use and design of library space over the last generation. There were two significant exceptions to that judgment as regards his own library.

(a) The project included a television-broadcasting studio in support of a state project, which in the mid-1980s predicted that distance education would be conducted with interactive television technology using fiberoptic cable. The growth of Internet-based distance learning left the studio underutilized, and the interviewee quickly turned the studio over to systems staff, who had been inadequately provided for in the original planning.

Commenting on rapid technology changes, the interviewee said that "putting telecommunications closets in was one of the smarter things they did."

"Any time you add space for a purpose, you can always find a different purpose for the space, but you're glad you have the space. Our television studio, for instance, had a rather large storage room off [of] it . . . , and it's been a godsend to us for other purposes. . . . Anytime you add space, you're going to find a use for it. The use just may change."

The university has long been concerned with distance education. As its Internet-based courses develop, some specialized needs for visualization emerged (e.g., in nursing courses). Educational television is beginning to get some use.

(b) The project included significant space for student group study and for faculty carrels.

The interviewee thinks that library space planning will continue to evolve and honor traditional activities, though with increased emphasis on student study space and less emphasis on stacks space. The experience with the television studio suggests the dangers of radical, vision-driven changes in space design rather than evolutionary change.

QUESTION 4: In the future, library space planning will be less strongly driven by shelving needs, but those needs will only diminish, not disappear. The library is buying twice the number of books, and the interviewee sees no electronic substitute for the book.

The expansion of electronic journal subscriptions (creating no bound volumes) and JSTOR-like projects

(which make it possible to remove serial back files) are the major factors supporting a reduced need for shelving. Moving JSTOR back files to storage (or discarding them) will give the library five years of growth. The interviewee anticipates building a shelving facility for his campus, rather than participating in a consortial venture.

The availability of interlibrary loan material is a factor in the likely future need for shelving, but not a significant factor. The university's consortial memberships do not affect the library's book buying.

QUESTION 2: Aside from group study space, the library project did not particularly accommodate changing patterns of student study. There have been a number of policy changes.

QUESTION 5: The library project was not informed by a vision statement other than the 1985 consultant's report and the specific vision statement for educational television.

INTERVIEW 16: LIBRARY DIRECTOR

QUESTION 4: Over the thirty years since the last major library construction, collection growth had crowded readers out by requiring that seating be reduced almost by half.

State guidelines called for a twenty-year planning horizon as regards collection growth. Understanding what will happen to the ratio between paper and electronic resources over the next twenty years and projecting university financial support for the collections is very difficult—"more art than science." In the end, the library estimated the collections would grow by a factor of 1.3 over the next twenty years, an estimate the library believes is conservative as regards the impact of electronic resources.

The library, under some site constraints to contain the building footprint, invested heavily in compact shelving. The interviewee thinks it unlikely the library will turn to off-site shelving in the future. Electronic resources are likely to expand faster than the planning assumptions; also, some expansion of compact shelving is possible.

QUESTION 11: The university has its roots in teacher education. For this reason, the audiovisual function has long been a library function. The library employed Ph.D.-level instructional development staff to work with faculty; it had a graphics production lab with photographer, videographer, and graphic designer; it provided audio functions campus-wide.

Recently, the university decided to develop a centralized information technology unit that included these operations administratively, though they remained physically in the library. "The concept of the building was not simply a library in the traditional sense, but we used—for [the state capitol] and the people down there, the legislators and the executive branch, the people we had to go to get support for funding—we used the rather awkward title of library and information services center. And the notion . . . was that whatever we do with the new library ought to really be thought of as another mechanism, another facility for helping transform the campus learning culture. And so what I did, and what we did, was build right into our program materials and so forth, right from the start, the notion that what we would be doing was providing a better locus of resources, locus of services, locus of support that would be an allied set of services that would be librarians, IT professionals, and faculty working together to support student learning and support research on campus."

The library did no systematic assessment of student learning modes as it pursued this goal. But "we certainly attached the project to various threads and streams of conversations about student learning and student learning styles and active learning interests and things like that."

The project has a center for academic excellence, a joint venture of the provost and academic senate. The center fosters faculty development activities and classroom support. This center was a recent development on campus and a "late comer" to planning for the library. It had to be designed into the building as it was being built. The interviewee was a strong advocate for incorporating the center into the library. "The project gained a certain type of momentum that is hard to quantify or express—or maybe it's more enthusiasm than momentum—because of the fact that the people who are leading the media-oriented, instructional technology change on campus . . . really took heart and developed a real sense of buoyancy and support for the idea of a library that would have new facilities that would provide better services and better spaces for these kinds of people. And they kind of just pitched in and we all sort of worked it together."

INTERVIEW 17: LIBRARY DIRECTOR

The interviewee was not at the library in the 1980s, when it was designed. He arrived just as it opened and was responsible for implementing what had been planned.

QUESTION F: There were two major goals for the new library building:
1. The library was meant to be an architecturally interesting centerpiece for a campus that was at the time otherwise rather drab.
2. The decision to make information technology the path to excellence reflected the fact that the institution was relatively young and had relatively weak print collections.

QUESTION 7: Campus administrators invested substantial sums in two major planning efforts for the library. Consultants conducted the first of these, done in the mid 1980s. The objective was to understand the future of information technology and what it would enable in a 15 to 20 year time frame. Integrating information technology into library information resources and services was identified as critically important. "That report from an outside group made it possible for the library to have influence that they would not otherwise have had. The campus had made the decision to focus on technology. This provided somewhat of a blueprint. And I think frankly it allowed the library to present a picture that was not entirely dependent on the campus computing center's perspectives, which were probably not as ambitious as were [those] involved in this report."

A second large study, conducted by a technology company in conjunction with the construction of the library, designed the scholar's workstation and the entire infrastructure behind it. "The story I like to tell has to do with our wiring." We spent $2 million on wiring infrastructure, which included both twisted pair and fiber optic wires. "The copper that was run was Category 3. Just before they were going to pull the wire, Category 5 became available. And it would have cost $30,000 to upgrade. And they chose not to because they believed that the fiberoptic would provide all of the growth path that they needed. And of course as it has turned out, we've almost never used the fiber and we'd kill to have Category 5 in the building. So the moral that I draw from that is sometimes you just can't pick right, and you just have to live with it."

The first consultant's study "really changed the nature of the conversation rather than making any specific recommendations. It really positioned the library to be a different thing than it would have been, in the way the whole campus thought about it, rather than the specific projections on the technology. The second . . . project developed technology, and over the ten years since the building opened, that technology has changed a great deal. But because the campus said the library's technology is important, we have a staff and an expectation around our technology expenditures which has allowed us to adapt. . . ."

The library had one-time funds to pay for workstations, server infrastructure, etc. "We invested, again with money that I wish I had back, probably $1 million in a video distribution system, which was really cool and which we developed ourselves and which we've now disbanded."

Responding to a question about the library's ability to continue pushing the technology envelope, the interviewee said "we're not in a position to be as aggressive in terms of things that cost money to do." We have base budget support for equipment and staff, but don't have the one-time funds. "Primarily because we have the technologists in place, we're able to probably not to be at the cutting edge but closely behind it. . . . So we're not cutting edge in the sense that we're doing things that no one else is doing, but on balance we do more than almost anybody else. So in that sense, I think we're still at the forefront."

QUESTION 2: Responding to a question about the impact on student learning of the library's technology emphasis, the interviewee said "the library is the largest [computer] cluster on campus, and our gate counts have held [where others have not]. . . . We have a lot of students in our building. . . . [The student body is largely a commuter one, and] the fact that a student who lives 45 minutes away in one of the . . . [city's] suburbs doesn't have to come to the library to do reserves is a really important service. And they tend to appreciate that. It's a little hard to know how the academic resources that we've put in place have affected teaching and learning, since the Web has exploded in such a way that it's hard to sort that piece out these days. Although, if we were to go back five years, . . . we were assertive in buying electronic content and we were able to deliver it to a large number of desktops in the library. I think that clearly made a difference at that time. It's a little harder to sort out now."

The interviewee described the impact on teaching as fundamentally the fact that "we have people who can work on that issue. . . . It's really the staffing infrastructure at this point that matters more than the physical hardware and network stuff. . . . The campus understands that the fact we have 90 staff and a dozen of those are computer technology people is not an issue. . . . [It's] that broader 'changing what the library ought to be' piece. . . . So we have a lot of technologists to work on things like how do we integrate library resources with the course management system. And it's expected that that's what we do. And the building in a funny sort of way has set that expectation."

QUESTION 7 (again): The technology company project conducted many focus groups with faculty, but they were concerned primarily with systems configuration. There was little impact on the physical design of the building. "In a lot of ways, the building is a very traditional library structure. . . . They just put a lot of wire and a lot of technological capability into a structure that is largely a very traditional building."

QUESTION 6: The interviewee affirmed the importance and utility of evolution in library design practices. "The judgment that was made about the placement of our technology was based on an underlying assumption that students would need to use both the machines and the books together. . . . And of course that's not what ended up happening. . . . The books don't really need to be next to the computers. This model makes service very hard because the geography is so spread out. It's hard to have a quiet place in the building because the sound from these [computers] dissipates throughout the entire floor. . . . We very early identified this as a flaw in what we had done. . . . But we gave that advice to lots of people. . . . The notion of the information commons was developing as we were doing our building. We chose really not to do that. We distributed the technology, but I think that very quickly we came to the conclusion that the information commons was a better idea, based on our negative experience with the distribution of machines all over the building."

The building was built to be very flexible, but even so the cost of changing HVAC and stack configurations is high enough to discourage changes.

QUESTION 2: The library design provided about 40 group study spaces. But as it turns out, much of the collaborative work among students is done at the computer clusters. This generates a fair amount of noise. The group study spaces have become the place for quite study. "The way in which we conceptualized them and the way they turned out to be used is almost opposite."

The idea that students would use books and technology together also turned out to be wrong.

The library avoided having large tables, because in the old library they served a social purpose. The tables attracted groups of students that were loud and disruptive. "One of the lessons I tell people about our building is that you need to be aware of not trying to find the best solution and deploying it across your whole facility, but looking at creating diversity in the environment. People seem to want to find the right answer and apply it. . . . We would have been better to have a room that would have been the noisy place with a bunch of tables."

QUESTION 5: The primary impact of the library's vision statement was that of convincing the campus to adopt technology as the path to excellence for the library.

QUESTION 11: A teaching and learning center was placed in the library as a strategically important partnership. "When they designed the building, the notion was that it would be a place for librarians, technologists, and the media people to collaborate and provide support for faculty. And again, it didn't really ever play out that way. . . . The librarians and the computer people tried to run something for a while, but it never really worked. . . . " The center started to take off only when it was aligned administratively with the campus-wide faculty development service. "The design and conceptual things that went into the [library] design really didn't work. But the space was available . . . and so . . . the fact that it's in the library turns out to be very important. But the particulars of what the vision was turned out not to work at all. We [now] have a couple of librarians who live in that space, so the relationship is just very tight. And the proximity makes it very easy for us to be involved in course development, especially where the university is supporting . . . initiatives in distance education. [Where the university] makes some strategic investment in certain kinds of teaching, its very easy for us to make sure the library component is involved because of our proximity with the people who are making it happen."

INTERVIEW 18: DIRECTOR OF A PRINCIPAL LIBRARY UNIT

QUESTION F: The library was built because in two ABA sabbatical inspections [i.e., accreditation visits made every seven years], the law library was strongly criticized. The old library also fell notably short of the still more exacting standards of the Association of American Law Schools.

QUESTION G: [Architect's name] designed the library with no input from the library. The university wanted a beautiful space, and got it. But the entrance location is dysfunction, it has a noisy rotunda, and staff offices are badly located. No one at the university "wrestled with the architect" over issues of functionality.

The interviewee came to university nine years after the library opened. She had extensive involvement in law library design at another university where, she observed, concerns for functionality prevailed over the interest in "beauty."

QUESTION 7: A committee guided the design of the library. An associate dean of the law school was responsible for library planning. Library staff had some involvement in writing the building program.

In addition to physical beauty, the library plan provided space for expanding the building (since built on for other purposes), a flexible floor plan, natural light on all floors, and an abundance of study spaces and carrels—a critical need for law students. Plans also provided for extensive reading rooms and abundant table space for readers. Shelving for collection growth was provided, though in the event the shelving was not adequate for even ten years of growth.

QUESTION 4: Today the library is short of shelving space. The library owns, but does not yet use, off-site shelving, and it is possible to install more compact shelving in the library. The library has weeded a substantial number of volumes that had little value other than helping to meet the former volume-count requirements of ABA accreditation. The migration to electronic resources continues with varied success with the resources themselves, with their ease of use, and with their affordability. Reliance on electronic resources for primary materials (statutes, court cases, etc.) is now almost total, making a "huge difference" in reader behaviors and the need for shelving.

Still, the problems of shelving a growing collection persist. The move to electronic resources has not "solved" the problem. That said, future space planning will be much more concerned with space for people. It is most unlikely that the law school will have additional space for the collections. "If they're going to spend building money, we need classrooms and we need [library] faculty offices and we need group study space much more than we need collection space."

QUESTION 6. The interviewee agrees emphatically that the new library is basically traditional in its concept. Even the concern with group study space is traditional in law libraries, though curiously relatively little such space was provided in the new library.

Asked if there are opportunities for radical change in library design that are being missed, the interviewee mentioned the need to integrate better the public and technical services staff of the library; the need for space where students can talk with one another without disturbing others; food service; and wireless technology. She observed that faculty almost never come to the library anymore, depending instead on electronic resources and excellent faculty liaison services. "We don't need to accommodate them in a way that we needed to in the past." Law students "jump on the electronics in a heartbeat long before they ever go out to touch the book. But they still operate with each other, whether they're studying together, working on a project, just visiting in the course of the day, because most of them do come here first thing in the morning and do not leave until they go to dinner, and then many of them come back to study for the rest of the evening. And we have to kick people out, always, at midnight. The way students interact with each other, which is what is most critical to us in the library space, isn't radically different. So I'm not sure—other than more variety of space for quiet study and talking out loud—at least at this point I can't think of something that would be especially useful to them."

QUESTION 10: The interviewee said she was told that a formal post-occupancy study of the library was done after it opened. But she has never seen it or heard what its findings were.

QUESTION K: "The library has to have the vision as it goes into the planning process, and it really has to, I would say the term is, fight hard to keep to what you need the end result to be. . . . It's really easy to get run over and let the beauty of the space outweigh the functionality of the space. And I'm here to tell you that you can absolutely have both, but you really have to work at it."

Master's Colleges and Universities I

INTERVIEW 19: LIBRARY DIRECTOR

QUESTION F: The interviewee distinguishes between institutional and library goals. The former grew out of recognition of the total inadequacy of the old library and the need for more space and more comfortable space. The institution wanted the library to become an academic centerpiece on a campus located on an old military base, where the prevailing ambience was thoroughly military.

Library goals included the introduction of information technology and the strengthening of library instruction programs as well as institutional goals. The library very much wanted to provide electronic information resources in close association with expert library assistance.

QUESTION G. The college has two campuses. One enrolls primarily upper-division undergraduate students (55%) and graduate students (45%)—mostly MA candidates. Most of the students (80%) commute to campus; most classes are taught at night.

QUESTION 1: Electronic classrooms were critically important to the library, if not to the institution, during the planning phase. The institution looked to the library for leadership on this matter.

QUESTION 6: There was no intention to design a library of radically different appearance; rather, the design aimed at significant differences in the delivery of library services. Major changes included:
- Network connections at 92% of the seats. These are heavily used. When first measured, 22% of the students were using laptops in the library, and that figure has steadily risen each semester. The interviewee has been particularly struck by group use of laptops.
- A variety of seating options: Windsor chairs, two-position seating, lounge seating, carrels.
- A cyber café.

The interviewee believes that significant, conservative attitudes among some faculty work against radical program innovation and radical changes in library space design. But "if we infuse technology into library space, we affect perceptions of people in the environment. We position the library in a way that it can be seen as a leader in the intelligent adoption of technology for use within the community."

There are an exhibit gallery, classrooms, and a cybercafé in the new building, not administered by the library. The interviewee refers to this in saying that librarians should not think solely in terms of stand-alone library buildings. Creative partnerships offer the opportunity to welcome students in new ways.

QUESTION 11: The interviewee actively sought the inclusion of a state information center in the library part of the building. Partly this was an effort to create a niche identity for the building project and make it more attractive for state funding. Other non-library operations in the building are two seminar rooms, two electronic classrooms (administered by information technology), a slide library (only recently incorporated into the library), as well as the gallery and reception space and the cyber café.

The state information center gets more use than the library's special collections and is a powerful draw for students. The library welcomes it as an information function (rather than as a technology function). There is, however, relatively little interaction between the center and library staffs.

QUESTION 12: "In terms of academic benefits, timely and convenient access and the quality of the access—the enabling that is done with the technology, with the comfortable environment, with the

comfortable furniture—has an impact here that also creates a greater sense of academic purpose. This has been quite fascinating. The students appear to be more serious when they're in there [i.e., the library]. There is maybe a sense that they have a first rate facility and they want to take advantage of it. There's also been a kind of psychological uplift for the academic community as a result of this [project]. . . . As a result of having the old . . . [military] buildings, there has been a military ambience to the campus. Since that time [i.e., the takeover of the base by the college] there have been efforts to soften it a little bit. . . . The library has just really been the lynchpin to upgrading the physical character of the campus. And I think it gives people a greater sense of pride and also a greater sense that they work in an academic institution. There really has been a pretty significant psychological impact."

QUESTION 13: Access to information technology was central to the design intention of the new library.

QUESTION 7: The library staff did an environmental scan as part of its planning, but no formal needs assessments or assessments of modes of student learning and faculty teaching. The interviewee was aware of the importance of group study.

Much of the early planning effort focused on the political process of securing state funding for the new library. When funding was secured, the interviewee had very little time to develop a program statement and could not get his library committee to engage with space design. A specially charged subcommittee did review his program and endorse it.

It was only when formal architectural planning was under way that the interviewee had a "real team" of campus physical plant officers, information technology and library staff, and faculty and students with which to confer. The student representatives were largely inactive; both faculty members were actively involved. The planning process included two open forums for faculty and students that were not notably productive. "It was not the process as you would ideally map it out, but the end result works. It's very well regarded by the community. It's kind of the centerpiece of the college. . . . The library was really the first major improvement that got us away from the old military ambience of the place and made us look more like a college campus. . . . That is the way in which we . . . helped the campus, give it a feeling of accomplishment, less a feeling of inferiority, and really help it move ahead academically. It does create a sense of serious academic purpose if you have a real library, and we do! . . . The satisfaction with the new library has been extremely high. . . . Having the facility is much more than icing on the cake; I think it's several layers of the cake."

INTERVIEW 20: LIBRARY DIRECTOR

QUESTION F: The library had been deemed inadequate by accreditation teams visiting the university at two different times. The institution was under the gun and had to act quickly. Some efforts dating from the first accreditation review had failed to produce results. A new president was appointed, and she made the construction of a new library a high priority.

QUESTION G: The old library was much underutilized. Students went elsewhere to study; it had one inadequate classroom. The new building was meant to accommodate significant enrollment growth and the growth of the library collections. It was meant to be quiet, spatially less confusing, and to provide adequate space for staff.

QUESTION 4: The new building was designed to allow a doubling of the collection, and further expansion of the building is possible at one of its ends. The use of electronic resources will slow the need for additional shelving. There is no existing need for more shelving, and shelving is a problem that the

interviewee is not thinking about. Given the demand for new space elsewhere on campus, it is hard to imagine that any library space needs will be heeded for the next 50 years. The interviewee believes the library will have to live within its existing space for the foreseeable future, even as it takes on new responsibilities (as, for instance, the absorption of campus audiovisual operations).

QUESTION 7: Planning for the new library was distinctive in that it was done in very little time. The president secured a gift of $1 million as seed money and went to the legislature for the rest of the project. When state funds were approved, the interviewee had two months—in the summer—to plan the new facility.

He would have like to do the planning in the "right way" (i.e., with needs assessments, consultation with readers, focus groups, etc.), but had to depend instead on some earlier surveys of student opinion (about library services, resources, and the building) conducted at the library and student center. The library had also, for some time, tracked opinions expressed in its suggestion box. The library staff was observant about library use and well informed about the campus community.

The interviewee and his staff did the planning, with assistance from an outside consultant.

The interviewee had led the campus-wide accreditation self-study. "I had a lot of information about teaching practices on campus—there was a lot of assessment going on in general for the campus—so the timing was pretty good, actually. And my experience with that process helped as well. Another librarian . . . was responsible for the library part of the report, so she was heavily involved in this too. The two of us being involved in the development of that report helped inform the planning process for the library. . . . But then we got a lot out of it, as I said. I think that helped me feel more confident that we were tying our planning objectives to campus objectives. . . . One of the things was teaching practices—assessments of the various disciplines on campus, what they were saying about themselves, how they were developing degree programs, changes in the way they designed the curriculum and the requirements for students' assignments. That's kind of where we got some of the ammunition for providing more group study rooms, was our sense that faculty were giving more assignments that required that students work together."

The interviewee specified conference and meeting rooms as another response to what he learned from the accreditation self-study. "We rarely got any faculty coming into the old facility. . . . So when we were designing this building, we were also trying to meet a definite, expressed campus need for better meeting facilities."

Use of the building, as measured by gate counts, has tripled.

QUESTION 8: There were no significant disagreements about planning objectives. The need was so great that people were glad to get any of them addressed. There were few complaints about the short planning period and the few opportunities for consultation. The project benefited from a great deal of good will on campus.

QUESTION 10: In the planning, neither the library nor academic computing thought of the other as a strategic partner. Then the library focused on audiovisual services as such a partner, but the building finally did not have enough room to bring them into the library. The accreditation study suggested the need for closer cooperation between the library and academic computing, and the library now regards academic computing as a strategic partner. The library and academic computing expect to "behave like one team" in the reorganization of audiovisual functions on campus.

After the new building opened, the campus began a modest center for teaching and learning. The library regards this center as a strategically important partner and houses the director in its building. The library would like to see center activities expand within the library, but space constraints will make that difficult.

As regards student social space, the new building provides a student lounge with TVs and snack machines. It is open around the clock.

Students were much concerned with unmanaged noise in the library and are very glad to have study rooms with doors they can close.

QUESTION 6: The interviewee agreed emphatically that this new building was designed to deliver traditional library values. "We built a very traditional building. We sought to provide comfort, quiet, light . . . and convenience—and that's what was missing in the old building. A lack of comfort, I think, if I could sum it up in one word. It just wasn't attractive, it didn't feel good to come in; people used to tell us they were doing fine until they got an assignment that made them come into the library. . . . Our design has worked magnificently. And we get compliments constantly about the way the building feels when they come in. [So we] satisfied some basic human need for comfortable space to sit, to focus and concentrate. . . . So I think in that regard we've hit upon a combination of things that does indeed meet the needs of students and faculty. I also see faculty who actually come . . . [to] hide out over here. Never did that before! So we're meeting a need for things other than the computers and wireless networks and group study and conference rooms."

Asked whether there are any opportunities for radical change in library design, the interviewee pointed to wireless networking as a technology they missed in the late 90s but have since installed. The interviewee champions the traditional library. "Libraries need to be destinations, actual physical spaces. Our experience seems to show us that. If it's comfortable and convenient, feels good to be in there and meets their needs, they will come. They still need a space like that . . . to get away from noise. . . . There seems like there is some sort of basic human need, still, for the library as a space to go to, as a destination."

QUESTION K: The interviewee thinks his previous employment has made him especially attentive to client needs and was important in building his confidence for planning the new building. Neither he nor his staff had had any experience in building new libraries and were nervous about the task. Working with an attentive architect was helpful. "Afterwards . . . we felt fairly confident that we had zeroed in on what the campus needed, basically. I did not feel as guilty about not doing formal studies and having the time to come up with a plan that was based on surveys and years of thought."

"Some of this was instinct and our years in the profession—what we had observed. Trying to tap into that and hoping that was accurate. Not a very good thing to say you're relied on, when you're spending a lot of money, especially taxpayers' money. We had a confidence level that sustained us throughout this thing. I think getting a consultant in here helped us shape this thing. We did write a lengthy program statement, and I felt the underpinning of that program statement made up for some of the lack of some other processes, perhaps."

INTERVIEW 21: LIBRARY DIRECTOR

QUESTION F: The project had three primary goals:
- More space. Shelving was 98% full and additional shelving was displacing students.
- Better-quality space. The old buildings had grown to be in very bad condition.
- Space friendly to technology.

QUESTION G: A master plan was done for the entire campus. Each building was assessed for its overall physical condition and for its ability to play its assigned educational role. The library ranked at the bottom of this master plan assessment and was made the first major project in campus renovations by the president. That decision was followed by a long political process within the state system and in the legislature and governor's office.

The interviewee reported no significant shift in project priorities over the nine-year period during which she was working on the building. She is deeply satisfied with the success of the project.

QUESTION 2: "Students should be treated as whole people. And they shouldn't be relegated to one particular type of seating. They're grown ups. They have different learning and study styles, just as we as faculty have different approaches to our study and research. So I was determined that we were going to build in a variety of different seating and studying environments—that we would have small intimate reading rooms, large double-height reading rooms, reading rooms with brilliant views of the campus, reading rooms with nothing to distract one while he or she was studying, single carrels for people who wanted real privacy, larger tables for people who wanted to work together, group study rooms for people who needed quiet, casual lounge seating, but lounge seating that it would be almost impossible to sleep in, just everything so that depending on what a student's mood was, he or she could find the right kind of study space."

The interviewee said she depended on long observation of student study behaviors (including her observations as a teacher) to guide decisions about the variety of spaces to be provided. As regards the mix of such spaces, she was guided by advice from the architect that programmed the building and the experience of other librarians across the country.

QUESTION 7: The project had an advisory panel of faculty, students, and administrators. Faculty and students were "so thrilled" that a new library was being built that they were not as demanding on specific matters as they might have been in other circumstances. Students identified the need for two people to work together at a computer. Faculty were instrumental in advising on the fit out of multimedia classrooms.

The interviewee conducted no formal assessments as part of the project planning. She was looking more for "experiential" guidance.

After the initial deliberations of the advisory panel, a project manager that the library hired, the architects, and library staff managed the project. The architects reported that they had rarely seen a situation where librarians had so much input on a project. The then president had great confidence in the library's ability to get good results.

QUESTION 4: The interviewee thinks it unlikely that shelving needs will again be the primary catalyst for library projects at her college. Thanks to system-wide space standards, the recent project provides abundant space for students. Increasing dependence on electronic journals and the weeding of back files of journals will leave plenty of growth space for monographs.

QUESTION 6: "The building is so unbelievably gorgeous, and so majestic; it's so grand. . . . If you came to our building, I'm sure you would be in awe. It is like what a grand, wonderful library should be. . . . It has an impact on what people do when they're in the building, how they feel . . . . It's a very important statement for the college to make. It's the most democratic building on campus, and if it's grand and awe-inspiring and at the same time warm, comfortable, and inviting, it makes a tremendous statement about how the college feels about learning and teaching. Our president has said that, for [the college], the library is an article of faith."

The interviewee agreed with the question 6 hypothesis. She said her library is both the physical and intellectual crossroads of the campus, serving as a kind of cultural center for the campus by hosting lectures, entertainment, etc. The library project was not radical in its planning, but it meets campus needs beautifully.

The interviewee emphasized that designing for a flexible use of space makes her confident the library will be able to respond to changing operational needs over the next 50 years. By implication, flexibility is a reasonable substitute for radical vision in library space planning.

QUESTION K. The interviewee mentioned the shakedown period required by sophisticated HVAC controls. She said she has been surprised at how often people want to use the library for sometimes quite large social and academic gatherings. Planners should not underestimate how hungry people often are for meeting space on campus.

The interviewee described a café immediately adjacent to the library that provides 24-hour food service, casual study space, computers, and group study facilities. "It and the new library together really serve the campus very, very well."

"One faculty member said to me . . . this is the best thing to happen to students on our campus in 30 years. And I think that's absolutely true."

INTERVIEW 22: LIBRARY DIRECTOR

QUESTION F: The interviewee reports that library staff and university administrators alike wanted a new library building that would be closely integrated into both the academic and social life of the campus. The university is a largely residential institution of 5,000 students and focuses heavily on the liberal arts.

QUESTION G: The interviewee described a successful "open" and "bottom up" planning process for the library, in which the views of students, faculty, and community members about what they wanted in the new library were sought and attended to closely. These views covered a wide spectrum of issues, from the building site to baby changing facilities in the men's rest rooms.

QUESTION 7: The library wanted to take a proactive role in the life of the community. Doing this involved, for instance, building a conference room (for poetry readings, musical performances, art demonstrations) and space for food and drinks. Community organizations are actively involved in programming for the conference room, which sometimes hosts teleconferences; all events are open to the public. The library even participates in the town's Fourth of July parade.

Students asked for "research study rooms" designed for two-person occupancy, seminar rooms, group study rooms for 6 to 7 persons, and research carrels.

Faculty observed that while students had labs to advance their learning, they themselves had no such place for learning. As a result, the library included a center for introducing technology into teaching, a demonstration classroom, and a center for teaching excellence.

Visits to other libraries, with the architect and facilities staff, were also important to the planning process, especially as regards library operations and workflows.

QUESTION 6: The interviewee felt that what marks her project as innovative was the concern with

faculty development. She also reported significant leadership and success in working information literacy into the core competencies taught and learned at the university. A three-credit hour freshman seminar focuses on these competencies, and the library is responsible for delivering one of the three credit hours of instruction. It was not clear what expression in library space this emphasis on information literacy has.

QUESTION 10: The interviewee said that while the library did not conduct a formal post-occupancy assessment of the building, it did identify a number of things it wanted to learn regarding student use of the library's computers. They found that the upperclassmen used the library's technology in ways consonant with the library's intentions more often than freshmen did.

The library's gate count, circulation, and other statistics have risen significantly, counter to the national trend.

QUESTION 4: Additional shelving was urgently needed in the new building. In the future, the library expects collection growth to moderate as e-books take hold. The library also looks to a remote shelving facility, to be developed collaboratively by state institutions, as a means of dealing with collection growth.

The library self-consciously reserved a plot of land immediately adjacent to the new library for expansion.

Master's Colleges and Universities II

INTERVIEW 23: LIBRARY DIRECTOR AND TWO ASSOCIATES

QUESTION F: The library staff has recently been reorganized to support an increasing emphasis on library instruction, including collaborative work with faculty on integrating information literacy competency into academic courses. The library wants to become a center for teaching and learning, and toward that end freed some space previously used to shelve bound journals for the creation of an electronic classroom.

Long term, the library wants to be both the physical and intellectual hub of the campus.

QUESTION 7: A committee of librarians, faculty, information technology staff, and staff from the center for teaching, learning, and technology designed the classroom. There was a great deal of committee discussion about effective teaching and learning styles. The room has had "tremendous usage" and there have been no complaints about its design failing to support good pedagogy. Library staff cannot speak for the teaching practices of academic faculty, but librarians have turned away from lectures and increasingly relied on collaborative, active, and hands-on learning styles. The classroom works well for such activities.

There was no student involvement in planning for the classroom. Planners depended on their own teaching experience for their understanding of how students learn.

Library staff visited the electronic classrooms at other institutions.

QUESTION 8: The president has an incentive money program, and the library competed with three other academic units to build an electronic classroom. The library prevailed because it could promise greater access due to its long hours of operation and because no academic program would claim exclusive "ownership" of the space.

The electronic classroom is a first effort to create learning and teaching space in the library. More

classrooms are needed, and the library wants to develop an information commons and a space for collaborative reference work as well. This development will be done incrementally. The library can free some additional space (by removing duplicate bound serials and by using off-campus shelving), but eventually new space will have to be added to the library.

The library believes its instructional activities have a positive impact on student recruitment and retention, but it has not yet developed this argument with the university administration.

QUESTION 11: Some library reading space was given up when the center for teaching, learning, and technology was moved into the building. Now, the library sees the center as a strategic partner and is very glad to have it in the library. The center for academic excellence (student advising and tutoring) is also in the building, but the library has not yet regarded it as a strategic partner.

QUESTION K: The interviewee emphasized competition with other units scheduling library sessions in the electronic classroom. More such classrooms are needed, and the library should have priority claim on one of them.

The interviewee mentioned his success in shifting "back room" staff to new duties on the "front line" of library services. He believes, however, that additional staff will be needed to meet student and faculty needs for personalized assistance and technical support.

INTERVIEW 24: LIBRARY DIRECTOR

QUESTION F: The objectives for the project were to provide more space for collection growth, readers (including a greater variety of reader spaces), new technologies, and staff.

QUESTION 7: The formal planning process began with the appointment of a 40-person task force charged to describe "the academic future of the library." Most task force members were faculty; library staff and students also served on it. The focus was on collection matters, traditional library services, and library technology as it stood at the time (online catalog, etc.). The interviewee described the task force as a highly collaborative, widely involving one. The project developed directly from the work of this task force; most of the things sought by the task force were included in the building project.

The university next hired a library consultant to write a building program. A second group was appointed to respond to and monitor the work of the consultant. The last planning step was to hire an architect.

There was no formal assessment of modes of student learning. Librarians had observed the heavy use of the old group study rooms and were conscious of increased reliance on collaborative learning (e.g., the curricular emphasis on team work in the business school). Late in the process, focus groups of students were convened to comment on details of the plans and to indicate what they wanted and didn't want. There were many "show and tell" sessions at this stage in the planning.

The assessment of faculty needs was somewhat more systematic. Faculty were surveyed to learn what they were actually doing with multimedia instruction. The library got good feedback from this survey, and then asked two faculty to work very closely with the architect in brainstorming sessions to design the electronic classrooms. The classrooms were well designed and are heavily used; they have become a model for other electronic classrooms on campus.

The library's own instructional classroom was designed to encourage group work. The interviewee had an opportunity, after having feedback on the effectiveness of the classroom, to redesign it in different space. "The second time round we were able to do much better in terms of developing a room that was much more supportive of student learning objectives and faculty use of technology."

Asked if she would pursue a more formal assessment of student learning behaviors now, the interviewee answered: "Oh absolutely. I think that's very, very important. Now we certainly tend to look much more carefully at those kinds of things and to think in terms of strategic goals of the university and our [i.e., the library's] strategic goals and what's going on in the classroom and how faculty teach and students learn."

"Our planning process for its time was very open and broad-based and was really effective. But we would certainly do some things differently if we were doing it now."
- The interviewee would try to make the later phases of the planning as richly collaborative as the first phase and the design of the electronic classrooms were. In the later phases, we "were developing plans and sort of putting them out there and letting people react to them as opposed to bringing people into the planning process from just the ground up."
- "Libraries are encompassing so many more things than they used to—like multimedia classrooms and cafés and just all kinds of things that no one expected to see in a library 10 or 15 or 20 years ago—and so taking a broad look at campus needs. I would want to do that" not least because deficiencies of the student center make the library de facto an important social center on campus. "What should that mean for a library? What is the appropriate role for a library in that kind of scenario, not to take the place of the student center, but to become something different from what libraries have been in the past? Obviously we're all in a different place now. What should that mean, what could that mean?"
- "There are just so many different ways that people can meet needs, and it really calls for thinking outside the box." The interviewee exemplified this by describing the evolving food and beverage service at the library and the evolving relationship with information technology staff.

QUESTION 8: The project initially came in over budget. This required the elimination of about 20,000 square feet in the plans, which the library took as an opportunity to rethink its organization and operations. The library was recreating "the strengths but also the weaknesses and the inefficiencies of our old library." The library entirely rethought both its public and technical services and developed a team-based organization. "Planning a library takes a lot of sensitivity to everyone's needs on campus. But it also takes a lot of courage, because sometimes you just really have to say, 'we can't do things; this is an opportunity to develop a new vision and do things in a way that's different from the way we've always done them. . . .' We really took a step back . . . and really consolidated and came up with a much better plan. And at the same time we began to recreate our organization. As long as you're changing things, I mean heck why not change everything? . . . We just turned everything upside down. It was challenging, exciting, and sometimes rough, but in the long run we've been a lot better for it. . . . A building planning process can really be a catalyst for so much more than just the building."

QUESTION 2. The interviewee described the variety of student spaces as follows: group study spaces, two multimedia classrooms, four seminar rooms (used in a variety of ways), three 24-hour microcomputer labs, a library instruction classroom, carrels (some oversized to permit students to spread out their material and to have more than one student at the carrel), lounge chairs, and lots of nooks and crannies everywhere. Students move the furniture around a lot.

Responding to what she would do now to make the building more attractive to students, the interviewee said she would be more thoughtful about the presentation of food service, have more (and better) lounge chairs, and soften the sterile quality of the many white walls by bringing in more artwork—especially that by students and faculty.

QUESTION 11: The library always thought of the presence of academic computing personnel in the library as a strategically important partnership. The computing staff have been less clearly focused on partnership issues, and in fact the relationship has had its ups and downs, mostly dependent on the personality of the leadership of information technology services. Administrators elsewhere on campus originally did not understand the value of the partnership, or even thought the presence of information technology staff in the library could be a distraction from library services.

QUESTION 4: The interviewee expects the library will need to add shelving eventually, but given uneven collection budgets and the impact of electronic materials, it is hard to predict when that will be. The building can structurally accommodate two additional floors. A long-term goal is to bring the music library into the main library building.

Baccalaureate Colleges—Liberal Arts

INTERVIEW 25: LIBRARY DIRECTOR
(for the comments of the dean of this college, see interview 6)

QUESTION F. Three things were paramount in the renovation of the library
1. Providing shelving for the collections.
2. Providing reader accommodations, given a dramatic reduction in seating occasioned by the need to accommodate a growing collection. A major effort was made to improve both the quality and the quantity of student study spaces.
3. Providing an HVAC system adequate to ensure the preservation of the library collections, especially during hot summers. The interviewee had to fight hard to achieve this goal.

The library occupies a prime, pivotal site on campus. It was important to the college that the library be renovated and expanded without moving from its existing location.

QUESTION 7: Planning for renovations began when the interviewee toured a number of college libraries. Two different consultants had advised that the library could be successfully renovated. The college appointed a new president, and he set up task forces to consider key directions for the institution. When the task force concerned with facilities asked whether colleges would need libraries in the future, given the emerging power of digital information resources, they answered the question by saying that at their institution, a residential college with a traditional curriculum, students "needed to have a good place to study as well as good information resources. The library as a place is very basic to this college. But we didn't have good places to study. . . ."

There was no other place on campus for students to study, except the dormitories, which did not work well. Students were sitting on hallway floors and in vacant classrooms. They "wanted to come together in some other place, and in fact they do come together now. This is both a very social and a very studious library. . . . And it's been that way since we opened up." There was substantial demand for 24-hour operation, even of the unrenovated library, at an institution where the curriculum strongly emphasizes reading and textual study.

While the need for study space was very clear, there was no formal assessment of student learning behaviors to guide the design of study space. The interviewee had a sample carrel built and invited students to comment on it. Otherwise, a committee charged with library renovation visited nine libraries and returned convinced of the importance of compact shelving and of a variety of study spaces for students. The interviewee visited other libraries with a new dean and treasurer. "When people ask me

about building, I say 'Go look at some libraries, because you're going to see bad things—which is very useful—and you're going to see good things. It's important and it gets the juices flowing about the idea of building and changing space to see what's positive.'"

QUESTION 2: Renovations provided the following student study spaces:
- A large reading room, with fixed tables and a fireplace, which is heavily used by students.
- Individual carrels.
- Reading tables next to a curtain wall on two floors that overlooks the quadrangle. "So there's some sense of community that you have inside or outside the building."
- Lots of soft seating throughout the library.
- Group study spaces. These are always in use and more such spaces would be welcome.

QUESTION 8: Early on, the interviewee spent a relatively modest sum on the redesign of the reference desk area. The redesigned space and its services were an immediate success and students loved it. That convinced the administration of the value of a comprehensive library renovation. "The treasurer said to me, 'that's the best $250,000 we ever spent.' They could see that if we did something serious to the building, we were going to have a wonderful, wonderful opportunity to enhance the college's physical facilities and in a place that's important to students."

The interviewee believes that the only concern the accreditation team had about the library related to renovations. When team members were told renovation would be done, their report had only commendations and no recommendations regarding the library. The interviewee believes this helped build commitment to the project. This is one of the things that "pushed it over."

QUESTION 6: The interviewee agrees with the question 6 hypothesis. Stressing the traditional uses of the library, he affirms that "people enjoy coming to the library. . . . They like the atmosphere. I think there's a certain expectation, at least at liberal arts colleges, that coming to the library to find information, to study that information, compare that information, is a normal and right thing to do. . . . I have a lot of art in the building, much of it student art. But it humanizes the space and makes it a place that people want to come [to]. And I'm doing that for a reason: to help teach them that . . . you come and consult."

"Libraries are [often] very gloomy; they're not very nice places. They're not attractive. . . . Why shouldn't students have decent light and a comfortable chair and a clean environment and room to spread out their materials so they can work? And also to be able to see their friends when they're there? You know, this is their community now. They've left home; this is their world. And so I think that's what we're providing them: a place where they can develop and grow."

QUESTION 4: The college belongs to a consortium that maintains a large online catalog and offers rapid document delivery services. As a result, the interviewee says his library has several off-site shelving units. The consortium also plans to build an off-site shelving facility for collaborative use. This and the emergence of e-journals leave the interviewee feeling there will be little reason in the future for collections to crowd readers out of the library.

QUESTION 10: The interviewee has done no formal post-occupancy evaluation of the renovation. He is keeping careful gate counts and has observed substantial increases in use. "Students crowd in."

QUESTION K: The interviewee emphasized the importance of the food service offered at the library.

"If we keep the building clean . . ., the students treat the building much more respectfully. . . . If you give them a nice place and clearly show that it is important and take care of it, they will return that to you. They're quick; they're quick to perceive that they're being treated as a reasonable individual."

INTERVIEW 26: LIBRARY DIRECTOR

QUESTION F: The project was driven by a set of pragmatic needs (shelving for the collections, roof repair, technology retrofits) and a vision that the library should be more responsive to student learning needs. The college wanted the library to be a vital center to the campus. The original library building is quite handsome and a campus landmark. The project was meant to enhance the symbolic position of the library on campus and to have a positive impact on prospective students.

The college wanted to include the center for writing and teaching and the instructional technology and media center in the same building. These units do not report to the library and occupy quite discrete spaces in the building.

QUESTION G: A former dean had been actively lobbying for the library project for some years. Bringing the two centers into the project helped to sell it to the trustees.

The project was an early, major element in a larger plan of campus capital improvements. The library and campus center are adjacent buildings, and they were renovated at the same time and in ways explicitly meant to complement one another.

QUESTION 7: A survey launched the planning process. The survey form asked students and faculty about their interest in potential features of the new library space. Results were disappointing. Respondents focused on the need for more copying machines and library materials rather than on potential architectural features of the building.

The interviewee, the former dean, and some trustees visited a few renovated libraries at equivalent institutions.

The interviewee, the consultant, the former dean, information technology staff, and the centers' staff wrote the building program. Faculty and student representatives were provided for in this process, but neither showed any significant interest in detailed planning. They came only when the architect made presentations.

With so many projects going forward, the college employed a real estate development company to help manage the capital plan. Each individual project had its own project manager assigned from this company. The interviewee was chair of a "shepherding committee" and was not in charge of the project. Eighty percent of the design decisions were made by library and other involved staff, drawing on their own observation of faculty teaching practices. The college is small enough so that these academic support staff understand campus teaching methods and needs quite well.

The interviewee did not claim an equally strong parallel knowledge of student learning behaviors.

The principal design mistake made was in providing too many carrels in the mix of carrels, lounge seating, and tables. The carrels are underutilized. There is probably too little group study space.

QUESTION 4: The interviewee expressed uncertainty about any future need for shelving. The building now has space for perhaps 20 years of collection growth. The print periodical collection may "shrink away," given the use of electronic journals. There is space for the installation of compact shelving.

QUESTION 11: The center for writing and speaking and the educational technology center are included

in the building but not in the library's security perimeter. The centers were primarily interested in having new and better spaces. The interviewee was glad to have them in the building and trusted that good things would result from physical proximity. But neither she nor others at the time regarded the centers and the library as strategic partners. "We didn't plan for real ways in which we would develop partnerships, and that [i.e., partnership] has been slower to develop than I might have hoped, when I was being optimistic about it. . . . We're all very strapped here."

One entrance to the library was to be staffed by media center personnel, but it soon became clear the center could not tie down to a service desk staff that it needed to have out and about on campus.

QUESTION 6: The interviewee said her project fits the question 6 hypothesis. The two centers are the only things that make for a non-traditional design for the library, "but we were not melded together into a unified service point or any of those things that some people are experimenting with. Of course we were working with an existing building, too, which probably keeps your mind in the box to some degree."

"There doesn't seem to have been a paradigm shift yet [in library space design]. It seems to me that higher education in general does not seem to have paradigm shifts very often. So since other things change so slowly, it may be only natural that libraries do."

The interviewee described an interesting project at another university. A single building will offer a host of facilities and services exclusively for freshman, including some information services. The idea is to create an environment particularly to support first-year students.

QUESTION 2: The interviewee had a wide variety of student accommodations as an explicit goal in the project planning. The project provided:
- Secluded carrels and lounge furniture
- A grand reading room with large tables (the most popular study space in the library)
- An outdoor reading terrace
- A readers' gallery in space between a garden and the campus center
- Six group study spaces of various sizes
- Three additional group study spaces equipped for media presentations
- Different kinds of carrels

Students have traditionally wanted the library to be open more hours; their call for more hours is more "heartfelt" as regards the renovated library.

There are no designated "social" spaces in the library, but the computer cluster on the main floor and the writing center are in fact much used as social spaces.

QUESTION K: The desire to have the library and the campus center work together as buildings resulted in there being three entrances to the library. A trustee was particularly insistent about one of these, and is reported to have said: "Oh those librarians and their fortress mentality. They just have to get over it."

INTERVIEW 27: LIBRARY DIRECTOR

The library project had three principal goals:
- Provide more space for the college archives and special collections
- Rearrange space so that media and computing services could operate more effectively
- Correct deficiencies in the work space of individual units (e.g., interlibrary loan and circulation)

The interviewee was not at the college when the library was renovated, but existing documentation makes him confident about his answers.

QUESTION 4: "The quality of the [archives and special collections] space and the quality of the services has only generated more collections. And now it [i.e., this space] is one of the points that is most crowded."

"In a small college we get caught up in the question of centralization versus decentralization of HVAC. . . . The judgment was made in the 1980s that we would be more efficient if we were a centralized system. But we have lost control, and we have significant problems with the humidity control in the summer and [in] both summer and winter with temperature evenness when the outside temperature is fluctuating."

Shelving will continue to be an issue. "There is no sign in our projection that the number of books acquired will significantly drop. It may decline slightly. In terms of periodicals, yes there will probably be changes there. There are changes there. We are trying to control the growth of the collections by the purchase of JSTOR and the disposal of the print volumes that that represents. There are plans in . . . [the state] for a remote storage facility that would be collaboratively used, and we would depend on that for little-used materials. And we will install more compact shelving. Between those three things and maybe some judicious weeding, we will try to keep our periodical collection within the bounds of the current space. But that is going to be kind of hard."

In response to a question about what will motivate the next major investment in library space, the interviewee said: "What would prompt an expenditure is more likely to be providing appropriate spaces for technology. The staff in computing services has grown. We have nice group study rooms in the library, but they are not designed to bring technology into the center of that group study . . . or allow the students to practice multimedia presentations. . . . And probably one other thing that may drive it [i.e., future investment] will be to incorporate the campus's academic support service within the building."

QUESTION 6: The interviewee agreed with the premise advanced in question 6, except for the last two or three years, where he sees significant change. What he sees in recent years is a shift to allocate proportionately less space to collections and more space to diverse study spaces, social spaces, and technologically capable spaces. These changes are driven by (a) information technology (b) changes in the delivery of reference service—more reference service is now being offered, it is more personalized, and it is electronically distributed—and (c) the incorporation into the library of functions not previously included in libraries.

Library space planning is properly evolutionary, not subject to radical redirection. "Facilities are very expensive. It's hard to figure out how to experiment. In the [unintelligible word] sense, we're going to be fairly conservative about that. At least in the college library, what you're going to do will be in response to what you think is happening in the curriculum and the way students are going to use information resources in the next five to ten to fifteen years—whatever your planning horizon is. That's about as far as you're going to go. Those changes in curriculum and so forth are fairly conservative, fairly slow to happen."

QUESTION 7: The interviewee agreed there was little formal needs assessment or consultation with constituencies in the renovation project. He affirmed that library staff stay in close contact with faculty and students and depend on the daily accumulation of experience to guide thinking about space planning.

The interviewee agreed we have not done systematic studies of learning and teaching behaviors. How

might that be connected to library space design, especially as regards teaching behaviors? He emphasized the importance of group study areas and the diversity of individual study spaces responding to individual differences in learning styles.

QUESTION 11: Renovation planning responded pragmatically to earlier decisions about the location of media and computing services and was not driven by a sense of a strategically important alliance of these services with the library. That changed as the library director became administratively responsible for these units.

INTERVIEW 28: LIBRARY DIRECTOR AND TWO ASSOCIATES

The project being reported on was the third phase of what may be a five-phase renovation of the library. The driving objective for all of the renovations has been to keep what is good and to improve on it rather than to effect radical change. The renovations achieve a "shifting and burnishing" of library services. The library, while a handsome building, had grown shabby over time and was not an attractive place to come to. The renovations aim to change the affective character of library space.

Sometime in the 1990s, the library and computing services were merged under the interviewee's leadership. "In some ways, the phased approach has really allowed us to mature as an organization, and I think a lot of the decisions that we have made are better decisions because we have had more time together as a merged organization. And some of the changes we have put in place probably couldn't have occurred five years ago. . . . It is very gratifying to see how the organizational vision is captured within the space, and really allowing [library and computer] people to come together through the work and now through living side by side."

QUESTION F: The project had some specific objectives:
• To provide the archives with a reading room.
• To provide special collections a seminar room, which has become heavily used for teaching.
• To create a conservation facility to accommodate expanded treatments aimed at keeping the circulating collection in good condition for readers. The need for such treatments became evident in a condition survey the library did, revealing that a high percentage of the collection was deteriorating. The library has an active program in the book arts, which offers experience with typesetting and hand printing. The conservation facility is an integral part of this program.
• To provide upgraded HVAC and fire protection for the floor.
• To provide six small study (and technically capable) rooms that accommodate up to two persons.

QUESTION 7: "We didn't do formal surveys. Given the size of [the college], . . . there's an awful lot of comfortable interaction—library with students, library with faculty, several librarians are on the faculty council. [There has been] on campus . . . a very comfortable respect by faculty and students for the library. I think we felt the communication routes were in place, that a formal survey wouldn't be the best way to hear what people wanted. All along there's very active involvement with and keeping up with not only what the curriculum is now but where it's going. I think there's a very good sense of where the faculty wants to go as well as how students are doing their work. So it made more sense to us not to be formal but to take advantage of the communication routes that we had. And also to make sure that we didn't hear just what we wanted to hear. We didn't want just to talk with our friends, who would try to make us feel good."

"In the case of students, it was primarily those who worked for us. You might say they were biased. And of course they are. But they can also speak with us with some understanding of what we can possibly

do for them. And some of the most valuable information I got was from our student employees. And the thing I remember most was what kind of furniture they want. . . ."

The need to move parts of the collection to off-site shelving was a significant factor in space planning and required a substantial consultative effort with faculty. Staff started with faculty who were "friends" who "would be open with us and not working solely on their own agendas," but then moved to broader discussion groups and consultation with individual departments and faculty members. "We heard it all. And of course we heard it a lot from some who were most anxious about that particular decision."

Emeritus faculty asserted a wish for carrel space in the library as a way of keeping in touch with the life of the college and their academic interests. Such carrels were provided but have in fact not been used by emeritus faculty.

QUESTION 8: Lead gifts for the library project went a long way toward establishing the priority for the project among other college projects.

Coincident with the renovations, the library undertook significant staff reorganization. This activity expressed itself in a vision statement for library services, through which library staff took responsibility for making the new organization work well. The new mission/vision statement was "just a perfect staff preparation for renovation."

QUESTION 6: The recently completed renovations aimed at enhancing largely traditional library operations, confirming the hypothesis about library space design posed in question 6. But the renovation work now under way, focusing especially on the library's reference service, is much more radical in its view of the changes needed in library operations.

"We are changing with this renovation from an old fashioned library where the client comes in and consults with the librarian or consults with a computer to get some information and then goes off to do whatever they're going to do. What we are planning for and implementing right now is space that supports a student who comes in and wants to start her research in the reference area. So she sits down at a spacious table with a computer. She spreads herself out and she goes to work. She does her work. She starts her writing. She talks with a reference librarian and so on. So she's there for the duration. . . . We will have many large tables with regular computers that we provide. . . . These tables are all in sight line of the reference desk, so if reference staff see that someone needs help they become assertive. If the student or faculty member needs help, they can see that help is right there. Also in this view is the computing help desk and something else that is actually radical for us. Just a few steps away is a very large reading room. And this really defines the change too. Before the renovation it had been stack area. . . . After the renovation, . . . this area is becoming a large reading room which is going to have vending machines with it so that students can go in and relax a little bit, can eat, can do their work, and at the other end of the room they have newspapers and current periodicals. So while the standard resources are still here, the way we allot the space and place our service points has evolved."

"We had a new service model. We're not combining desks, but we really wanted adjacencies strengthened. . . . [There is a lot more] interaction between what is going on at our reference desk, what is going on at access services . . . . We talk about it as our kitchen design with our refrigerator and stove and sink . . . all within a few paces of each other. . . . That is changing the way folks are seeing this service floor. And I think the . . . technology and media center . . . helps to kind of reinvent what we were doing here in the library. It is a very high-end media facility, but combined with our course reserves operations. We have a number of project rooms that allow for production of new instructional applications and for students engaged in multimedia projects. . . . [The library and information services are a merged organization.] It was a way to capture within our facility design the nature of our organizational design."

There are statements in the vision statement that reflect choices made in space design. "For instance, we welcome the opportunities presented by technology but know that technology is not a substitute for personal service. So we're not just clumping computers together in a lab somewhere. But it's a self-service lab. It's very much interspersed in our service areas. . . . And certainly in the . . . technology and media center, the service point is the central point. . . . We have a ring of staff, basically, around that facility so that you are readily seeing the people who are going to be providing the service. And in fact part of the current renovation was to open up, using a partial glass wall, what was the traditional technical services area within the library, in effect to say, 'Here are all these people who are providing services to you. It's not just a machine behind these walls.'"

QUESTION 2: Student study needs were met with tables and chairs, but the preferences students expressed for furniture were attended to closely. This produced a mix of lounge and firm seating. Elsewhere, student study needs have driven the decision to convert an alcove into a joint staff/student conference room where, after the workday, students can practice their presentations using appropriate equipment supplied in the room. Class presentations have become central to teaching and learning at the college. It is not clear how heavily students will use this room. "We will wait and see how they will want to use it."

"And the other thing [students recommended] was something I don't think anyone had thought of before. This building is blessed with two atriums, and the renovation has really polished those. . . . Students said it would great to have a [30' to 40'] counter right there [along the length of the atrium]. And it absolutely is. It is used for anything they want to use it for. It's dropped and powered. . . . What happens is that at the end of the term practically every seat is full. Early in the term people scatter themselves around. . . . It's been a nice expansion space and always well used."

QUESTION 4: Shelving the collections has definitely not been the most important motivation for library renovations at the college. The delivery of services has been much more important.

"Probably back . . . when we did the master plan, one of the components we were trying to get at was what are we going to do with all of these books. We're running out of space. . . . At some point, . . .we said hold it, that's not the only reason for people to come to this building. What is it that we really want them to be coming for? It made us alter our thinking to say they are coming here because of the staff expertise we can provide, because of the services and the support we can provide in relationship to their learning and their teaching activities. The collections are important, but that is really secondary to the services we are offering."

"Overall, through these renovations, we're actually reducing the amount of collection space [in the building]. It looks as if we are quite comfortable in terms of collection growth now . . . by sending off-site quite a few things."

INTERVIEW 29: LIBRARY DIRECTOR

QUESTION F. The interviewee identified five objectives for his renovation project:
1. To get two separate buildings to work together as fully integrated space
2. To create many different kinds of spaces that would prompt the campus (especially faculty) to think of the library as a teaching and learning space
3. To "deal with technology" by getting thoroughly wired
4. To deal with growth of the collections
5. To "make the library look and feel like a library and create hospitable space to work, study, and read in"

The project has been exceptionally successful, as measured by student and faculty use of the library. Library staff are swamped by requests to use library space.

QUESTION 7: The project began when the interviewee, newly arrived at the university, went to the dean to secure modest support for preliminary space planning. He recruited faculty, library staff, the head of campus facilities, and students to participate in these preliminary studies.

The interviewee recruited a member of the sociology faculty to help design a survey of student views about the library. "We tried to gather as much information as we could." The survey was comprehensive in scope, including questions about library décor, features of desirable study spaces, and a little about information technology. "I wanted to get student input right off the bat."

With this much preliminary planning, the interviewee was able to hire an architect to join the planning effort and produce "on a shoestring budget" a broad conceptual and schematic plan for renovation to be done in modules over a significant period of time.

QUESTION 8: At this point, a new president arrived at the university. He made facilities and space planning his primary agenda and readily approved a more aggressive approach to library renovations. The president's support was crucial to the success of the library project. He sent the interviewee an e-mail saying that the project "will probably cost twice as much, and let's go ahead and do it. When I got that, I said, hmmm, I don't think I've ever received an e-mail like that before."

With the president's support, the interviewee turned to the library committee to serve as a sounding board for the project and to build faculty ownership of it. The committee readily signed off on the educational features of the project and spent much of its time deliberating on less critical issues, such as carpet color. That happened because the university has a good history of supporting the library, people knew it was overdue for renovation, and a good plan was in place. The library project has been particularly successful in getting the existing building "rejuvenated and reutilized."

QUESTION 2: Asked what the interviewee meant by describing some of the renovation as producing "cultural spaces," he answered by describing events spaces, i.e., space for exhibitions, special collections, the book arts, parties celebrating the publication of faculty books, library friends lectures, and lectures sponsored by the library at commencement.

The interviewee specified the following spaces as explicitly advancing an understanding of the library as a place for teaching and learning:
• Three electronic classrooms, with workstations, projectors, smart boards, etc.
• A writing center
• A seminar room, designed in response to faculty requests, with food service but no technology capabilities
• Fourteen group study spaces, designed with lots of student input
• A 24-hour study space, thoroughly wired and designed with significant input from the donor
• A special collections laboratory for printing and the book arts. The special collections staff does a lot of collaboration with the English and fine arts faculty, making their facility "a great place to teach."

In describing these spaces, the interviewee said they were often uncertain about the demand for them and how best to equip them. He spoke of a willingness to experiment and to take risks in affirming the library as a space for teaching and learning, rather than filling the available space with shelving. "We could have filled the place up with more shelving, but instead I took the risk that I'm sort of living with at the moment of building three electronic classrooms, a seminar room, a major reading room for rare books,

and that kind of stuff, which has paid off. I mean those spaces are just getting a tremendous amount of use. . . . We also have a writing center in the library. That was part of the politics of the reconfiguration of space. We kind of made that choice because we thought there were potential collaborative possibilities with the writing center, and historically it had been in the library. . . . We also had in mind creating spaces where teaching faculty could come in and do their thing in a variety of different settings. And that's where we weren't sure. We kind of had some encouragement, but we weren't sure."

"We're finding especially with new faculty that, when we do our orientation in some of these [cultural] spaces, they love to come back. They love to bring their classes in [even when there is no specific library-related reason for teaching in the library]."

QUESTION 6: The interviewee expressed a "yes, but" kind of agreement with the hypothesis advanced in question 6. He believes that especially in college libraries, attention is newly being given to instructional space and to collaboration with faculty. "I sense there is somewhat of an opening toward instructional space and collaboration with faculty, at least at liberal arts kinds of places. But it's not a dominant theme. A lot of it depends on your institution."

Large library projects are often driven by technology and shelving issues, or by the striving for coffee house effects. "A lot of places are missing opportunities. . . . But there is beginning to be an understanding that if we don't integrate more with the curriculum and with the research mission that things are going to be complicated and difficult."

The sources of the new attention paid to educational space are not clear. There is some "understanding that we can't deal with the historic understanding of the library as a space for the collections only. Librarians are beginning to get that point. . . . The model of the library as a warehouse is somewhat problematic at this point. We have to find a different mode of doing business."

In some cases, technology drives library design for the worse—i.e., libraries are over designed for technology. The right balance between traditional library functions, technology, and the library as a place for teaching and learning will vary from campus to campus and depends significantly on campus culture. "It's really cultural issues you're trying to deal with, and get translated into the space in some reasonable way that works."

There is no formula for doing this. Success requires working with an architect "willing to ask difficult questions about assumptions about what will be used and not used" and a willingness to get a great diversity of views in the planning stages, "so that you can hear the naysayers along the way. . . . Technology was not the solution to our problem, and we really need to let the teaching mission drive the process. So we listened closely to the faculty, and we tried to listen to students. They come and go. . . . You have their attention for limited periods of time."

QUESTION 4: The interviewee has used a fifteen-year planning horizon in thinking about collection growth. He expects to reduce significantly the amount of shelving space needed for print journals by moving rapidly to online access to journals (including JSTOR). Existing back files will move to storage or compact shelving.

The book collections will continue to grow. The interviewee sees "a lot of use of our book collection in different ways, and interesting ways. . . . We're going to find space to house the book collection locally, in the library and browsable."

Consortial arrangements, requiring the development of mutual preservation and storage strategies,

and interlibrary loan will have some impact on the growth of the book collections, but the extent of that impact is uncertain.

QUESTION 10: The interviewee has done no formal post-occupancy studies of the renovation project. He has succeeded in getting about 20 questions regarding the library into the annual survey of graduating seniors. In the future, these questions will touch on library facilities. For the present, the library will this spring participate in the LibQual project, where many of the questions focus on library space issues. "We're so busy dealing with demand issues, and dealing with managing the space and people in a positive way [that we've not had time for formal assessment]. It's kind of taken our breath away as we try to keep up with what has happened."

In a follow-up message to the interviewer, the interviewee wrote: "I think that there is a strange dialectic right now (at least since the mid-90s) between libraries and technology that we in the profession have not worked through. I['m] thinking here not just of the print/electronic nexus but also [of] the notion of a library as a space for thought, reflection, study, and active learning. It is the latter practice that technology has provided an opportunity to reformulate. In planning new spaces, we should have that part of the process foremost in our minds. But it's hard. Because many on our campuses really just want us to solve the 'space problem' rather than begin the process of rethinking the role of the library in positive, proactive way."

Baccalaureate Colleges—General

INTERVIEW 30: LIBRARY DIRECTOR

QUESTION F: Project objectives were to respond to needs for shelving, student study space, library instruction, and excellent telecommunications. After the project was completed, the library moved to wireless technology, complementing the university's provision of laptop computers to all students.

QUESTION G: The university was motivated to do the project in part because of negative accreditation comments on the library.

QUESTION 7: The initial program for the project was based in considerable measure on a systematic comparison of the university and its library with other similar institutions and their libraries.

Once hired, the architect ran a number of focus groups for students, faculty, and administrators to determine what they wanted. Faculty wanted more information resources, office space in the library, and quality seating. Students wanted more information resources and a variety of study spaces. Otherwise, the interviewee felt that students—coming from small farm communities—generally lacked any frame of reference for what an academic library should or might be.

When the university required students to have laptops, the interviewee expected them to be used in carrels where power is provided. Instead, students favor using their laptops in lounge seating, stringing power cords (often awkwardly) to any available outlet.

At some point in the planning, the interviewee commissioned a formal study of the future of the book.

The university has a significant program in distance education. The library project included two distance education classrooms as a consequence.

QUESTION 4: The library project provided a great deal of shelving space for the collections. At some time that shelving will no doubt be filled. The interviewee believes the university will add a wing to the library rather than go to off-campus shelving, given the emphasis on current-use materials in the collection.

QUESTION 10: The interviewee commissioned a formal post-occupancy study, in which the views of faculty, students, and campus deans were surveyed. He was in part motivated by the wish to have data on the success of the library project for the accreditation process. The study indicated that the project "worked" as intended.

QUESTION K: The interviewee said the project included some "scholar work stations," i.e., rooms for 2–3 people equipped with high-end computers and sophisticated application software. These rooms were not heavily used and have been reallocated for archival collections.

The interviewee emphasized the importance of building as much flexibility as possible into library projects. It is all but impossible to predict how space will be used more than ten years out.

INTERVIEW 31: LIBRARY DIRECTOR

QUESTION F: The library was unusual in that its renovation was not a response to inadequate space. There was enough space, but it was not very useful space. The building looked worn; it did not comply with ADA standards; it had unpleasant carrels, poor instructional space, and terrible HVAC; library staff and the collections were poorly located; and the entrance was hostile. Prospective students told the college the library building was an admissions liability.

The project addressed these problems. But "we didn't start out with what I think is the traditional question, 'How much stuff do we have to get in this building and what kind of stuff is it?' . . . We didn't do that. We started out the planning by saying. 'What do we want to happen in this building?' And the answer to that was that we wanted to be much more proactive about promoting learning. . . . And that's what we were trying to do—both information literacy, which we consider our discipline, but also other kinds of learning—and we wanted the architecture to make it be like a think tank atmosphere, where there would be lots of exciting ideas bouncing around, and people could interact with each other and text and whatever technological stuff they might require, so that great minds could do their thing in this space."

QUESTION G: All the collections were put on the basement floor in compact shelving; the upper floors were dedicated to people. "We also wanted to say with the architecture that this building is not about stuff, it's about people." There have been no reader complaints about the need to go to the basement to get books.

QUESTION 7: "I think the programming stage is absolutely the most important and that if you don't have a vision at that point, you're certainly not going to get one as the project progresses." The interviewee did no formal assessment studies, nor did she collect statistics.

The regents brought an initial planning effort to a halt, feeling it was not sufficiently forward leaning. A subsequent planning session with an architect, a consultant, the interviewee, the college dean, a faculty member, two regents, and an information technology specialist was an immensely productive brain storming session. "It was an amazing experience. And that's when we came up with the whole notion that we have three things coming together in this building: we have learners, experts, and tools. And this is the only place where that particular combination comes [together]. Tools you can get anywhere now, and learners can be anywhere and should be anywhere. But experts are not quite so mobile—both librarian experts and classroom faculty experts. But where we all come together is right here in this library."

After this planning session, a core group began to develop these ideas, followed by informal consultation with faculty and students. "We had our student workers pull in other students and student government was involved, and had them talk to us. And they came up with some neat ideas. They said, 'You know, we need a place to practice a speech.' Never would have thought of that if we hadn't asked the students. . . . So we have some individual study rooms with mirrors in them, so then a person can practice a speech and watch him or herself."

The project was not a hard sell with the administration or the faculty. We shared a vision of what should be done. "I felt really lucky in the whole process that the administration was actually willing to go out on a limb with this building. And they were not only accepting of some different things to do but really eager to do some different things."

"We tried to find literature about the design of educational spaces. . . . I was amazed; I found next to nothing [in the literatures of architecture and education], and I thought surely school designers must think about these things, don't they? But I couldn't find anything. I was trying to find out more things about learning styles. We knew we wanted to accommodate many different kinds of learning styles here. . . . But we didn't have a lot of guidance from anything except sort of our own sense as learners and teachers of what people might need. We hoped if we provided enough different kinds of spaces, people would find ones that were convenient for them, or conducive to their own styles."

QUESTION 8: "We had just put up . . . a chapel. . . . So we had the chapel as a [college] symbol of faith, and we wanted a symbol of learning. . . . And so the library had symbolic value as a learning symbol."

QUESTION 5: The vision statement mattered a lot to library planning. It was the first thing in the program booklet, and it represented the heart and soul of the project for library staff. A number of design decisions reflected the vision statement. The interviewee and the dean of the college wrote the vision statement after the brain storming session with the architect, and then sought comments on it.

QUESTION 6: "We tried hard not to design just another academic library. Information literacy had to be the driving point behind the building. So we were trying to create a space that would be very supportive of our information literacy program, and that of course is the mission of our library. . . . I've seen an awful lot of stacks covering a lot of square footage with study spaces around the edge. We didn't do that. . . . [In including a coffee shop,] we wanted a place that would really foster interaction, particularly between students and faculty. And it's done that. . . . The driving force was different [from that of most projects]."

To foster this difference, one needs "librarians who think differently. And I'm afraid I haven't seen a lot of those. I hear a lot of librarians being concerned about our relevance in this age. . . . That's a serious concern, but we're not going to answer it by doing the same old things we've always done. But I don't see a lot of really creative thinking in the profession. I'm really sorry to say that. I'm different, of course!"

QUESTION 12: "Information literacy. It's easy. . . . Educating students is our priority. Information literacy is our foundation. Producing lifelong learners is our objective. . . . There's nothing in there [i.e., the library's mission statement] about, you know, we're just handmaidens who wait to see what somebody wants us to do and then we meekly obey. We really see information literacy as our discipline; this is what we teach here [at the college]. My colleagues and I see ourselves as educators." The interviewee regards this as "completely obvious."

QUESTION K: The list of things the interviewee would do differently is very small. She was surprised by the heavy use of one staircase that is most unattractive.