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SELECTION OF LIBRARY AUTOMATION SYSTEMS: A MANAGEMENT PERSPECTIVE

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Abstract

Selecting automated library systems is a complex and often difficult process that most library administrators will have to go through, and different libraries usually took different approaches. This study is to identify the factors that influence library administrators' decision-making process regarding library automation. The most significant attitude changes between librarians with automated systems already in their libraries and those without automation occurred in the areas of system cost and vendor selection. Administrators from libraries without automation considered the system cost to be the dominant factor, while librarians with automated systems operating in their libraries had learned from their experience and put much more emphasis on performance, and were more willing to search for the computer system that would best meet their needs.

Keywords:

Surveys—automation ; Public libraries—Connecticut ; Cooperative library systems

Introduction

In this electronic age the development of information technology affects every aspect of library services. In terms of library automation, the new advancement in telecommunication and computer technologies has already turned it into an on-going process

in which librarians keep looking for more powerful and reliable systems to improve their services. Coping with library automation systems has become an indispensable part of library administrators professional lives.

Selecting automated library systems is a complicated decision-making process that requires careful planning, comprehensive assessment and evaluation. Most library administrators will have to go through this difficult process of decision making, probably several times in their professional careers. Technology breakthrough, library staffing, national economy and local politics may all have impacts on such decision-making process. How do library administrators reach their decisions on new computer technologies in general and automation systems in specific? Will experience make any difference when librarians select automated systems? Are they all facing same problems and seeking for the same answers? The purpose of this exploratory study is to identify the factors that influence library administrators decision-making process regarding automation before and after they have been through the process. Although the survey were conducted a few years ago and focused only on public librarians, decision-making process, the findings are still valid in today's library management, and could be applied to other areas and other aspects of library information services.

Methodology

The scope of this research was all the public libraries in the state of Connecticut. For the past two decades computer technologies had divided libraries into two worlds : libraries with automated systems and libraries without automated systems. In early 1990s in Connecticut there were 195 public libraries ; half of them had installed automated systems and were offering computerized services. The remaining libraries belonged to the "developing world" where pencils and punch cards still played important roles in

daily operation. Since Connecticut was at the midpoint of its libraries' automation process, the viewpoints of the two groups of library administrators became the base for this comparative study.

In late 1990 questionnaires regarding library automation were sent to all directors/librarians of public libraries in Connecticut. Eligible respondents were chosen from *The Directory of Connecticut Libraries and Media Centers*.[1] They included directors/ head librarians from all public libraries and those that function as public libraries.[2] Branch libraries were excluded from this study. The mail survey was conducted in two steps. First, those libraries without automation were identified from the state directory, and a two-page questionnaire was sent to each eligible respondent. At the beginning of the questionnaire a filter question was asked in order to eliminate unqualified answers. For those fixed-alternative questions, standardizing alternative responses were listed in both alphabetical and reverse order so that order bias could be minimized. Of the 108 questionnaires sent out 58(53%) were returned. Of those 58 respondents, 8 indicated that they were already in the process of computerized services.

Two weeks after the first group was contacted, similar questionnaires were mailed to 85 directors/librarians whose libraries had automated systems listed in the state directory, and those 8 libraries in the first group who identified themselves as in the process of computerized services. Sixty(64%) responded, and of those 58 libraries provided useful data. Thus the combined total response rate for the survey was 59%.

Background Data on Connecticut Public Libraries

Serving a population of 3,777,000, there were 195 public libraries in Connecticut's 169 municipalities, with 164 designed as principal public libraries in early 1990s.[3] Only five of the state's public libraries served a population over 100,000. In the fiscal year 1990–1991 when this study was conducted, public libraries in

Connecticut had a total income of over $80 million, and an operating expenditure of $22 per capita. Primary support for public library services came from local property taxes. Total expenditures for public library services from local tax funds were about $70 million, which was 87% of its total income in 1990–1991.[4] Principal public libraries also received state aid grants based on equalization and incentive components, as well as a base grant. State grants were made available to both principal and non-principal libraries for construction through general funding, and automation through bonding.

Fourteen percent of public libraries, income was spent on materials in 1990–1991. The total book collection in public libraries in Connecticut was over 12 million volumes, or 3.76 per capita. They ranged in size from New Haven, the largest, with a collection of over 574,000 volumes, to Hartland, the smallest, with only 4,000 volumes. All public libraries in Connecticut opened a grand total of 8,000 hours per week, and circulated over 23.7 million volumes in fiscal year 1990–1991, averaging over 7 volumes per capita.[5]

The following two tables presented some quantitative data on Connecticut public libraries which would be helpful for the understanding of sample groups and the interpreting of the survey findings. These data were on the third annual census of the Federal State Cooperative System for the fiscal year of 1990–1991, the same year this survey was conducted.

Table 1 General Statistics of Connecticut Public Libraries

Population of Legal Service Area of Public Libraries in Connecticut									
Population of Legal Service Area	1 to 999	1000 to 2499	2500 to 4999	5000 to 9999	10000 to 24999	25000 to 49999	50000 to 99999	100000 to 249999	Total
Population	546	32294	105952	324720	935912	675847	1090981	610766	3777018
Percentage	0	0.9	2.8	8.6	24.8	17.9	28.9	16.2	100
Libraries	1	20	28	45	57	20	18	5	194
Percentage	0.5	10.3	14.4	23.2	29.4	10.3	9.3	2.6	100

Ranges of Size of Collections of Public Libraries in Connecticut

Books & Serial in Volumes	0 to 4999	5000 to 9999	10000 to 24999	25000 to 49999	50000 to 99999	100000 to 499999	500000 or more	Total
Libraries	1	9	46	47	38	30	3	174
Percentage	0.6	5.2	26.4	27	21.8	17.2	1.7	100

Ranges of Weekly Public Library Service Hours in Connecticut

Public Service Hours	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 or more	Total
Libraries	2	17	18	39	32	46	21	2	177
Percentage	1.1	9.6	10.2	22	18.1	26	11.9	1.1	100

Table 2 Financial Statistics of Connecticut Public Libraries

Ranges of Operating Expenditures of Public Libraries in Connecticut($ 0.0)

Total Operating Expenditure	0 to 9999	10000 to 49999	50000 to 99999	100000 to 199999	200000 to 399999	400000 to 699999	700000 to 999999	1000000 to 4999999	Total
Libraries	3	34	21	26	38	18	12	21	173
Percentage	1.7	19.7	12.1	15	22	10.4	6.9	12.1	100

Ranges of Public Library Expenditures per Capita in Connecticut($0.0)

Operating Expenditure per Capita	0 to 0.99	1 to 2.99	3 to 4.99	5 to 6.99	7 to 8.99	9 to 11.99	12 to 14.99	15 to 19.99	20 to 29.99	30 or more	Total
Libraries	2	9	3	6	8	13	15	34	47	36	173
Percentage	1.2	5.2	1.7	3.5	84.6	7.5	8.7	19.7	27.2	20.8	100

Allocation of Operating Expenditures of Public Libraries in Connecticut($0.0)

Type	Staff	Collection	Others	Total
Expenditure	52696350	10901499	13866801	77464650
Percentage	68	14.1	17.9	100

Sources of Operating Income of Public Libraries in Connecticut($0.0)

Income Source	Local Income	State Income	Federal Income	Other Income	Total
Income	69815933	1586096	276484	9074475	80752988
Percentage	86.5	2	0.3	11.2	100

Preliminary Findings

As mentioned earlier, fifty percent of public libraries in Connecticut did not have automated systems when the survey was

conducted. Of this group of libraries surveyed, 24%(12) libraries indicated they had some kind of plans to automate in the next few years—4%(2) in the coming year, 18%(9) in the next 5 years and 2%(1) not sure when. Seventy-six percent(38) of the non-automated libraries do not have any plans to automate, at least in the next five years. The reason most often cited for not automating was budget constraints. Other reasons mentioned were : the size of the library, lack of staff and space, not principal library, and priorities other than automation. After data were collected, it was not surprising to see that the majority of libraries were interested but could not afford and support automation.

The average length of service in their libraries for this first group of librarians was 11.73 years, and 8.14 years as directors. When asked which network they prefer to join if they could, 41%(11) said BIBLIOMATION (local CARL network), 33%(9) opted for stand-alone systems, 15%(4) for LION (local Dynix network), 7%(2) for CIRCCESS (local CARL network), and 4%(1) for LEAP (local CLSI network). The total of libraries that preferred to join the existing library networks was 67%. Since almost all libraries in this group were small to middle-size libraries with limited resources, strong system supports would be critical to their mission of success.

The second group, composed of those libraries with automated systems in place, made up nearly 50% of the public library population in Connecticut. Of those libraries responded, 91%(53) had already automated their library services, i.e., at least had a circulation module in operation and 80% of their collection in computer databases. It took an average of 1.84 years for them to accomplish their goals. The remaining 9%(5) were still in the process of installing systems and building up databases.

The average length of service in their libraries for this group of librarians was 10.98 years, 8.17 years as directors. When asked whether they would select the same systems if they could do it again, 67%(39) of librarians said yes, 28%(16) no, and 5%(3) were unsure.

From the findings one could see that even though the majority of this group were satisfied with their current systems, a large portion of librarians were looking for different approaches. Most of them belonged to the existing library networks in the state, namely, Bibliomation, CircCess, LION and LEAP. The reasons that librarians cited for not choosing the same systems were : down time, slow response time, modules needed not available, and not integrated systems, etc. It was clear that they were seeking new systems that would be powerful and reliable enough to meet their increasing demands. Several of them did switch to stand-along systems after this survey was conducted. With the fast development of computer and telecommunication technologies, more and more new integrated library systems had become readily available recently. It should be noted that all the existing library networks in Connecticut had listed the continuing system upgrades as priorities.

Tabulation of the Results

The results of the mail survey from both responding groups were tabulated below for comparison.

Table 3 Factors in Librarians' Decision-Making Process

	Group I Without Automation	Group II With Automation
How important is each factor in your overall decision-making process?*		
Hardware & Software Maintenance	8.12%	12.20%
Library Board Decision	13.18%	9.25%
Personnel with Computer Knowledge	3.36%	8.12%
Retrospective Conversion	8.79%	10.62%
Space Limit	9.82%	2.91%
Staff Training	12.12%	13.62%
System Cost	36.97%	21.14%
Vendor Selection	7.64%	16.64%
Others		5.50%
Total	100.00%	100.00%

*Each respondent was asked to assign a percentage to each of the factors so that his total of percentages assigned equaled to 100. The percentages for each factor were then averaged.

What are the most important factors for selecting computer systems†		
Adaptability & Flexibility	2.24	2.69
Documentation	4.43	4.69
Expendability	3.03	3.10
Response Time	3.54	2.81
User Friendliness	1.76	2.87
Others		4.85

†Each respondent was asked to rank each factor with 1 being the most important and 6 being the least important. The ranking scores for each factor were then averaged.

What are the most important factors for selecting vendors?		
Colleague's Recommendation	3.41	4.69
Consultant's Recommendation	3.94	4.61
Contract Offer	3.38	3.49
Demonstration & On-site Visit	3.24	3.24
Maintenance Contract	3.94	3.82
Vendor Size & Performance	3.09	2.10
Others		6.04
What are the most important system modules?		
Acquisition	3.57	4.00
Cataloging	2.51	2.60
Circulation	1.54	1.09
Online Public Access Catalog	3.00	2.84
Serial Control	4.37	4.47
Are full MARC records useful & important?		
Yes	33.33% (13)	84.48% (49)
No	12.82% (5)	8.62% (5)
Not Sure	53.85% (21)	6.90% (4)
Total	100.00% (39)	100.00% (58)
What are the most practical ways to convert collections?(Multi-answers are allowed)		
Commercial Service	28.21% (11)	18.97% (11)
Library Staff	56.41% (22)	75.86% (44)
Volunteers & Friends	25.64% (10)	25.86% (15)
Others	2.56% (1)	8.62% (5)
What are the most practical ways to fund automation?(Multi-answers are allowed)		

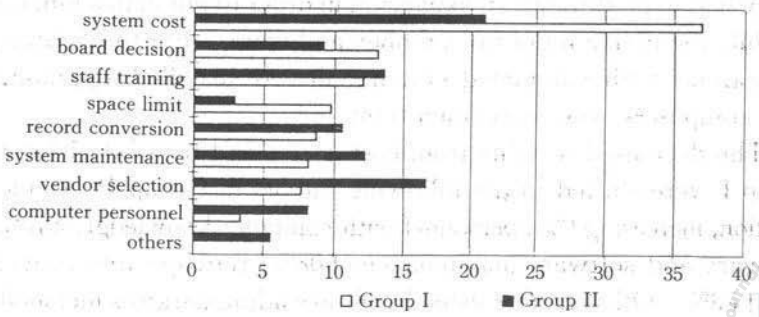
Federal & State Grant	83.78%(31)	42.86%(24)
Library Budget	24.32% (9)	69.64%(39)
Local Fund Raising Campaign	29.73%(11)	14.29% (8)
Private Fund	10.81% (4)	30.36%(17)

Overall Factors in Decision-Making Process

Library administrators from both groups agreed that the system cost was the most important factor in their decision-making process regarding automation. Nevertheless there was a significant difference in how important it was. As Chart 1 shows, the cost factor was 16% more important for Group I than for Group II. Libraries without automation regarded the cost as the dominating factor because budgets were so tight. For the Group II librarians cost was still the most important factor but no longer a dominating one; instead, more emphasis was put on selecting systems from different vendors that would best fit their needs.

Receiving 13.18% of the weight, library board decision was surprisingly listed as the second most important factor by Group I librarians. This was probably because that all library boards were made of community residents, local politics had to become a very important factor in library administrators' decision-making process.

Chart 1 Overall Factors in Decision-making Process



Since most of those libraries were small to middle-size libraries with tight budgets, the boards' willingness and involvement would definitely play an important role in their automation process. Those librarians felt that strong support from the board must be a vital part of their library automation projects. A conservative board as the governing body of the library, unwilling to make any commitment, could simply delay such process for years.

From Group I to Group II the board decision as a factor was downgraded to number six by falling about 4%. This was probably because boards of those libraries with automated systems were already involved and realized the benefits of automation and would therefore incline more favorably towards it. Nevertheless, the board involvement and the factor of local community politics should never be underestimated, since they could have such strong impacts on libraries' strategic planning, fund appropriation, and staffing.

Librarians from both groups shared similar views on staff training. It was rated as the number three factor in the decision-making process by both groups. Another significant variation between the two groups existed in the opinions concerning space limits. From Group I to Group II, physical space as a factor decreased about 7%. This indicated that for Group I librarians, space limit was a factor that they had to consider seriously. If a library had to go through an expansion in order to put in machines, it certainly required a lot of time, money and work. For those Group II librarians with automated systems already installed, upgrading their computers was more important.

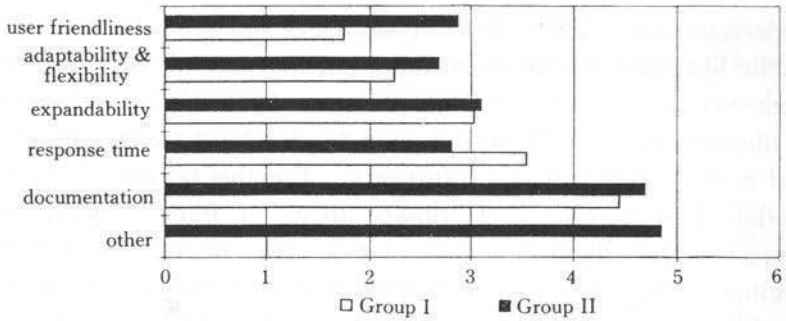
The decreased weights from cost, space and board decision in Group I were shifted to the following factors in Group II : vendor selection, increasing 9% ; personnel with computer knowledge, 4.76% ; hardware and software maintenance, 4.08% ; retrospective conversion, 1.83%. Other factors listed by library administrators included : network capability, performance of the consortium, staff time and

patience.

Factors in Selecting Computer Systems

In the decision-making process of choosing computer systems, the Group I librarians rated user-friendliness the most important, while the Group II librarians ranked adaptability and flexibility as the most important factor. Since most staff of the Group I libraries did not have automation experience, library administrators preferred systems that could be easily learned and comfortably handled when looking for computer automation. Librarians whose computer systems were already in operation had learned from their experience that selecting an automated system which best fit their specific needs was more important in the long run.

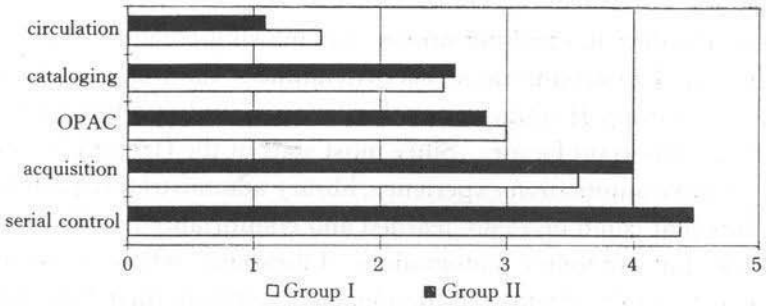
Chart 2 Factors in Selecting Computer Systems



Response time, the number four factor on the first group's list, was upgraded to the second most important system selection factor by librarians with automation experience. This indicated that the latter had learned the importance of more powerful and reliable computer systems. Other system-related factors listed by this group of librarians were : system support, reliability, vendor reputation and MARC (Machine-Readable Catalogue) capability.

Librarians from both groups shared the same point of view regarding the relative importance of individual computer system

Chart 3 Computer System Modules

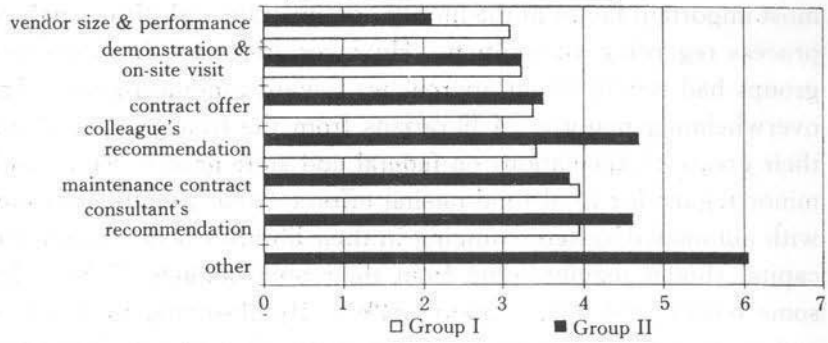


modules. They all agreed that circulation function was the most important module in their library services. It was followed by cataloging and online public access catalog (OPAC) ; acquisition and serial control were listed at bottom. This result was easily understandable. Till today circulation is still regarded by many public librarians as the most important measure of their libraries' performance, even though the importance of providing a wide range of library services in the information age has been realized by more and more library service professional. For this reason circulation module had become the primary focus of library automation projects, especially at their early stages. As a matter of fact, at the beginning the majority of automated systems installed in Connecticut libraries were circulation systems with cataloging functions. Truly integrated library turnkey systems such as CARL, Dynix, Innovaq and others did not make their presence in Connecticut until early 1990s.

Factors in Vendor Selection

Selecting computer systems and choosing vendors were two closely related aspects of the decision-making process regarding library automation. Vendor size and performance, demonstration and on-site visit, and contract offering were all seen by both groups

Chart 4 Factors in Vendor Selection



of librarians as the most important factors in the vendor selection process. Rapidly technological advancement had constantly re-shaped the automation market. To survive and succeed librarians had to seek a vendor with an excellent performance record and strong system support. Financial stability was regarded by all library administrators as an indispensable criterion for selecting vendors.

Some variations existed between the two groups' lists. Colleagues' recommendation dropped from fourth place in Group I to sixth in Group II. Those librarians who had automated systems in place put the maintenance contract as the next important vendor selection factor. They learned from experience that vendors' reliability would be critical to the smooth operation of their systems. By comparing the range variations in average ranking scores between the two groups, as Chart 4 showed, it was safe to say that the second group of librarians had more pragmatic views of vendor selection.

Other factors mentioned by library administrators in their vendor selection process were : affordability, system specification, building up of database, upgrading support, and honesty.

Funding and Other Issues

System cost, as mentioned earlier, was regarded as the single most important factor in the library administrators' decision-making process regarding automation. However, librarians from the two groups had two different approaches toward funding issues. The overwhelming majority of librarians from the first group had put their greatest expectations on federal and state grants (84%), with minor regard for local fund-raising efforts (30%) ; while librarians with automated systems running in their libraries believed that the capital should mainly come from their own budgets (71%), plus some federal and state support (44%). By observing the political and economic climate in recent years, it was clear that the latter was a more practical approach and the one most likely to prevail in the future. According to a report from the statewide database task force : "automation developments in Connecticut have largely come from the bottom up with some limited financial support and encouragement from the state."[6] The Connecticut State Library 1990−1991 statistics also showed that 87% of all public library funding came from local taxes, 11.2% from other sectors, and merelly 2.3% came from state and federal grants.[7] In short, if librarians really planned to automate their libraries, they had to stand firmly on their own feet and support systems through their own efforts.

Another divergence between the two groups occured in the views toward the MARC records. The majority (54%) of the first group of librarians were unsure whether MARC records were useful and important for their library services. Nevertheless, for system upgrading and networking, MARC records would be not only useful but essential. The second group of librarians—those with automated systems in their libraries—had much more appreciation of the importance of MARC records.

Retrospective conversion should never be underestimated by library administrators when they made up their minds toward automation. Collection conversion was the most time-consuming segment of every library's automation process. This survey indicated

that both groups of library administrators agreed that library staff would provide main efforts in data conversion, with some assistance from volunteers, friends of libraries, and commercial services.

Conclusion

Selecting automated library systems is a complex and often difficult process that most library administrators will have to go through, probably several times in their professional careers. The librarians surveyed in this study identified computer system cost as the most important factor in the decision-making process ; experience did make a difference. Cost as a factor fell more than 40% from Group I to Group II. Those librarians with automated systems running in their libraries had learned from their experience and put much more emphasis on searching for the computer systems that would best meet their specific needs.

The complex nature of library automation projects led to a variety of approaches. User friendliness of the system, library board decision and space limits were given significant consideration by the first group of librarians while adaptability and flexibility, response time and maintenance support were emphasized by Group II librarians. Based on this study it was obvious that librarians with automated systems running in their libraries had clearer views and more practical approaches toward library computer automation.

This survey focused only on public libraries in the state of Connecticut, and the size of library as a variable was not considered in the original design. Further research with a large scale stratified random sampling of different libraries would certainly provide more comprehensive information on this subject.

Notes

1. *Directory of Connecticut Libraries and Media Centers Including Finding 1990 : A Quick Reference to Libraries, Information and Media Centers in Connecticut* (New York : LDA Publishers, 1990).

2. "Public library" is here defined as a library which receives it funding in whole or in part

from local tax funds, and it serves its residents without charging a borrower's card fee, no matter whether such a library is incorporated as a private association. *Newsletter of Association of Connecticut Library Board*, (October 1990) : 3.

3. Some towns may have more than one public library. The state law requires the local municipal governing authorities (selectmen, council, aldermen) to determine which is the principal public library for their own town or city. Since June 30, 1987 only those libraries with the "principal public library" designation have been eligible to receive state aid monies. *Ibid.*

4. National Center for Education Statistics (NCES), *Public Libraries in the U.S. : 1990.* Washington, D.C. : Office of Educational Research and Improvement, U.S. Department, 1992. NECS 92-028.

5. *Ibid.*

6. *Providing Access to Connecticut's Library Resources : Statewide Database Task Force Final Report*, (April 1990) : 3.

7. National Center for Education Statistics (NESC), *Public Libraries in the U.S. : 1990.* Washington, D.C. : Office of Educational Research and Improvement, U.S. Department,1992. NECS 92-028.

Appendix I

Survey : Library Automation in Connecticut

Is your library in the process of computerized service (started or finished automation) ?

[ ] No [ ] Yes (You can stop here)

Does your library have any plan to automate ?

[ ] No [ ] Yes

If no, why ? _____

_____

If yes, when do you plan to automate your library ?

[ ] Next year [ ] Next 5 years [ ] Not sure

In your opinion how important is each following factor in your library's automation process? (Please determine percentage of each factor in the decision-making process. Total=100%)

__% Hardware & software maintenance __% Library board decision

__% Personnel with computer knowledge __% Retrospective conversion

__% Space limit __% Staff training

__% System cost __% Vendor selection

__% Other (Please specify) _____

What factors would you consider most if you are going to choose a computer system? (Please rank all of them with 1 being the most important & 6 being the least important)

[ ] Adaptability [ ] Decumentation

[ ] Expendability [ ] Response time

[ ] User friendliness [ ] Other (Specify) _____

Assuming you are going to select a vendor, what would be the most important factors for your decision making process? (Please rank them with 1 being the most important & 7 being the least important)

[ ] Colleague's recommendation [ ] Consultant's recommendation
[ ] Contract offer [ ] Demonstration & on-site visit
[ ] Maintenance contract [ ] Vendor size & performance
[ ] Other (Please specify)_____

What modules (functions) of a library automation system do you think are the most important for your library? (Please rank them by numbers with 1 being the most important & 6 being the least important)

[ ] Acquisition [ ] Cataloging
[ ] Circulation [ ] Online public access catalog
[ ] Serial control [ ] Other (Please specify)_____

Do you consider the full MARC (Machine-Readable Cataloging) records to be useful and important for your library's automation service ?

[ ] No [ ]Yes [ ] Not Sure

If yes, are you going to use full MARC records in your library ?

[ ] No [ ] Yes

If no, why ?_____

What way would you consider is the most practical for your library to convert its collection into computerized database ?

[ ] Commercial services [ ] Library staff
[ ] Volunteers & friends [ ] Other (Specify)_____

What way would you consider is most practical for your library to secure enough funds to meet total automation costs ?

[ ] Federal & state grant [ ] Library budget
[ ] Local fund raising campaign [ ] Private fund
[ ] Other (Please specify)_____

If you could automate your library today, which network would you join ?

[ ] Bibliomation [ ] CircCess
[ ] LEAP [ ] LION
[ ] Stand-alone system [ ] Other (Specify)_____

How many years have you been working in this Library? (Optional)_____

How many years have you been working as the Director? (Optional)_____

Appendix II

Survey : Library Automation in Connecticut

Is your library in the process of computerized service (started or finished automation) ?

[ ] Yes [ ] No (you can stop here)

When did you start to automate your library ? _____

When did you finish your automation (have automated circulation service and 80% of collection in computer database) ? _____

In your opinion how important is each factor in your library's automation process? (Please determine percentage of each factor in the decision-making process. Total=100%)

__% Hardware & software maintenance
__% Personnel with computer knowledge
__% Space limit
__% System cost
__% Other (Please specify) _____
__% Library board decision
__% Retrospective conversion
__% Staff training
__% Vendor selection

What factors would you consider most when choosing a computer system? (Please rank all of them by numbers with 1 being the most important & 6 being the least important)

[ ] Adaptability & flexibility
[ ] Expendability
[ ] User friendliness
[ ] Documentation
[ ] Response time
[ ] Other (Specify) _____

What are the most important factors for your decision-making process when selecting a vendor? (Please rank them by numbers with 1 being the most important & 7 being the least important)

[ ] Colleague's recommendation
[ ] Contract offer
[ ] Maintenance contract
[ ] Other (Please specify) _____
[ ] Consultant's recommendation
[ ] Demonstration & on-site Visit
[ ] Vendor size & performance

What modules (functions) of a library automation system do you think are the most important for your library? (Please rank them by numbers with 1 being the most important & 6 being the least important)

[ ] Acquisition
[ ] Circulation
[ ] Serial control
[ ] Cataloging
[ ] Online public access catalog
[ ] Other (Please specify) _____

Do you consider the full MARC (Machine-Readable Cataloging) records to be useful and important for your library's automation service ?

[ ] No [ ] Yes [ ] Not Sure

Is your library in the process of converting its bibliographic records to MARC format ?

[ ] Yes [ ] No

What was the most practical way for your library to convert its collection into computerized database ?

[ ] Commercial services
[ ] Volunteers & friends
[ ] Library staff
[ ] Other (Specify) _____

What was the most practical way for your library to secure enough funds to meet total automation costs ?

[ ] Federal & state grant
[ ] Library budget

[ ] Local fund raising campaign [ ] Private fund

[ ] Other (Please specify)_____ [ ]

If you could do it again, would you choose the same automation system as you have now ?

[ ] yes [ ] No

If no, which system do you prefer and why ? _____

_____

How many years have you been working in this Library? (Optional)_____

How many years have you been working as the Director? (Optional)_____