

Staff Opinions in Library Automation Planning

A Case Study

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■ Staff at the Indiana State Library were surveyed regarding reactions to automation and expectations of an on-line catalog and circulation system. The surveys were conducted before automation planning and staff development committees were created, and again a year later. Opinions remained stable in many areas, but increases in staff involvement and automation's impact on staff attitudes were noted. Reactions to automation in general were positive in both surveys. By the second year, fewer respondents felt they could predict automation's impact on staffing, while more expected work to remain about the same. The number of responses to an open-ended question declined, with considerably more positive comments in the second survey.

INCREASINGLY, writers on library automation are emphasizing the importance of including people as well as equipment in the planning process. In a sense, this current awareness builds on the interest in changing jobs and organizational structure that occurred with the introduction of technical services automation, seen for example in Eleanor Montague's observations (1). More recently, Michael Malinconico's columns in *Library Journal* suggest considerations for library administrators, and Sara Fine's research on resistance to automation has added to our understanding of the topic (2,3).

For the library automation planner faced with the need to oversee the implementation of a system, however, there are few descriptions of how successful projects have developed or maintained effective communication with the library staff. The following is a description of one library's efforts to increase understanding of its automation needs and planning.

Background

The Indiana State Library in Indianapolis employs approximately 80 people, of whom about 45% are professional li-

brarians. The library's seven divisions are housed in a three-story building in the center of Indianapolis. Connected to Indiana's State Capitol and State Office Building, the library provides information and services for state legislators and state employees, as well as offers a number of other specialized services, notably materials for the blind and physically handicapped, support for genealogical and historical research, and support for public libraries in the state. A fairly decentralized structure has developed as staff in various divisions have sought to provide excellent service to their respective clientele.

Since the 1970s, the library has used OCLC for much of its cataloging and interlibrary loans. The general card catalog was frozen in January 1981 when a COM catalog was produced to provide catalog access. A printed subject catalog for the genealogy collection was produced at the same time. These catalogs, generated from OCLC tapes, included items cataloged from the mid-1970s through the date of catalog production. The listings were intended to be cumulated and reissued annually, with quarterly updates. A variety of technical and contractual problems disrupted this schedule—the nadir being a nine-month wait for any new catalog listing in 1982.

The library has access to external automated systems for reference service (Dialog as well as an Indiana database for U.S. Census information). In addition, the library director uses his personal microcomputer for budget planning, and state-wide public library statistics have been prepared on the state's mainframe computer since 1980. However, there was no general access to computers or automation during the period described by this report, and circulation was handled manually by each division of the library.

Automated support was requested to deal with heavy and increasing circulation in materials for the blind and physically handicapped, as well as problems of delays in the library's COM catalog and lack of library-wide knowledge about special collections. The state gov-

ernment approved preparing a request for proposals for a turn-key on-line catalog and circulation system. However, all activity was stopped in 1981 due to a budget freeze. The resulting sense of frustration was compounded by low staff involvement in automation planning. Staff morale was generally considered poor, and opinions about automation were presumed to be negative.

At the same time, it was necessary to involve the library staff both in selecting an automated system which would do the best possible job of meeting the wide variety of needs in the library and in encouraging staff acceptance of the system. With these goals in mind, four librarians worked with a consultant from the Indiana University School of Library and Information Science to develop a survey of staff opinion regarding automation.

It was hoped that soliciting staff opinions would help suggest areas of staff concern to be addressed in planning for automation and provide a benchmark with which to compare changes in attitudes during the automation process. A survey of all staff was conducted in 1983 and repeated a year later.

First Staff Opinion Questionnaire

The questionnaire primarily focused on attitudes toward automation and expectations of the library automation project. Impressions of staffing and training implications of the library automation plans were solicited, as well as "reactions to automation." Some background on respondents' division of work and experience with computers was collected in case it became necessary to target specific audiences, and people were asked to indicate which means of providing information on automation plans were desirable. An open-ended request for comments or observations concluded the survey form, which is reproduced, with the number of responses to each question, in Appendix 1.

The questionnaire was distributed in April 1983, with a cover letter from the library director. Response was voluntary,

and work time could be used to complete the questionnaires, which were returned anonymously. Fifty-nine responses were received from 77 employees—a response rate of approximately 77%.

Respondents indicated they would like to be involved in planning for an automated system through discussion sessions, serving on automation committees, and reviewing and commenting on automation priorities. There was significant interest in being kept informed on automation efforts, with training sessions, general meetings, circulation of automation plans, tours of other libraries, and vendor demonstrations receiving high ratings.

Automation Planning and Staff Involvement

The survey results were summarized at two open meetings for all library staff. Here the library director asked for volunteers to serve on two new, library-wide committees: a library automation planning committee and a staff development committee.

The director appointed all senior administrators to the library automation planning committee, and 14 other employees volunteered to serve on the committee. The committee organized subcommittees to investigate word processing options, and to review and update the statement of the library's requirements of an on-line catalog and circulation system.

These groups provided opportunities to learn about the complexity of automation needs and the relatively strict monetary constraints that determined what the library could afford. In addition, subcommittee members shared their tasks with staff from other divisions of the library, reducing some of the parochial attitudes which result from the decentralized organization. Eventually word processing recommendations were forwarded to the library director. Shortly thereafter the request for proposals was revised, approved through the state's review process, and released.

The eight-member, staff development committee concentrated initially on staff development for automation. The committee published an almost-monthly news memo to continue dissemination of automation plans begun at the open meetings. A question box was designed, and its contributions provided topics for the news memo. In addition, several programs were organized to acquaint staff with automation terminology, to visit the local public library's automated system, and to conduct demonstrations of microcomputers owned by staff members. One especially effective program involved a discussion by public librarians of their experiences during the installation of an on-line catalog and circulation system.

This process provided increasing staff awareness of the library's automation plans, particularly relating to word processing and the on-line catalog and circulation system. However, there was little tangible evidence of increasing automation. A terminal to reach the state's mainframe computer was installed in the library building, but no other computer equipment appeared.

Second Staff Opinion Questionnaire

In April 1984, one year after the first survey, a second testing of staff opinion was done. This questionnaire repeated many items from the first one, while incorporating some changes to reflect the then current situations with word processing and on-line catalog planning. There was relatively little turnover in staff, and four positions had been filled in the intervening year, leaving the surveyed population fairly stable. Fifty-seven responses were received from 81 employees—a response rate of 70%. The survey form, with the number of responses to each question, is reproduced as Appendix 2.

Comparison of Survey Responses

In comparing responses for the two surveys, statistically significant changes

occurred in respondents' perceptions of having been kept informed about automation efforts. As seen in Table 1, 95% of respondents to the second survey reported that they had been kept informed, compared with only 45% a year earlier. Several of the open-ended comments praised the staff development committee's work in this area.

An equally significant change appeared in perceptions of how staff attitudes were affected by automation. As the comparison in Table 2 shows, 27% of year one respondents felt automation had caused attitudes to deteriorate. One year later this had fallen to 4%.

The list of possible reactions to automation was divided into two categories: positive and negative. The negative reactions were further divided into groups roughly based on three of Kotter and Schlesinger's four most common reasons people resist change: different assessment of library's needs, low tolerance for change, and parochial self interest (4). These categories and the number of responses to each are given in Table 3. Although negative opinions had been expected, especially in the first survey,

Table 1. Staff Perceptions of Being Informed about Automation Plans

Do you feel you have been kept informed on the Library's automation plans?		
	1983	1984
yes	26	53
no	26	0
don't know	6	3
chi square = 36.073, degrees of freedom = 2, p < .001		

Table 2. Effects of Automation on Staff Attitudes

How have library automation efforts to date affected staff attitudes?		
	1983	1984
attitudes have improved	10	21
automation efforts have had no impact on staff attitudes	14	15
attitudes have deteriorated	16	2
don't know	19	17
chi square = 14.816, degrees of freedom = 3, p < .01		

Table 3. Staff Reactions to Automation at the Library

	1983 (N = 77)	1984 (N = 57)
POSITIVE REACTIONS TO AUTOMATION	176 (85.4%)	180 (87.8%)
Improve services	48 (23.3%)	47 (22.9%)
Good idea	38 (18.4%)	42 (20.0%)
Improve prestige	24 (11.6%)	24 (11.7%)
Work will be more interesting	22 (10.7%)	24 (11.7%)
Would help my career	22 (10.7%)	19 (9.2%)
It's about time	22 (10.7%)	24 (11.7%)
NEGATIVE REACTIONS TO AUTOMATION	30 (14.6%)	25 (12.2%)
<i>Different Assessment of Needs</i>		
Money better spent on other services	11 (5.3%)	4 (1.9%)
Costs too much	7 (3.4%)	7 (3.4%)
Not needed	1 (0.5%)	1 (0.5%)
<i>Low Tolerance for Change</i>		
Apprehensive	10 (4.9%)	8 (3.9%)
I would quit if the library automated	0 (0%)	0 (0%)
<i>Parochial Self-Interest</i>		
Work would be more boring	0 (0%)	1 (0.5%)
Who cares	0 (0%)	2 (1.0%)
Too much work	1 (0.5%)	2 (1.0%)
TOTAL	206 (100%)	205 (100%)

the vast majority of the responses (over 85%) was positive. The negative reactions were due mainly to a different assessment of the library's needs or a low tolerance for change. However, the only low tolerance for change reaction selected was "apprehensive," much less negative than the "I would quit if the library automated" reaction, which was not chosen by any of the respondents.

The second year's responses were slightly more positive, but the frequency ranking of each reaction remained remarkably stable. Reactions chosen most often were that automation would improve services and that it was "a good idea." The other positive reactions each accounted for about 10% of the responses. The major change from the first to the second survey was a decline in the proportion of respondents who felt that the money would be better spent on other services (down from 5.3% to 1.9%).

Expectations of how automation would affect jobs underwent some changes. In the first survey 42% of respondents thought staff would be transferred or laid off, while 34% did not know what implication automation held for staffing. One year later only 25% expected transfers or layoffs, but 73% were uncertain of staffing implications. This change was significant ($p < .01$)—probably reflecting the general improvement in State financial conditions, as well as uncertainty about the proposed automation project. A comparison of response rates to several of these questions is presented in Table 4.

Major changes in jobs were expected by 27% in the first year, with 32% expecting retraining. By the second year only 16% expected major changes, and 23% foresaw retraining ($p < .05$). Anticipated changes in job classifications or workload were not significant. The per-

Table 4. Expectations of Impact of On-line Catalog and Circulation System

	1983 (N = 77)	1984 (N = 57)
Library services will be improved	44 (36%)	43 (39%)
faster	44 (36%)	35 (32%)
less personal	9 (7%)	11 (10%)
more complicated	12 (10%)	5 (5%)
about the same	5 (4%)	7 (6%)
don't know	5 (4%)	4 (4%)
deteriorated	0 (0%)	4 (4%)
slower	3 (3%)	0 (0%)
Changes in your job will be major	16 (27%)	9 (16%)
minor or none	25 (42%)	38 (68%)
Retraining will be required for my position	19 (32%)	13 (23%)
Your job classification will be upgraded	4 (6%)	1 (2%)
downgraded	1 (2%)	0 (0%)
Work will be about the same	16 (21%)	34 (48%)
more fun	21 (28%)	13 (18%)
less complicated	12 (16%)	9 (13%)
more complicated	14 (19%)	5 (7%)
less personal	2 (3%)	3 (4%)
don't know	10 (13%)	7 (10%)
My work load will increase	12 (21%)	10 (18%)
decrease	3 (5%)	3 (5%)

centage of respondents expecting job up-grades declined by the second year, while no one anticipated downgrading. Expectations of workload changes remained stable, with close to 20% expecting an increase and about 5% a decrease in workload.

Changes also occurred in perceptions of work with an automated system. The percentage who expected work to be "about the same" increased, while those anticipating work to be either "more fun" or "more complicated" declined.

Perceptions of automation's impact on library services did not change significantly. Most people felt services would be improved and faster, though the next two most frequent choices were "less personal" and "more complicated." A major shift occurred in the latter, with a drop from 10% to 5% of respondents expecting services to be more complicated. The idea that an automated system may not be as complicated as first thought parallels the assessment noted above—work may not be as complicated either.

A remarkable difference between the two surveys was the number of responses to the open-ended request to "share any comments or observations you have on automation at the State Library." Thirty-eight people (64%) commented on the first survey, often in carefully thought-out essays of two or three paragraphs, bringing out a variety of concerns. Only 26 people (46%) responded to the request for comments a year later, and 19 of the comments (73%) were primarily in re-

sponse to the request for suggestions on staff development needs.

A summary of the comments is given in Table 5. Even with the decline in the number of people making general comments, the percentage of comments in most sections remained about the same. The major shift was from a focus on past problems at the library to expanding on the observation that staff are better informed.

Conclusion

Responses to the two surveys of Indiana State Library staff indicate major changes in sense of involvement and assessment of automation's impact on staff attitudes. At the same time, reactions to automation in general remained quite positive and relatively stable. By the second year fewer people expected that work with an on-line catalog and circulation system would be greatly different from existing operations.

Several changes occurred at the library during the year between the surveys, but respondents' comments indicate that the use of library automation planning and staff development committees were in part responsible for the changes observed. The use of written news memos, general meetings, and specialized subcommittees provided opportunities for staff to both expand their knowledge and contribute to the automation process.

Table 5. Summary of Staff Comments

	1983		1984	
Staff fears and need for training	15	(27%)	7	(28%)
Concern about specific library services	12	(21%)	4	(16%)
Past problems with automation at library	12	(21%)	0	(0%)
Questions of funding support or priorities	10	(18%)	6	(24%)
General positive comments	7	(13%)	3	(12%)
Staff are better informed	0	(0%)	5	(20%)
TOTAL	56	(100%)	25	(100%)

Appendix 1

Indiana State Library Staff Automation Survey, 1983

(with number of responses to each question)

Please check the appropriate answer(s) for the questions below.

1. In which division do you work?

5 Administration/Business Office
10 Blind & Physically Handicapped
7 Catalog
8 Extension
7 Genealogy
10 Indiana
12 Reference & Loan

2. What priority would you place on the following functions the system might perform?
 (1 = highest priority, etc.)

22 Record what's in circulation in DBPH
1 Record what's in circulation from Reference & Loan
17 Record all materials in the card catalog (on-line catalog)
5 Provide additional access to special collections (newspapers, cemetery lists, etc.)
6 Serials check-in and associated files
1 Financial records
0 Acquisitions
6 Word processing
2 Other _____

(Number given is number of first priority rankings)

3. Please indicate if you have used or have seen used any of the following:

	Have used	Have seen used
OCLC	44	5
Search Services (Dialog, INDIRS)	17	23
Microcomputer	14	13
Other library's on-line system	3	20
Video games	44	6
Other computer applications	14	17

4. Listed below are some reactions to automation. Please check all that apply to *your* feelings about an automated system at the Library.

<u>10</u> apprehensive	<u>22</u> it's about time
<u>38</u> good idea	<u>48</u> improve services
<u>1</u> too much work	<u>0</u> work will be more boring
<u>24</u> improve prestige	<u>0</u> who cares
<u>1</u> not needed	<u>7</u> costs too much
<u>22</u> work will be more interesting	<u>11</u> money better spent on other services
<u>22</u> would help my career	<u>0</u> I would quit if the Library automated

5. Do you feel you have been kept informed on the Library's automation efforts?

26 yes
26 no
6 don't know

6. How have library automation efforts to date affected staff attitudes?

10 attitudes have improved
14 automation efforts have had no impact on staff attitudes
16 attitudes have deteriorated
19 don't know

The following questions deal with your expectations of what an automated system for the Library would be like.

7. As a result of the automated system (please check all that apply)
- | | |
|-----------|---|
| <u>6</u> | staff would be laid off |
| <u>24</u> | staff would be transferred to other divisions |
| <u>7</u> | new staff would be hired for existing jobs |
| <u>10</u> | new, specialized (high paid) staff would be hired |
| <u>24</u> | don't know |
8. The time required to get all library information into the system would be about
- | | |
|-----------|-----------------|
| <u>2</u> | 6 months |
| <u>4</u> | 1 year |
| <u>14</u> | 2 years |
| <u>25</u> | 5 years or more |
| <u>14</u> | don't know |
9. How would existing files be converted for the automated system?
- | | |
|-----------|--|
| <u>4</u> | conversion comes with the system |
| <u>29</u> | present library staff |
| <u>18</u> | special staff hired for the conversion |
| <u>8</u> | don't know |
10. After a transition period, Library services would be (check all that apply)
- | | | | |
|-----------|----------------|-----------|------------------|
| <u>44</u> | improved | <u>9</u> | less personal |
| <u>5</u> | about the same | <u>44</u> | faster |
| <u>0</u> | deteriorated | <u>3</u> | slower |
| <u>5</u> | don't know | <u>12</u> | more complicated |
11. As a result of the automated system, changes in your job would be
- | | |
|-----------|------------|
| <u>16</u> | major |
| <u>22</u> | minor |
| <u>3</u> | none |
| <u>18</u> | don't know |
12. Would retraining be required for your position?
- | | |
|-----------|------------|
| <u>19</u> | yes |
| <u>21</u> | no |
| <u>19</u> | don't know |
13. As a result of automation, would the classification of your position be
- | | |
|-----------|------------|
| <u>38</u> | the same |
| <u>4</u> | upgraded |
| <u>1</u> | downgraded |
| <u>16</u> | don't know |
14. After the system was installed, would your work be (please check all that apply)
- | | | | |
|-----------|------------------|-----------|---------------|
| <u>14</u> | more complicated | <u>21</u> | more fun |
| <u>16</u> | about the same | <u>2</u> | less personal |
| <u>12</u> | less complicated | <u>10</u> | don't know |
15. Would your workload
- | | |
|-----------|---------------------|
| <u>12</u> | increase |
| <u>27</u> | stay about the same |
| <u>3</u> | decrease |
| <u>15</u> | don't know |
16. How would you like to be involved in planning for the automated system? (please check all that apply)
- | | |
|-----------|---|
| <u>19</u> | Serve on automation committees |
| <u>19</u> | Review and comment on automation priorities |
| <u>25</u> | Participate in discussion sessions |
| <u>4</u> | Other _____ |
| <u>7</u> | None |
| <u>16</u> | Don't know |

17. Would you like to be kept informed on automation efforts? (please check all that apply)
- | | | | |
|-----------|-------------------------------|-----------|--------------------------------------|
| <u>40</u> | General information meetings | <u>30</u> | Circulate plans for automated system |
| <u>26</u> | Seminars/discussion groups | <u>43</u> | Training sessions |
| <u>11</u> | Suggested reading list | <u>1</u> | Other _____ |
| <u>29</u> | Vendor demonstrations | <u>0</u> | Nothing |
| <u>23</u> | Newsletter/memo on automation | <u>0</u> | Don't know |
| <u>29</u> | Tours of other libraries | | |
18. Do you think the people will respond frankly to this survey?
- | | |
|-----------|------------|
| <u>43</u> | yes |
| <u>1</u> | no |
| <u>15</u> | don't know |
19. Please share any comments or observations you have on automation at the State Library.

Appendix 2

Indiana State Library Staff Automation Survey, 1984

(with number of responses to each question)

Please check the appropriate answer(s) to the questions below.

1. In which division do you work?

<u>5</u>	Administration/Business Office
<u>9</u>	Blind & Physically Handicapped
<u>7</u>	Catalog
<u>10</u>	Extension
<u>9</u>	Genealogy
<u>7</u>	Indiana
<u>10</u>	Reference & Loan

2. What priority would you place on the following functions for automation in the Library? (1 = highest priority, etc.)

<u>35</u>	Record circulation from DBPH
<u>1</u>	Record circulation from other divisions
<u>12</u>	Record all materials in the card catalogs (on-line catalog)
<u>1</u>	Provide additional access to special collections (newspapers, cemetery lists, etc.)
<u>1</u>	Record serials holdings and check-in
<u>3</u>	Record library orders and acquisitions
<u>3</u>	Keep financial records
<u>4</u>	Word processing
<u>1</u>	Other _____

(Number given is number of first priority rankings)

3. Please indicate if you have used or have seen used any of the following:

	Have used	Have seen used
OCLC	41	11
Search Services (Dialog, INDIRS)	17	22
Microcomputer	12	29
Another library's on-line system	13	25
Video games	40	10
Other computer applications	12	14

4. Listed below are some reactions to automation. Please check all that apply to *your* feelings about an automated system at this Library.

- | | | | |
|-----------|-------------------------------|-----------|---------------------------------------|
| <u>8</u> | apprehensive | <u>24</u> | it's about time |
| <u>42</u> | good idea | <u>47</u> | would improve services |
| <u>2</u> | too much work | <u>1</u> | work will be more boring |
| <u>24</u> | improve prestige | <u>2</u> | who cares |
| <u>1</u> | not needed | <u>7</u> | costs too much |
| <u>24</u> | work will be more interesting | <u>4</u> | money better spent on other services |
| <u>19</u> | would help my career | <u>0</u> | I would quit if the Library automated |

5. Do you feel you have been kept informed on the Library's automation efforts?

- 53 yes
- 0 no
- 3 don't know

6. How have library automation efforts to date affected staff attitudes?

- 21 attitudes have improved
- 15 automation efforts have had no impact on staff attitudes
- 2 attitudes have deteriorated
- 17 don't know

Questions 7-15 deal with your expectations of what the minicomputer system (OCCS) for the State Library will be like.

7. As a result of the automated system (please check all that apply)

- 0 staff will be laid off
- 12 staff will be transferred to other divisions
- 3 new staff will be hired for existing jobs
- 7 new, specialized (high paid) staff will be hired
- 35 don't know

8. The time required to get all library information into the system would be

- 0 about 6 months
- 7 about 1 year
- 9 about 2 years
- 33 5 years or more
- 8 don't know

9. How would existing files be converted for the automated system?

- 2 conversion comes with the system
- 37 present library staff will do the work
- 8 special staff will be hired for the conversion
- 10 don't know

10. After a transition period, Library services would be (check all that apply)

- | | | | |
|-----------|----------------|-----------|------------------|
| <u>43</u> | improved | <u>35</u> | faster |
| <u>7</u> | about the same | <u>0</u> | slower |
| <u>4</u> | deteriorated | <u>5</u> | more complicated |
| <u>11</u> | less personal | <u>4</u> | don't know |

11. As a result of the automated system, changes in your job would be

- 9 major
- 33 minor
- 5 none
- 9 don't know

12. Will retraining be required for your position?

- 13 yes
- 28 no
- 15 don't know

13. As a result of automation, would your position be classified
- | | |
|-----------|------------|
| <u>48</u> | the same |
| <u>1</u> | upgraded |
| <u>0</u> | downgraded |
| <u>7</u> | don't know |
14. After the system was installed, would your work be (check all that apply)
- | | | | |
|-----------|------------------|-----------|---------------|
| <u>5</u> | more complicated | <u>13</u> | more fun |
| <u>34</u> | about the same | <u>3</u> | less personal |
| <u>9</u> | less complicated | <u>7</u> | don't know |
15. Would your workload
- | | |
|-----------|---------------------|
| <u>10</u> | increase |
| <u>35</u> | stay about the same |
| <u>3</u> | decrease |
| <u>8</u> | don't know |
16. What are your impressions of word processing at the State Library?
- | | |
|-----------|--|
| <u>2</u> | I don't know what word processing is |
| <u>29</u> | I will need training for word processing |
| <u>25</u> | it will be a help on my job |
| <u>0</u> | it will slow down my work |
| <u>18</u> | it will speed up my work |
| <u>35</u> | it will be hard to find time for all who need access to the system |
| <u>25</u> | some users may receive preferential access |
| <u>6</u> | it really won't make any difference |
17. Do you think people will respond frankly to this survey?
- | | |
|-----------|------------|
| <u>46</u> | yes |
| <u>0</u> | no |
| <u>10</u> | don't know |
18. What topics would you suggest for future staff development activities, not necessarily related to automation? Some suggestions include burn-out, stress management, access to special collections, tours of the divisions.
19. Please share any comments or observations you have on automation at the State Library.

References

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3. Fine, Sara. *Resistance to Technological Innovations in Libraries: Research Report, Part II: Data Analysis and Statistical Report. Final Report.* Graduate School of Library and Information Sciences, University of Pittsburgh, Pittsburgh Pennsylvania, 1979. ERIC Document 226 730.
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