Developing Best Practices for Technical Services Cross-Institutional Collaboration

ABSTRACT

The OhioLINK CollaboraTeS Project was initiated to support cross-institutional collaborations by building a skills inventory and by defining collaborative best practices. This paper discusses what was learned and defines best practices for collaboration. The authors recommend the creation of regional technical services skills inventories, and the application of management and financial best practices to collaborations. Librarians should be confident they possess these skills because many of them have been learned in other environments. Collaboration represents a bright future for libraries struggling to meet tight budgets. Providing the tools and best practices for collaboration makes it easier for libraries to participate.

INTRODUCTION

The Ohio Library and Information Network (OhioLINK) is a consortium of eighty-eight Ohio college and university libraries that was founded in 1987 to provide research information for students, faculty and researchers throughout Ohio. By 2006 OhioLINK technical services librarians had extensive experience cooperating with each other, and collaborated well at the consortium level. But they did not have a history of cross-institutional collaborations. Therefore, no infrastructure had developed for cross-institutional project management. No one knew how to best create or manage collaborative cross-institutional workflows. Given OhioLINK’s cooperative climate, and a tougher economy, it was natural for the consortium to investigate environmental factors and best practices for cross-institutional collaborations. The original intent was to foster collaborations by creating the tools needed, such as an OhioLINK...
technical services skills inventory and by defining best practices for collaboration. Over time this work resulted in the creation of the CollaboraTeS Toolbox, http://platinum.ohiolink.edu/dms/collaborate/.

This paper presents the results of research undertaken as a background to the creation of the OhioLINK CollaboraTeS Toolbox. What was discovered is presented in the hope that other consortia or institutions will consider collaborating cross-institutionally, once they too learn about the management of collaborative projects.

Project and workflow management, change management, outsourcing best practices, and financial management can all be applied to cross-institutional collaborations. Technical services librarians know how to manage people and projects and they can apply these skills to collaborations.

A brief discussion of a sample of North American collaborative library projects is first provided, followed by the OhioLINK context. The environmental factors that foster collaborations are then highlighted. Practical methods for project implementations and best practices are offered as well as conclusions and next steps.

**SELECTIVE SURVEY OF COLLABORATIVE PROJECTS**

This section details several of the more successful technical services collaborative projects currently being conducted in academic libraries across the United States. It is included here to provide background for the work done within CollaboraTeS to define environmental conditions and best practices for collaborative work. While there have been many attempts by libraries to collaborate in the past, the most common type of collaboration involved having a shared Online Public Access Catalog (OPAC) or union catalog. The projects listed here attempt to expand the meaning of technical services collaboration in libraries by collaborating in more innovative ways than a simple union catalog. These projects are examples of what can be done collaboratively.

The 2CUL project, initiated in 2009, is a cooperative partnership between Columbia University Libraries and Cornell University Libraries. This broad integration project includes collaboration in
cataloging, e-resource management, collection development and digital preservation. This is a special collaboration between two specific libraries in close proximately to each other who are sharing library staff and resources.\(^1\)

The Next Generation Technical Services project was undertaken by the University of California Libraries, which is comprised of multiple libraries on 10 separate campuses. The main focus of Next Generation is on providing a statewide OPAC and centralized cataloging for all libraries that crosses institutional boundaries. This collaborative project includes a wide range of libraries sharing a common technical services system.\(^2\)

The Orbis Cascade Alliance is similar to OhioLINK, and services 37 university and college libraries in Oregon, Washington, and Idaho. Since the 1990’s this consortium’s work has grown and expanded to include collaborations in collection development, ebook purchasing and cataloging; cataloging of foreign languages; and specialized cataloging. The Alliance’s current focus is on standardizing workflows and sharing funding models between all libraries in the alliance.\(^3\) Most recently Orbis Cascade has issued an RFP for a Shared Library Management Service, which will include a single shared technical services solution,\(^4\) thereby facilitating workflows that cross institutional boundaries.

Denison University and Kenyon College, two small liberal arts schools located in southeastern Ohio, are both members of the Five Colleges of Ohio Consortium. These two libraries have combined their technical services departments to provide greater efficiency and flexibility. Work flows across institutional lines with one institution handling approval materials and the other handling smaller, direct orders.\(^5\)

The New York Public Library, Columbia University Libraries and the New York University Libraries’ Manhattan Research Library Initiative (MaRLI), allows research material to circulate between the three institutions and coordinates research collection purchases.\(^6\) This a first step that Damon Jaggars, Associate University Librarian for Collections & Services, Columbia University, predicts will lead to cross-institutional projects, with digitization predicted to be their first.\(^7\)
Each of these projects has been successful in their own right, and all of them grew out of administrative or consortial projects. Their methods reflect that orientation. In contrast the CollaboraTeS Toolbox focuses on providing the information and tools needed to foster smaller grass-roots projects that could be initiated between individual libraries, rather than by administrations or consortiums.

**OHIOLINK CONTEXT**

Information on the roots of the CollaboraTeS project is provided here to further contextualize the work described in this paper. In 2006 the OhioLINK consortium determined a need to reassess its service model. Early in this process it was recommended that OhioLINK libraries look across institutional boundaries to seek group actions and partnerships to increase effectiveness and efficiencies. By 2007, then Executive Director Tom Sanville had outlined a vision for the University System of Ohio that called for increasing cost-effectiveness by collaboratively and collectively managing the growing physical and electronic collections. To partially articulate this vision, the Group Technical Services Task Force was charged with exploring ways to aggregate or centralize technical services activities. Expected benefits included: cost savings through staffing efficiencies and discounts, greater standardization among member activities, reduced duplication, and improved expertise for libraries that have few staff resources.

The OhioLINK Database Management and Standards Committee (DMSC) is the standing OhioLINK committee charged with maintaining standards for the central catalog, and to create policies and procedures for consortial metadata. This committee is most concerned with technical services issues and collaborative activities.

To realize OhioLINK’s vision, DMSC asked Margaret Maurer, Julie Gedeon and Barbara Strauss to create an inventory of technical services expertise within OhioLINK libraries. The inventory, and the best practices documentation that was later created to accompany it, comprise the CollaboraTeS Project’s Toolbox. The CollaboraTeS mission is to foster collaboration between technical services departments. The vision was, and is, that institutions would be more likely to participate in collaborative ventures if
they were aware of the resources that other institutions had or needed, and if they had information about collaborating.

As a first step, OhioLINK institutions were surveyed to gauge institutional willingness to share, barter or contract expertise with other libraries. Institutional needs were also inventoried. Expertise was revealed in foreign languages, formats, cataloging schema, metadata standards, technologies, OCLC products and services and participation in PCC programs. The survey proved that OhioLINK libraries’ technical services units had the capacity to engage in collaborative technical services projects. The survey resulted in the creation of the CollaboraTeS Database (the inventory) which is available to OhioLINK libraries at the CollaboraTeS Toolbox on the OhioLINK web site. (http://platinum.ohiolink.edu/dms/collaborate/).

The survey revealed some interesting findings about OhioLINK libraries, several of which are relevant to this discussion. Libraries large and small were willing to barter, share or do work on contract for each other, and smaller libraries, in particular, indicated a willingness to share across all the survey categories. More libraries indicated having expertise than needing it, and OhioLINK libraries were more likely to identify expertise than they were to identify needs. This all seemed very promising in terms of fostering collaborative librarianship.

Margaret Maurer and Julia Gammon then began work on the creation of tools to foster cross-institutional collaborations. Information on workflows, costing models, agreements and projects are now available for use at the CollaboraTeS web site (http://platinum.ohiolink.edu/dms/collaborate/). Maurer also undertook research into the environmental conditions that foster collaborative librarianship, which is also available at the site.

The next several sections of this paper will focus on what was learned. A discussion on what was discovered about the environmental conditions for collaboration is followed by what was learned about best practices for implementing collaborative projects.

ENVIRONMENTAL CONDITIONS THAT FOSTER COLLABORATION
Collaborative projects do not take place in a vacuum. They are impacted by their management practices, work cultures and their consortial environments. There are, however, some characteristics that are more prevalent in successful collaborative projects.

Writing in 2007, Marilyn Mitchell identified change management best practices as pivotal to cross-institution collaborations. Mitchell lists the following factors that impact organizational change to build cross-institutional collaborations: how well the organization manages change and risk; the importance of strong leadership leading the change; broad buy-in by staff and constituents; the contributions of outside assistance, perhaps through consultants or other professional colleagues; careful, comprehensive planning; excellent communications; group decision making; original thinking; and time and timing—managing the group’s time, and initiating at the best time.36

Organizational work-culture has also been identified as having an impact on successful collaborations. Emily Prather-Rodgers observed that workflow re-design disrupts current processes, many of which may have protective constituents.37 Therefore Scott Wicks and Robert Wolvern’s assertion makes sense that activities that are new to both parties are often easier to re-engineer into more collaborative workflows.38 Ravit David, Kate Davis and Alan Darnell also report that when established systems exist there is greater potential for pushback from the stakeholders.39 This is one of the reasons Jan Hayes and Maureen Sullivan recommended using an independent consultant when re-designing workflow.40 Rick Lugg, as interviewed by Cory Tucker and Chris Sugent, reported that the more problematic part is human nature itself; the mental and political hurdles, needed to deal with change.41 Lugg went on to say that “Sharing can be difficult and uncomfortable. It involves a loss of control – and to some degree a dilution of one’s institutional identity.”42 Lugg also recommended exploring shared work in areas that don’t require collocation, where there is a volume of work, and where resources are leased [licensed] rather than owned, because there is less resistance to sharing.43

The complexities of the consortial environments pose a challenge. For example, libraries that want to share cataloging skills within their consortium must consider the implications of any OCLC commitments.44 Roberta Winjum and Annie Wu articulated that belonging to a consortium compromises
local interests and diverts staff time. Xudong Jin and Margaret Beecher Maurer wrote that, “the overlapping layers of consortial agreements that connect libraries form almost a web that can be constricting.” Again, according to Lugg, decision-making becomes more complicated and travel to more meetings is required. “Sharing well is hard work.”

Given all this, what features do successful collaborative projects have in common? Margaret Maurer selectively surveyed North American collaborative projects and found that some commonalities were present in more successful projects. These included:

- They have strong support from the top or from strong local advocates.
- They have pressing economic reasons to collaborate.
- They are geographically proximate, or they at least have good delivery systems.
- They have experience creating memoranda of understanding and other workflow agreements.
- They exhibit similar work cultures and collections.
- They have experience cooperating with each other.
- They hire a consultant and utilize good project planning and management practices.
- They utilize grant money to provide structure, accountability and cash.
- They manage communications and staff buy-in well.
- They have a shared backend on their library automation system.
- They plan a collaboration that is manageable in size.
- They neutralize territoriality, particularly for already-existing workflows.
- They trust each other.

The conditions identified as fostering collaboration did not all appear to be present in each successful project, but some mix of them did, and successful projects exhibited a synergistic balance.

The discussion so far forms the basis for a more practical discussion on best practices for implementing a collaborative project.
BEST PRACTICES FOR PROJECT IMPLEMENTATION

Planning

Any collaborative project includes a planning phase, an implementation phase, and an evaluation and assessment phase. Details on best practices for each of these three phases will be provided. Throughout this discussion the initiating library is differentiated from the providing library. One institution always starts the conversation, and that library is referred to here as the initiating library. The initiating library may be articulating a need it has, or it may be offering a service.

Careful project planning is important both for the library initiating the service and for the library providing the service. Planning helps avoid problems that can occur down the road. The initiating library first must define the scope of the project. For example, it could be a project to acquire expertise that the library lacks, or to support a staffing shortage. Many technical services tasks lend themselves to collaboration such as cataloging, ordering, serial check-in, binding, electronic resource management, sharing best practices, digitization projects, etc. The project may have multiple parts, or not. It is recommended that first-time collaborators start simply and small, expanding only when they have attained more experience collaborating with each other.

Next, ensure that administration supports the collaborative project. This will be needed as the project moves forward. Check to be sure there are no personnel issues that might affect the project, such as a staff union contract with restricts on what can, or cannot, be done. Once you have confirmed it will work, ascertain if you have the staff needed to coordinate or direct the project.

The library initiating the project may also want to determine if it is more economical to do the project commercially or with a collaborating library. Do not assume that collaboration with another library will always cost less than paying a vendor. Price quotes can be requested concurrently. Of course, if the other library is willing to barter or trade for the work, then those payments will not be a factor. Also
be aware that there may be other reasons for going with a collaborative partner, such as building relationships and experience for future projects.

The next step is to locate a library that might be willing to share their expertise. This can be problematic, because directories of technical services skills do not exist. For OhioLINK libraries, locating another institution is easier because of the existence of the CollaboraTeS Database of Expertise. The development of similar regional directories is recommended, and can be done following the CollaboraTeS model.

Locating a library in the absence of such a directory can require some creative searching. Current partners are of course a first source. Don’t make assumptions about other libraries’ capacity to provide expertise. Research by Margaret Maurer, Julie Gedeon and Barbara Strauss has shown that participants in the Program for Cooperative Cataloging (PCC) libraries tend to have more resources, and more resources to share with other libraries. This might be a good place to start. Maurer, Gedeon and Strauss also discovered that small as well as large institutions have specialized expertise, and that some smaller libraries will have the capacity to offer that expertise to the right partners.  

Locating a partner library that is proximate will facilitate sharing.

Once the potential partner library is identified, the next step is to establish a relationship between the two institutions. Taking the time to build this relationship will build trust, grow buy-in and improve communications. This is especially true if the two libraries have never worked together. If the libraries are geographically proximate, then a visit might be in order.

The library providing the service will also need to plan. Making sure the administration supports the collaboration is especially important. Take some time to determine what the impact could be on the local workload. Does the capacity really exist to do the work? No one wants to so over-burden staff that morale is impacted. However, in a barter situation in particular, increasing workload in one area may lessen it in another.

Project Implementation
Project specifications and workflow must be defined for each project at an appropriate level of detail. This ensures that all participants understand how the project impacts their work. Good project communications also depend upon agreed-upon expectations.

For example, cross-institutional cataloging projects represent unique challenges for libraries because the resource, or its surrogate, must be transmitted to the cataloging institution. The cataloging records must also be transmitted.

OCLC libraries can utilize a Connexion save file to transmit records. This can be done in several different ways. The cataloging institution can use one of the receiving institution’s OCLC authorizations to place records in a save file. The receiving institution then accesses this same file to update the record, bring it into the catalog and post holdings. In this model the cataloging credits are earned by the receiving institution. A second model has the cataloging institution using its own authorization to create and update the bibliographic records, but not to post holdings. The OCLC number is transmitted to the receiving institution, where the record is downloaded, and holdings are posted. In this model the cataloging credits are earned by the cataloging institution. Holdings can also be batch-loaded, with the cataloging institution communicating the OCLC numbers via spreadsheet or text. The third model involves the cataloging library receiving an OCLC agent authorization for the receiving library. This model is the most efficient, as the holdings can be posted at the point of update by the cataloging institution. The cataloging credits are also earned by the cataloging institution. This model requires some setup, and is therefore more useful for on-going projects.

Both the library receiving the service and the library offering the service will need to appoint a project coordinator or leader. Both leaders will need to understand what the service agreement will be and have the authority to get the job done. Regular communication through this centralized conduit will limit errors and confusion. As discussed above, more successful collaborative projects have been shown to have buy-in from staff participating in the project. Trust development between project participants will come with time, but must be jump-started initially by the project leaders.
Having a beta test, or trial run, and evaluating how well it went, will provide the project coordinators with a method to evaluate the planned project workflow. This trial run will allow both sides (the providing and receiving libraries) the opportunity to modify the plan. It also allows everyone to ensure that the specifications on the work to be done are met. Timelines are important and should be discussed in the planning process. The library receiving the service may have an expectation that the library offering the service can’t meet. Understanding the start date and the completion date (unless it is expected to be ongoing) is vital to the success of the project.

Methods of Compensation

OhioLINK libraries do not have extensive experience determining how to compensate other libraries for doing work. There are a variety of models for arranging for compensation for inter-institutional collaborations, regardless of whether the collaboration is long-term or short-term. The first is to do the work at no charge. Many libraries have informal relationships with other libraries on an as-needed basis. Alternative compensation may include credits or deliverables from other partners or vendors, such as receiving OCLC cataloging credits.

Another attractive option for collaborations is the barter system. Here institutions agree to exchange services or skills. For example, one library may have language skills and another has systems expertise. This sort of arrangement is most useful when institutional skill-sets complement each other.

Some consortia have experimented with barter systems that use non-cash tokens or inter-institutional credits to track contributions. For example, the Appalachian College Association created the Tony Tokens voucher system for this purpose. Though cashless, these systems require tracking and maintenance to process credits, so they are not entirely free.

Finally, libraries can charge other libraries a fee, either for cost recovery, or to make a profit. Tasks and jobs may be tracked by the project, by the item or by the hour. There is an array of pricing models available to estimate how much it costs to do the work. Be certain that the estimated costs account
for the expertise needed to do the work. Remember that payment procedures will need to be defined, including any needed financial accounting.

OhioLINK libraries also have to determine how much to charge partner libraries. This can be a complex process, and was therefore one that more information is provided for on the CollaboraTeS Toolbox. Before two institutions can determine the price of performing a collaborative service, they must estimate the cost of doing the technical services tasks involved. Knowing specifically what it costs for a library to perform a task can be useful for planning purposes and for deciding what to charge the institution needing the work.

Costs can often be very specific to individual institutions and care must be taken to find the appropriate methods of cost analysis for the libraries and for the specific tasks. The devil, of course, lies in determining what will be measured and how it will be measured. In a final report submitted to the ALCTS Heads of Technical Services in Large Research Libraries Interest Group by the Task Force on Cost/Value Assessment of Bibliographic Control, a set of elements was defined as contributing to costs for cataloging alone: staff salaries, benefits, time spent for all bibliographic control activities, cataloging tools, database maintenance costs, and overhead. While this list concerns only cataloging costs, it is a good place to start when determining what to measure in technical services.

According to Richard M. Dougherty, there are many ways that technical services costs can be calculated. It is therefore important to let the purpose of the analysis guide the type of measurement used. This sounds obvious, but the costs chosen to be included will impact the results. Therefore when the library is calculating costs, it should measure the cost of only the functions that are part of the workflow. If the collaboration does not include shipping costs, don’t include them in the analysis. If the goal is to charge cost recovery only, then a less detailed pricing model may be the choice.

At the most basic cost accounting level, libraries can calculate the unit cost (the cost per unit supplied) by using the following:

\[
\text{Unit cost} = \frac{\text{cost of producing N units of work}}{N}
\]
The cost of producing work can include the cost of ordering an item, the license fees, cataloging costs, and physical processing costs, etc.\(^5\)5

Staff costs represent a significant cost within the library budget. When it is possible to know how long it takes staff to perform task(s), then divide the staff costs by the time to do the task to arrive at the unit cost for the task. This formula can be used to measure the cost of doing a task, or a group of tasks. Unit costs can consist of work done by several types of staff just by adding them together. The institution providing the service would more easily provide this cost analysis.

Note, however, that this calculation does not include the cost of staff benefits. These costs can be considerable. It is recommended that the cost of benefits be included in cost analyses in order to obtain more accurate data. The U.S. Bureau of Labor Statistics reported that in September 2011 employee benefits represented between 29.1\% and 31\% of employer compensation costs.\(^5\)6 The institution may make actual cost information available, or standard percentages may be defined for this purpose. Simply add these costs to the staff costs in the equations above.

The cost of supplies used in task performance can be included in the calculation. These costs can be derived for a workflow by dividing the cost for the supplies by the number of items in the supplies. These figures can then be added to any of the equations above to reflect more accurate costs.

Overhead costs may or may not be taken into consideration. Direct costs can be attributed to a specific activity or cost center. Indirect or overhead costs cannot be assigned to any one activity, but rather support an array of activities. This category can include activities such as clerical support and administration, building furnishings, postage, telephones, and rent.\(^5\)7 Traditionally these costs are allocated based on the percentage of labor costs. If, for example, sixty percent of the unit’s salaries are connected to the activity under study, then sixty percent of the unit’s indirect costs would be assigned to the total cost.\(^5\)8 Generating these figures is a complex process that requires effort and expertise, but some cost estimations require them.

Finally, if it is not always possible to start by knowing exactly what it costs to perform a function, then there are other ways of estimating costs. For example, find out what a vendor charges for the task
and consider if that is appropriate. This may not be the most accurate method, but in some circumstances it will suffice. Another source is data reported in the literature. According to Robert M. Hayes and Virginia A. Walter, analogies can also be made from comparable tasks.⁵⁹

Writing a Memorandum of Understanding

It is highly recommended that a memorandum of understanding (MOU) be created between two collaborating institutions. However, there is little information available in library literature on what to include in a memorandum of understanding for cross-institutional collaborative projects, and therefore information on crafting a MOU for outsourcing technical services has been examined. According to James Kopp, the MOU provides a method of establishing and documenting partnerships.⁶⁰ Expectations are clearly defined when the project partners take the time to create a MOU. The MOU can be a very simple document or a highly detailed one, and the necessary level of complexity for the MOU should be defined by the nature of the project, and by the relationship between the two institutions.⁶¹ Even projects that do not involve monetary payments could be guided by a MOU. According to Shelia Pantry and Peter Griffiths, the specifications should be flexible enough to allow for changes and unforeseen roadblocks, but specific enough to allow monitoring.⁶² Also, many MOU suffer from excess focus on the quantitative aspects of the agreement while, “what is more useful is a focus on the quality of the service.”⁶³ Shelia Pantry and Peter Griffiths recommend that outsourcing agreements state what is needed in a service statement, define the mechanics and process of fulfilling those needs and describe the quantities of work to be handled and the ways of measuring them.⁶⁴ All of this applies to collaborative projects.

David Ball recommends that a MOU include information about: the duration of the agreement, concretely defined deliverables and methods, manager and contract names for both parties, quality assurance measures, costs and resources.⁶⁵ Defining a schedule and timeframe for completion, including turn-around times will help both institutions manage the project. If the library is charging for the work, define how payment will be made, and which accounts the money will be paid to. Pantry and Griffiths
suggest that a glossary might be included for more complex agreements to prevent term confusion.\textsuperscript{66} Turnaround times need to be defined.\textsuperscript{67} Arnold Hirshon and Barbara Winters point out that there may be boilerplate language that the library requires be included in any agreements. Check with the library administration to see if this is the case.\textsuperscript{68}

Project Evaluation and Assessment

Once the project is implemented, periodic maintenance is required. Communication is the key to a successful implementation. Regularly scheduled meetings, targeted emails, and phone calls enable discussions of project status, progress and problems. Both parties must remain flexible and open-minded as unexpected situations could occur. Full production may not be the same as a beta test. The original timeline or workflow may require changes. Evaluative measures such as benchmarks and timetables should be agreed upon in advance. Provisions also need to be made that enable needed changes, or the cancellation of the project.

Periodic and ongoing evaluation and assessment is important. This gives project participants the opportunity to assess how things are going and to make modifications as needed. Changes in procedures may be required by something outside the prevue of the libraries. For example, there might be a rule or standards change, a vendor problem or other outside influence. Or an internal change at one of the libraries could occur, such as a staff change or an open position. Institutions can avoid frustration and problems by having scheduled times for communication and assessment.

CONCLUSIONS

Collaboration represents a bright future for libraries struggling to meet tight budgets. Cross-institutional collaborative projects are happening throughout North America, and technical services librarians are becoming involved. The CollaboraTeS Toolbox is an attractive alternative because it focuses on
providing the information and tools needed to foster smaller grass-roots projects that could be initiated between individual libraries. Using the tools outlined in this model other consortia or institutions could consider collaborating cross-institutionally.

Creating an inventory of technical services expertise would be useful for identifying new collaborative partners. Facilitating the discovery of collaborative partners is a key factor in facilitating collaborations. Simply seeing where expertise exists can stimulate activity. The authors recommend the development of regional inventories for this purpose.

Environmental conditions such as management styles, work cultures and consortial environments have been found to impact collaborative projects. Some of these factors are givens, or even barriers, but environmental conditions can be improved. It is recommended that technical services librarians look to the literature on change management as a resource.

Many of the best practices used to manage internal workflows, consortial relations and outsourcing projects can be applied to cross-institutional projects. By applying knowledge from one arena of librarianship to another, librarians will better manage collaborative projects. Technical services librarians know how to manage people and projects and they can apply these skills to collaborations.

Increasing skills in costing models, financial management and the creation of MOU are recommended for those new to cross-institutional collaborations. Additional information is available in business financial management literature and in library technical services outsourcing literature.

The next chapter for CollaboraTeS involves making OhioLINK institutions more aware of the resources that are available for collaborative technical services. Selling collaboration takes ongoing work. Without constant reminders, it’s too easy to forget that partnerships need to be developed, nurtured and expanded. Work will include finding ways to make information available and reminding potential users of the successes that have been achieved so far.


7 Ibid.

8 “OhioLINK: Connecting People, Libraries and Information for Ohio’s Future – 2006 and Beyond; Continuing the Task,” (working paper, Columbus, Ohio: OhioLINK, April 2006), 3-5.


Maurer, Gedeon, and Strauss.


Ravit David, Kate Davis and Alan Darnell, telephone interview with the author, February 23, 2011.


Lugg, Tucker and Sugnet, 21.

Lugg, Tucker and Sugnet, 19.


46 Jin and Maurer, 41-58.

47 Lugg, Tucker and Sugnet, 21.


50 Maurer, Gedeon, Strauss.

51 Ibid.


55 Ibid., 169.

57 Dougherty, 168.

58 Ibid., 180.


63 Ibid., 35.


66 Pantry and Griffiths, *Managing Outsourcing*, 64

67 Ibid., 103.