A Case Study of Migration to an Open Source ILS: Partnership among State Libraries

Vandana Singh

[1] School of Information Sciences, University of Tennessee, USA

Abstract: This case study will describe the experiences of librarians in a small consortium and their collaboration with the state library during the process of migration to an open source integrated library system (ILS). Social justice is conceptualized in terms of policies, such as the "redistribution of goods and resources to improve the situation of the disadvantaged" (Bankston, 2010). With this understanding of social justice—issues of resources, power balance and negotiations—will be discussed using case study as a methodology. The objective of this case study is to understand the roles played by different stakeholders and the power dynamics of such a collaboration through the lens of social justice.

Keywords: Case Study Methodology, Social Justice, Open Source Software, Integrated Library Systems

1. Introduction

This paper presents a case study of a small academic library consortium's interactions with its state library during the exploration and development phases of migration to the open source software integrated library system (OSS ILS) Evergreen. The paper uses the case study methodology to create boundaries for the case, describe participant-observer research methods and interactions, and explore how the case reflects social justice issues. This case study begins with the researchers' interactions with the small library consortium about best practices for migration, continues through these interactions, and ends with the consortium's being absorbed into the state library migration project and no longer needing the researchers' assistance. Data to analyze the development of the relationship between the consortium and the state library comes from meeting notes and email, phone, and face-to-face communications between the consortium, state library, and university researchers. Case studies such as this one are particularly useful for exploring social justice issues because they enable

the study of the interactions of different sub-groups or "embedded units" (Baxter and Jack, 2008: 550). This case study seeks to define and understand the power dynamics between a small library consortium and large state library system during the challenge of evaluating and implementing the new OSS ILS Evergreen.

2. Literature Review

This section is divided into two sub sections, starting with the basic definition of case study research and what it means followed by how case studies can be used to explore social justice and power relations issues.

Case Study Methodology

Case studies as a research methodology have become widely used in all disciplines (Kohlbacher 2006). Case studies have become common in education, political science, computer science, medicine, business, social work, and a host of other fields (Yin, 2003). Although there are many challenges associated with case study research, work on formulating theories of case studies in the 1970s and 1980s and rigorous practice of the methodology have transformed it as a more trusted method (Kohlbacher, 2006).

The essential definition of a case study is an empirical inquiry in a real-life context that consults multiple sources of evidence (Kohlbacher, 2006). Case studies usually concentrate on a single unit such as an organization or incident with the goal of generalizing to other units (Gerring, 2004). However, because case studies focus on individual incidents in the real world, they lack experimental control and generalize by suggestion rather than proof (Runeson and Host, 2008: 134). Attempting to replicate a case study in multiple incidents or programs can add some certainty and richness (Yin, 2009).

It has been notoriously difficult to define case studies and their units, but scholars have made very thorough attempts at shaping this definition. Merriam (1998) released one of the most thorough definitions of the case study and its usefulness in research. Merriam defines case studies as a study of a particular incident in a "bounded system" (27). Case studies can be described as particularistic or about a particular event or program, descriptive or having rich detail, and heuristic or illuminating new understandings (29-30). Case studies are concrete, contextual, and very much based in people whether the population being studied or the reader (31-32). Each discipline will have a slightly different formulation of the case study methodology that emphasizes some of these characteristics more than others (38). Some disciplines, for example, attempt more descriptive than particularistic case studies because they can be longitudinal and describe changes over time (Green, 2011: 7).

Case studies can also be defined in terms of the documentation and types of data they use. Documents, archival records, interviews, direct observations, participant observations, and physical artifacts are all possible data sources (Yin, 2009). Data from these sources can be analyzed for patterns, explanations, or changes over time.

Scholars have also attempted to specify exactly how case studies can be useful in research. Stake (1978: 5, 8) defines case studies as useful because they focus

on real-world knowledge without getting lost in abstract theories. He writes that case studies can be used to test hypotheses, provide complex and detailed descriptions, and make comparisons. Welch (1981) illustrates that case studies can make rational conclusions while still getting evidence from the emotions and intuition. The conclusions a case study makes vary based on the case study's goal. Some case studies aim to simply explore an incident or program, whereas others take on the more complex task of evaluation and improvement (Runeson and Host, 2008: 135).

One of the biggest strengths (and weaknesses) of the case study approach is its openness. Case studies have very few actual requirements, which allows them to be tailored to a real-world context but also leaves room to make many mistakes (Meyer, 2011). Having a comprehensive and detailed case study design is vital for overcoming some this challenge. The study's questions, unit of analysis, and criteria for interpretation and evaluation must be clearly defined (Kohlbacher, 2006). Being intentional about a case study plan and transparent about it in the reporting process can make the case study more scientific and generalizable to a certain extent (Crowe et al, 2011).

Many scholars have formulated details and ways to create and check case study designs for their validity and reliability. Rowey (2002: 21) proposes four tests for case studies. The test of constructing validity requires multiple sources of evidence and an established chain of evidence. The test of internal validity requires pattern and explanation building over time. The test of external validity requires replication in multiple case studies. Finally, the more general test of reliability requires a detailed case study database and records.

Runeson and Host (2008: 136) emphasize the importance of triangulation in establishing the validity of case studies. Using more than one data source, more than one observer, more than one type of collection method, and more than one theory or viewpoint all contribute to case study reliability. Combining quantitative research like survey responses and qualitative research like interviews is especially useful (Green, 2011: 2). This is especially important when the researcher has the role of "observing participant" rather than objective "researcher" (148). Finally, the researcher must be transparent when reporting the data, clearly communicating the collection method and articulating any conclusions in a way that is both fact-based and sensitive to the real-world organization (155). It is important to either avoid or be transparent about the researcher's bias (Green, 2011: 6).

Once a case study plan has been defined, another challenge of the method is actually sorting through the data. One of the benefits of case studies is that they provide very rich and layered data (Green, 2011: 6). However, the sheer volume of data from multiple sources can make it very difficult to perform a deep analysis (Crowe et al., 2011). Most researchers do not have the time or money to be truly thorough on every possible variable (Merriam, 1998: 42). It is usually better to answer a single question well than try to collect data about every aspect of a real-world situation or organization.

Case Study and Social Justice

Social justice has been defined in various ways throughout its long cultural, historical, and philosophical history. At its most fundamental level, social justice is based on the premise that "all people have the same status" (Stoll, 2011). Social justice is basically a policy of inclusion in which a society or institution provides all individuals with equal opportunities (Stoll, 2011). Although social justice can be seen as an abstract and formal theory, usually it is conceptualized in terms of policies, such as the "redistribution of goods and resources to improve the situation of the disadvantaged" (Bankston, 2010). Contemporary research on social justice topics is mainly concerned with developing a multidisciplinary and international approach (Miller, 2011; Tomblom & Kazemi, 2011).

Many qualities of case study research make them a useful tool for investigating social justice and power relations issues. Case studies of a single unit or organization often have "embedded units" for different interest groups that can be compared (Baxter and Jack, 2008: 550). The very nature of case studies includes multiple sources of data and perspectives, which means the opinions and interaction of these groups will be a major focus. Depending on how they are used, case studies can "give a voice to the powerless and voiceless (Tellis, 1997).

3. Methods

My relevant research experience comes from being the Principal Investigator on a research grant to study open source integrated library systems. In addition to surveying and interviewing librarians interested in open source software or using open source software, my research team interacted with a small library consortium specifically to help facilitate their migration to an open source ILS. The consortium eventually collaborated with the state library to ease migration. Power dynamics and social justice issues were apparent through our interactions with the consortium during this period.

The data for this study is a combination of different forms of communication between the research team and the consortium including face-to-face participant observation, phone conversations, the archival records of emails, and the resulting impressions of the research team. Neither the consortium nor the state library will be identified to protect their privacy and confidentiality. Multiple observers and multiple sources of data achieve reliability through triangulation. The qualitative data helps set up a library- and issue-specific case study that is (a) descriptive or portraying a situation, (b) explanatory or explaining the power relations, and (c) improving or beginning to formulate recommendations for library collaboration during open source migration.

4. Results and Recommendations

Specific examples of ways in which the small library consortium-state library interaction libraries illustrates issues of social justice and power dynamics. Examples are explored chronologically within the boundaries of the case study to illustrate the changing social and power dynamics over time.

Initial Planning: A Plea for Help – The small library consortium contacted the researchers at the University of Tennessee in February 2012 to discuss their migration process and request the researchers' advice and assistance. The consortium planned a 2-3 year migration to the OSS ILS Evergreen, including 18 months to evaluate, 24 months to test, and 7 months to develop before the migration process itself began. The consortium committee, made up of library directors and technical and other staff, also contracted with the OSS ILS support vendor Equinox for their help. From the beginning the researchers noted that the consortium did not have confidence in their ability to migrate on their own. The consortium hoped they would be able to rely extensively on the support of Equinox and the University of Tennessee to complete much of the work of migration.

Consortium Meetings: Decision-Making – The makeup of the consortium committee itself created power dynamics that were not conducive to quick or effective decision-making. The committee was made up of many members without much technical expertise. This caused problems because no one felt confident enough in their own research to make decisions or recommendations for the committee as a whole. According to notes from an early meeting, the consortium members "*encourage initiative but don't act independently.*" Small decisions such as the reliability of authority records in Evergreen degenerated into months of discussion and tasks to be completed at later meetings by smaller and smaller sub-committees. The researchers at the University of Tennessee offered simple system and functionalities recommendations only to find them lost in the deliberations.

Consortium Meetings: Expectations Miscommunication – The biggest source of miscommunication between the consortium and the university researchers was related to the level of work and responsibility to be carried by the University of Tennessee. Even though a Memorandum of Understanding (MOU) was created to clarify the expectations and responsibilities of each party, according to one of the researchers a "*disconnect*" occurred. The university researchers envisioned their role as providing recommendations and best practices for each step of the migration process based on past research as the consortium completed previous steps themselves. The consortium, however, began to expect more and more from University of Tennessee researchers and that they would actually perform key migration work such as creating demo sites and negotiating with additional vendors. According to one researcher, "*At this point it seemed to us that the [library consortium] team was floundering. They wanted everything handed to them and no one seemed to want to take responsibility for anything. They would go around and around on the same topic. We told them UT couldn't host their demo site.*" The university researchers provided screencasts and other informational resources to serve as "how to" guides for the consortium but reiterated that they would not in fact be doing the migration.

Consortium Meetings: Planning Miscommunication – Although the small library consortium wanted the university researchers to have a larger role in their migration process, efforts to include the university researchers in meetings

often failed. On multiple occasions committee members did not contact university researchers by phone to include them in meetings. According to one researcher, "*We never found out why our team member was not contacted, but we did find out that the meeting was very confused and disorganized which might be the reason*." One of the committee members said, "*We goofed in failing to call her during the last meeting, and she is unavailable today.*" Meeting notes also began to degenerate over the course of the migration process. As sub-committees did not report their research and progress on key tasks and action items, the entire consortium became confused about its status and how far along it had come in the migration process. One university researcher said "*accountability*" was the main issue. The university researchers suggested keeping all notes in one place by using Google Sites technologies, but the consortium did not adopt these technologies.

Communications Breakdown – For approximately three months in summer 2012 the consortium did not contact the University of Tennessee researchers to schedule meetings or share their progress. One university researcher finally contacted the consortium in early fall to share some relevant resources located but did not receive a response on whether the resources were useful.

Face-to-Face Meeting: Improvement Attempt – In mid-fall 2012 the university researchers traveled to visit the consortium. According to one researcher, "*The priority of the meeting was to establish a closer relationship [and] ensure a better flow of communication*" between the groups. After both groups shared a brief history of their research, discussion began about planning aspects of the migration. The consortium was still debating simple issues like authority files and tabling agenda items for later meetings, but the university researchers recommended only spending a couple weeks on such deliberations rather than months. Again the university researchers recommended the Google+ hangouts features to facilitate distance meetings, but the consortium decided not to adopt this technology. Meeting notes and records for later weeks were "*slowly*" provided to the university group according to one researcher.

Entrance of State Library – In late 2012 the consortium began having conference calls with the state library system. Originally they wanted to learn about how the state library migrated to Evergreen, but they quickly felt a desire to be included or absorbed in the state library system. The consortium was excited that the state library promised to complete their migration in just a few months and to buy the necessary equipment. The consortium also liked the fact that the state library was using two very experienced open source vendors for system migration and authority records. The fact that the state library migration was grant-funded meant that the small consortium would only have to pay $500.00 for migration, support, and training. One consortium member talked about the importance of "*building relationships with our neighbor libraries*" as a way to build goodwill and gain financial savings. According to one university researcher, this collaboration was the result of the state's recognizing "*the gap between library capabilities*" and wanting to close this type of "*digital divide.*"

The state agreed to let the consortium enter their system but did not allow all state libraries this privilege at this point.

Small Consortium, Big State Library: Political Deliberations – After the consortium decided to use the state library migration rather than migrating independently, numerous issues emerged regarding the consortium's autonomy. The consortium wanted the benefits of collaboration without being wholly absorbed in a merger with another system. The consortium was concerned first about viewing items in their system only and the permissions granted to users of other systems to borrow their items. The second concern was losing detail in item and patron records by moving those records into the system of a bigger library group. The consortium hesitated to even share their data with the vendor although this was necessary to get an accurate quote for their services. Despite these hesitations, the small consortium wanted to be considered "*priority number 2*" in the state library project. While the state library did not explicitly discuss the consortium's priority, agreements were made about how the consortium could maintain the autonomy of its holdings and records by using a hierarchy feature in the system. The consortium can also keep separate policies and rules in Evergreen. However, the state library recommended the formation of a smaller committee of the "*most experienced members,*" essentially moving some of the consortium committee out of the planning process.

Consortium-State Collaboration: Slow Progress – After discussing the benefits of collaborating with the state library and their vendors in the migration process, the small library consortium began to take the small steps needed toward migration such as weeding patron records. However, consortium committee members still remained confused about basic concepts like data mapping. The consortium finally seemed content with its responsibilities of organizing its own data while the state library and vendors took care of the system migration. For example, it was the state library's responsibility rather than the consortium's to begin developing protocols and guidelines for new record creation.

Continued Collaboration: Philosophy and Possibility – While negotiating the details of the merger, the consortium and the state library both expressed great satisfaction with the philosophy behind their collaboration. According to the state library, "*deciding to migrate to become a group collaborative usually offers buying power, more affordable systems and hosting discounts, access and discovery of resources across county lines and eventually resource sharing opportunities*." According to one university researcher, the small library consortium envisions "*sharing 'experts' [and] other committees*" to who will be able to more effectively "*share their knowledge*" and get the benefits of collaboration. The University of Tennessee's last contact with the consortium and state library ended on this positive note. While the negotiations and communications were themselves an enormous challenge, both the small and large libraries were able to compromise and find a solution that benefited everyone. While the state library had more leverage, it needed the consortium to begin the process of collaborating across the state. While the consortium lacked expertise and planning in its own committee, working with the state created

reasonable expectations and a structure to achieve them that facilitated effective work.

5. Social Justice Implications

The very nature of the small library consortium created the opportunity for challenging power dynamics before collaboration even began. The consortium's open source migration committee consisted of many members with little technical expertise, creating an environment in which deliberations lasted for months rather than weeks and no one felt qualified to make a final decision on migration data and vendors. The small library consortium seemed to want and need a "stronger" party with more expertise to come into their environment and solve their problems out of a spirit of goodwill. This desire led to various collaborations, some of which were unsuccessful due to unrealistic expectations. First, the library consortium wanted the open source support vendor Equinox to help with their migration, but the consortium was hesitant about sharing their data with the vendor. Second, the consortium wanted the university researchers to complete the migration for them, forcing the researchers to reiterate their previously agreed-upon role as facilitators and advisors but not as active parties in the migration. Over several months the consortium did not contact the researchers, perhaps disappointed that the university did not take an approach of offering up its expertise for free in the name of social justice and small library empowerment.

Luckily, just as the consortium committee was degenerating into confusion with sub-committees not reporting their work and results, a stronger group with more expertise and experience offered to help the small library consortium. Originally the small library consortium and large state library system met so that the consortium could learn from the state library's migration. However, very quickly upon seeing the state library's expertise and willingness to complete the consortium's migration in just a couple of months for a small fee, the consortium expressed a desire to be included in the project. The agreement to collaborate created excitement in both groups but also established a new environment of political deliberations and power dynamics. While not having much leverage, the small library consortium bargained with the state library to maintain its autonomy of data and policies rather than being totally absorbed. The state library genuinely wanted to include the consortium and thus allowed them the option of using hierarchical features in the Evergreen OSS ILS to maintain their autonomy. Overall, all parties involved benefited from the collaboration. The consortium found a group with expertise to help with the migration, the state library realized its goal of collaborating with other libraries across the state, and even the University of Tennessee researchers gained valuable first-hand experience working with and advising libraries on the adoption of OSS ILSs.

This particular scenario illustrates how case studies can be an effective tool to shed light on social justice implications. The "embedded units" of the scenario – the small library consortium, the open source vendor Equinox, the University of Tennessee researchers, and the state library – interacted and jockeyed for power

in various ways (Baxter and Jack, 2008: 550). The small library consortium sought to sway the other organizations to complete its migration without compromising their data or paying large fees or any fees at all. It was only when the state library entered the equation that both sides had something to gain from the collaboration. The small library consortium, which started in "the situation of the disadvantaged" with little expertise or leadership in its open source committee, greatly benefited from the state library's help in facilitating their migration (Bankston, 2010). The state library, on the other hand, gained the opportunity to realize its mission of helping and collaborating with libraries across the state. This mission has a definite hint of social justice in its attempt to "give a voice to the powerless" (Tellis, 1997). The state library's interactions with the small library consortium certainly brought the consortium advantages without compromising its voice.

6. Conclusion

In this paper we have explored how the case study method of looking at one library consortium's migration can reveal social justice issues inherent in merging and collaboration. We provided some concrete examples of how inter-library interactions in a specific instance reflect power dynamics. In future work, we look forward to gathering more extensive data on this topic through multiple case studies and establishing statistical significance, validity, and generalizability.

References
Bankston, III, C. L. (2010). Social justice: Cultural origins of a perspective and a theory. *Independent Review, 15*(2): 165-178.
Baxter, P. & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4): 544-559.
Crowe, S. et al. (2011). The case study approach. BMC Medical Research *Methodology, 11*(100).
Gerring, J. (2004). What is a case study and what is it good for? American *Political Science Review, 98*(2): 341-354.
Green, R. A. (2011). *Case study research: A program evaluation guide for librarians.* Santa Barbara, CA: Libraries Unlimited.
Kohlbacher, F. (2006). The use of qualitative content analysis in case study research. *Forum: Qualitative Social Research, 7*(1).
Merriam, S. (1998). *Qualitative research and case study applications in education.* San Francisco, CA: Jossey-Bass.
Meyer, C. B. (2001). A case in case study methodology. *Field Methods, 13*(4): 329-352.
Miller, J. (2011). Social justice work: Purpose-driven social science. *Social Problems, 58*(1): 1-20.
Rowley, J. (2002). Using case studies in research. *Management Research News, 25*(1): 16-27.
Runeson, P. and Host, M. (2008). Guidelines for conducting and reporting case study research in software engineering. *Empirical Software Engineering, 14:* 131-164.
Stake, R. E. (1978). The case study method in social inquiry. *Educational Researcher, 7*(2): 5-8.

Stoll, S. K. (2011). Social justice: A historical and philosophical perspective. *JOPERD: The Journal of Physical Education, Recreation & Dance, 82*(8): 36-39.

Tellis, W. (1997). Application of a case study methodology. *The Qualitative Report, 3*(3).

Tomblom, K. and Kazemi, A. (2011). Social justice research: Mission, prospects, and challenges. *Social Justice Research, 24*(1): 1-5.

Welch, W. W. (1981). Case study methodology in educational evaluation. Proceedings from the *Minnesota Evaluation Conference*. Minneapolis, MN.

Yin, R. (2003). *Applications of case study research*. Thousand Oaks, CA: Sage.

Yin, R. (2009). *Case study research: Designs and methods*. Thousand Oaks, CA: Sage.

.