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From the Selected Works of James Gross

March 19, 2009

National Library of Singapore Review

James Gross, *Drexel University*



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Group Final Project: Singapore Library Review

Group 2

Susan Etta Bachus

James Gross

George D. Lozowski

Jillian Elise Williams

March 19, 2009

Drexel University, Info 640

Introduction:

The Singapore National Library (NLB) was created on September 1, 1995 with the express mission of striving to continually expand the learning capacity of the country. To fully appreciate the importance of the Singapore library, it is helpful to first take a brief look at Singapore as a country.

Singapore is a very small country. Geographically, Singapore sits on the southern tip of the Malay Peninsula. It has a population of about 2.8 million people. A former British colony, it achieved independence in 1965 (Oder, 2004, p. 1). Singapore has been described as an island-city-state of about 646 square meters, with no natural resources (Sabaratnam, 1997).

Before approaching the task of identifying the issues involved in the changes undertaken by the Singapore public library system, it is important to delineate the goals of the Singapore National Library, and also to place those goals in the even larger context of the goals of the Singapore government. The impediments to those goals will clarify the question of what issues needed to be addressed in order to improve the success of efforts to reach those goals.

Poor, as noted, in natural resources, historically, Singapore's great wealth lay in utilizing "the professionalism of its civil service and the success of its development planning" to become "a regional business hub" (Hallowell et al., 2001, p. 2). "Space and manpower constraints" (Hallowell et al., 2001, p. 2) in Singapore, in the larger context of the "Asian economic crisis" (Hallowell et al., 2001, p. 6), led the government to focus on "Information Technology (IT), education, and training" (Hallowell et al., 2001, p. 2) in its development policy.

Obviously, the National Library occupies a key position to enable those goals. Indeed, in line with the government's general goals, the overall purpose declared by the National Library Board (NLB), cited by Hallowell et al., 2001 "is to continuously expand the nation's capacity to

learn through a national network of libraries and information resource centers providing services and learning opportunities to support the advancement of Singapore” (p. 1).

Further, the mission of the Ministry of Information and the Arts, which administers the public library system, was defined as being “to inform, educate, and entertain” (Hallowell et al., 2001, p. 3). However, during the 1990s, only 12% of Singapore's population even visited a library annually (Hallowell et al., 2001, p. 2).

A survey of public perceptions of the library system “revealed that the public found the comprehensiveness and accessibility of the Singapore Library's collection, services, and facilities inadequate” (Hallowell et al., 2001, p. 2). Moreover, morale within the library system was apparently also at rock bottom, given the characterization of the feelings of the staff, faced with pressure to change, as an attitude that “since things at the libraries could not get worse, they might get better” (Hallowell et al., 2001, p. 6).

Realizing the growing importance of the library for enhancing the knowledge of its citizens, the Singapore government felt that the library should be positioned as one of the key pillars of the national infrastructure to enhance citizen education (Sabaratnam, 1997). The government wanted to ensure that the country of Singapore maintained its global competitive edge. Thus, the inadequacies in the library system, noted above, compelled the government to analyze and remedy the reasons underlying these shortcomings, in order to utilize the library system as part of the government's strategy. To accomplish this goal, a comprehensive revamping of the library system was initiated via a study by the Library 2000 Review Committee (Chia, 2001, p. 343).

The Singapore library system consists of a country funded library structure. This structure includes college libraries, community libraries, and governmental libraries. Realizing

that the Singapore library system needed to be revitalized, government officials instituted the Singapore Library 2000 Review Committee. This committee conducted a library study between 1992 and 1994 (Chia, 2001, p.1).

Major Issues:

Based on the available literature, there appeared to be more than one interpretation as to the key areas or issues faced by the NLB library. Several additional articles by NLB library staff were examined, in addition to the Hallowell et al., 2001, report, in the course of this analysis. Three of these articles were cited due to their relevance.

The first supplemental article was by Dr. Christopher Chia, the first NLB director or chief executive. In his article entitled, “Transformation of Libraries in Singapore,” Chia identified infrastructure, services, content and people as being the four building blocks needed to transform the library (Chia, 2001, p. 344). The second article was by Ngian Choh, the current deputy chief executive. In his article entitled, “Library Advocacy: the NLB Singapore’s experience,” Choh identified the three key enablers of transformation as including human resources, technology, and organizational leadership (Choh, 2008, p. 2).

The third article was by NLB consultant and director Julie Sabaratnam. Sabaratnam’s article, entitled “Planning the Library of the Future-The Singapore Experience,” identified the areas of human resources, technology, and organizational leadership as being the three key enablers (Sabaratnam, 1997). Hallowell et al. (2001) mirrored the issues identified by Choh, indentifying the core issues as three pillars and identified them as organizational leadership, technology, and human resources (Hallowell, 2001, p. 4). The core issues were thus identified as including: Organizational leadership, library infrastructure, library services, library content, and library staff.

Based on the Library 2000 study, and the above cited papers, a comprehensive list of recommendations for library reform was formulated. These recommendations included the following five issues:

- 1. Organizational leadership**
- 2. Infrastructure-implement IT systems & library design**
- 3. Services- new library services**
- 4. Content-revamp the library collections**
- 5. People- hire trained library staff**

1. Organizational leadership was deemed as being essential to implement the recommendations of the Library 2000 library study. This consisted of hiring managers who would have experience in analyzing problems and finding solutions to them.

2. Library infrastructure was important as library patrons were dependent on the institution's physical and daily operations for information retrieval. Library infrastructure consisted of the re-design of existing and future planned library buildings, office personnel to coordinate services and programs, and IT systems to help manage all of the data.

3. Library services were important as the library wanted to be perceived as being part of people's lives. These services could include such items as in-library classes on subjects of self-development, library exhibits, art exhibits, group lectures or musical concerts.

4. Library content related to information that people sought. This included databases, reference services, and interlibrary loan services.

5. Library staff consisted of the requirement to re-train existing staff and hire new staff to handle all necessary library assignments.

Now, let us examine the specific issues faced by Singapore's library system in each of these areas:

I. Organizational Leadership

Much of the original resistance to change apparently originated from staff uncertainty as to how the new changes might influence their job security. Reassuring staff that this was not the case, and showing a strong commitment to the retention and development of existing staff (as well as the hiring of new staff) would prove crucial to the change process.

II. Infrastructure

One of the greatest weaknesses of Singapore's library system was the highly inefficient operation of existing systems and services. Long lines were a particular source of aggravation for patrons (and harried librarians as well, no doubt). Many processes (ILL, checkout procedures, etc.) were not automated or did not take full advantage of the systems already in place, leading to lengthy service and processing times, and decreasing the convenience and appeal of library services while driving up costs. Some of the automated services already in place—such as the physically awkward and often inaccurate book barcodes—were considered unwieldy and in need of improvement (Hallowell et al., 2001, p. 9).

Further, many staff members did not have access to computers. Obviously, this provided a major obstacle to many of the libraries most important objectives: computer literacy initiatives, staff development, and a more integrated, efficient, and modern IT infrastructure.

III. Services

Overall library use was quite low, no doubt in part because of the expressed displeasure at the state of most branch libraries. The long lines and unorganized piles of unshelved books caused by the infrastructure shortcomings we have already discussed had much to do with this. If Singapore's libraries were to prove themselves up to the task of attracting users (let alone fulfilling their stated educational mission), they would first have to address these fundamental problems and make the country's libraries more convenient and pleasant places to visit.

IV. Content

Historically, the library system had placed largely similar content in each library, meaning that collections were replicated many times over many different branches. This entailed excessive expenditures on many different copies of any one book or item. The overall result was a slower and less diverse acquisitions policy. The budget restrictions imposed by this policy also resulted in the retention of outdated materials, making the average shelf-life of a given book 11 years—much higher than desired (Hallowell et al., 2001, p. 2). Given the importance of computer and technology related content to the library's stated educational and cultural mission, ensuring the availability of more timely content was a major concern.

V: People

In addition to employee concerns caused by the impending reforms, the library system faced several other challenges related to staff and human relations. Salaries were rather low;

thus, despite a remarkably good retention rate of highly experienced staff (Hallowell et al., 2001, p. 1), the library system faced difficulties in attracting and retaining newer hires.

As a result of the Library 2000 study, the NLB management realized that they needed to change the entire image of librarianship. In fact, before the Library 2000 Review in 1994, "...the library service had the dubious honor of being the lowliest paid service in the entire civil service" (Chia, 2001, p. 347). Singapore had to change the image of librarianship to make the field a more appealing prospect. If Singapore was to improve on the perception of librarianship as a profession, they had to properly reward their librarians who provided exceptional services.

Hiring difficulties were exacerbated because the library system did not have full direct control over its own hiring policies and practices. Instead, Singapore's civil service hiring system would direct applicants to any branch within the government (including the library system) according to their own preconceptions of what sort of position an applicant was best suited for (Hallowell et al., 2001, p. 6). This limited the library system's ability to set appropriate job requirements, and did not allow for more proactive recruiting practices. Thus, libraries encountered difficulty in finding appropriately qualified candidates with the specific expertise required for their needs and initiatives.

Implementation:

Changes were implemented to address each of the key areas of concern we have outlined. For the sake of our discussion, we shall break these changes into three essential categories:

I. Changes to Leadership and Staff Matters

II: Changes to Infrastructure and Content

III: Changes to Services

I. Changes to Leadership and Staff

Library Leadership was the first priority identified by the Singapore government, and several new management structures and officials were brought in to effect change. In 1990 Singapore established the Ministry of Information and the Arts. Minister George Yeo set up the Library 2000 Review Committee (Hallowell, 2001, p. 3). Dr. Tan Chin Nam was appointed chairman. Dr. Nam appointed Dr. Christopher Chia to be NLB's Chief Executive (Hallowell, 2001, p. 4). Chia was described by the Singapore press as one of Singapore's "top technology researchers" (Hallowell, 2001, p. 3). Dr. Chia built a team of core managers charged with boosting staff confidence, introducing improvements, and reducing resistance to change (Hallowell, 2001, p. 4). Chia declared a philosophy based on three key principles: professionalism, partnership, and people.

An important aspect of the new management structure was its focus on securing the support and collaboration of the professional librarians already working within the system. To foster staff confidence and a sense of partnership in the ongoing changes, Dr. Chia offered clear reassurance that current staff positions were not placed under threat by the change process, and actively sought staff expertise and input throughout the process. Relying on methods such as "early morning 'sharing sessions,'" Chia drew on their accumulated expertise and experience of his staff (Hallowell et al., 2001, p. 4). These practices proved invaluable not only in giving the reform process a practical grounding based on first-hand input, but also in inspiring staff trust and confidence in the change process itself.

There were also other measures taken to improve staff moral, training, and retention. Various changes were made to establish a more pleasant and professional atmosphere, as well as

address concerns over the attractiveness of current salary levels, the new management regime quickly implemented “a slight raise, new designer-conceived uniforms, business cards, and an improved workspace featuring artwork and partitions” (Hallowell et al., 2001, p. 6). The library system also took control of its own recruitment and hiring decisions, allowing it to bring in appropriately qualified new staff as needed.

It was apparent that library professionals had to stay abreast of new and innovative practices within their profession. Moreover, library professionals had to have refresher courses on the basic skills they learned during their course of study. Sessions in customer service training and computer technology were also held. Given the library’s mission to further computer use and information literacy, it is only fitting that it was considered a major goal to give librarians (and not just patrons) computer access and training.

Professional training keeps professionals engaged with new ideas, and allows them to take an active part in ongoing changes. Management methodologies were integrated into training sessions to make this connection even more explicit: “[A]ll professional and executive staff in NLB undergo project management training and now share a common language for seeding and managing projects” (Chia, 2001, p. 347). NLB management felt it important for employees to share in the mission and goals of an organization.

II: Changes to Infrastructure and Content

Library infrastructure was addressed through several strategic changes. A business process reengineering initiative was carried out over the course of seven months beginning in June of 1997 (Hallowell et al., 2001, p. 9). The initial investigation aimed to outline the procedures in place for handling various systems such as acquisition, circulation, and inter-library loans, and measure the time taken by such processes. This created a clearer picture of the

systems and procedures in need of change, and highlighted the inefficiencies already discussed.

Various changes were introduced to decrease delays and increase efficiency. Some were made possible by a new, more fully integrated IT infrastructure cataloguing system.

Centralization also proved to be a key element with the establishment of a new call-center based model for telephone reference, which significantly decreased “time-to-information” by cutting down on the delay in answering inquiries (Hallowell et al., 2001, p. 11).

Examining delays in various processes also prompted some changes some changes which were not so strictly speaking infrastructural, but which had far reaching infrastructural implications. For instance, the library system adopted much more aggressive and stringent requirements when dealing with book vendors and suppliers to ensure a more timely provision of materials.

Library technical services were re-located to a more centrally located location, reducing wasteful redundancy. During the course of developing plans for new and existing branch libraries, a decision was made to avoid needless duplication in local library content. Less high-use resources were strategically distributed among designated regional libraries. New, more fully automated and efficient procedures for circulation and interlibrary loan processing enabled this more practical and economic new collections policy. The aggressive library rebuilding campaign also provided test grounds for creative development at individual libraries.

The library also revamped its locations and public image. The NLB aimed for an “increase in number of regional and community libraries” (Chia, 2001, p. 344). To this end, libraries were placed in many new kinds of environments, including not just traditional stand alone buildings, but also locations within other institutions, and even inside shopping malls (Chia, 2001, p. 344). The NLB desired to place libraries at least ten minutes from every major

transport terminal. Public transportation is quite important in Singapore and is a primary means of travel for many citizens. Having libraries close to transportation terminals can thus greatly increase patron use of library facilities, accounting for a major increase in overall circulation.

Another technical improvement allowed for significant changes in service methods as well as efficiency, by allowing for a quicker identification of library books. RFID, radio frequency identification—a technology previously used to identify luggage for the airline industry—was incorporated to speed up book processing. The new system made dramatic improvements to circulation delays and allowed for innovations such as the introduction of branchless book returns. Library patrons were permitted to return books at any library regardless of where they had obtained the book. Thus, new technical improvements (RFID and a more centralized cataloguing and processing system) aided in tracking and sorting all of the books, allowing for new and more convenient practices.

A related innovation was the incorporation of the “Borrowers Inquiry Station.” This was a computerized self-service desk where library patrons could pull up their library account and pay library fines. Again, the overall objective was to reduce wait times and increase perceived convenience.

Singapore’s NLB desired to “connect different parts of the world” (Chia, 2001, p. 346). As part of this strategy, the NLB took steps to begin converting their public domain materials into digital format for increased patron access (Chia, 2001, p. 346). In doing so, the NLB would be able to provide access to more than “30 million” documents in one region (Chia, 2001, p. 346). In addition, the NLB began to forge relationships with other libraries in an effort to facilitate seamless online access to their public domain documents.

III: Changes to Services

New library services were developed as a result of the Library 2000 plan. These services were initiated in an effort to collaborate with local communities, businesses, and industry (Tan et al., 2006, p. 5). An integral part of this effort was NLB management's decision to seek opportunities on the global scale for collaboration. This collaboration resulted in the NLB forging strategic alliances with international institutions for the joint usage of databases, collections, expertise, and other resources (Tan et al., 2006, p. 6).

NLB worked to develop alliances on the national as well as international level. On the international level, NLB has formed alliances with such institutions as the British Library, the Russian State Library, the National Library of China, and the Shanghai Public Library (Tan et al., 2006, p. 8). Other global alliances include the Congress of Southeast Asian Libraries, the Hong Kong Lingnan University Library, Macau Central Library, and the Macau University Library (Tan et al., 2006, p. 8). These alliances have allowed the NLB to provide its patron base with the ability to access and exchange a wide range of information and knowledge.

On the national level, NLB engaged in a multi-tiered program with over 200 community organizations to help develop programs that would appeal to their constituents (Tan et al., 2006, p. 5). An important aspect of the drive towards better community cohesion was the decision to develop smaller libraries.

The effectiveness and popularity of smaller, more tightly targeted libraries is reflected in Singapore's newly redefined hierarchy of public libraries. At the head sits the National Library, a traditional full-scale research library, followed by Regional Libraries, which contain focused reference and research collections in selected areas, combining to provide a full integrated research service (which, as we have already noted) is enabled by an improved interlibrary loan

system). Under them lie Community Libraries, which focus particularly on high circulation. Neighborhood libraries are an even smaller-scale extension of the same principle, focusing specifically on resources and programs of particular use and interest to school students and their parents (Hallowell et al., 2001, p. 16). (Naturally, students and teenagers are major targets of government education initiatives).

Shopping mall libraries, another innovation, were positioned “in the key regional shopping malls to make inroads into the Singapore heartland” (Chia, 2001, p. 344). The shopping mall libraries have created quite a stir in Singapore and make up about 40% of all attendance and loans of library materials (Chia, 2001, p. 344).

The cozy shopping mall libraries provide its users with “a café, a music lounge, programming area and viewing rooms” (Chia, 2001, p. 344). One such library is an experimental service called Library @ Orchard (Chia, 2001, p. 344). The facility consists of a miniature library, sized at 1,500 square meters, and located in a busy shopping mall (Chia, 2001, p.344). This experimental library service was particularly successful at attracting a previously under-represented segment of the population, teenagers.

Children were not been left out of the picture in the service arena, either: NLB libraries set up “reading parks” for children. These were managed by librarians and designed to assist children with reading (Chia, 2001, p. 344). Thus, libraries were cast in a new role as learning pods where the desire for access to information and literacy encourage learning and research.

In addition, increased access, management training, and infrastructure changes increased user access and satisfaction. Singapore residents were now spending more time in libraries in comparison to movie theaters or cinemas: “[C]inemas have been suffering an attendance decline

in recent years while people are going back to the libraries” (Chia, 2001, p.345). The NLB has created libraries are the information hubs where children literacy is promoted and access is cherished.

As a result of these experiments and changes, there has been a ripple effect regarding the perception of the library by the public. Patrons appreciate libraries which compliment their existing lifestyles—places where they can go and relax. While there, they are introduced to the library’s potential as a vehicle towards self-improvement and self-enrichment.

Transformation

We would argue that the key critical factor responsible for transforming this organization was the close coordination of change within the entire library system, and, in fact, within the entire government. It is hardly coincidental that the library’s institutional objectives—greater education in computer use, establishing a more centralized, integrated, and efficient IT infrastructure—happen to coincide so well with Singapore’s broader national objectives. This integration was instrumental in obtaining support and funding, and it was also shows a canny commitment to taking advantage of the changes currently taking place outside the library.

For instance, self-help and computer education books (as well as online databases) were easy to justify as expenditures because they fit in with the government’s cultural and educational objectives, but they also proved popular as high-use items because the public embraced the culture of self-improvement the books were meant to foster. Changes do not take place in a vacuum, and Singapore’s library system is a striking example of integrated changes occurring on many levels. For instance, one essential factor that enabled the success of the transformation

was the simultaneous support, by the government, of “the construction of an advanced national information infrastructure, including extensive fiber-optic and cable networks that could connect every home, school, office, and factory” (Hallowell et al., 2001, p. 2), which of course provided the necessary substrate for the entire “Anytime—Anywhere” umbrella online service, as well as the library system’s new centralized IT infrastructure.

This centralization and coordination has had far reaching benefits for everyone. It has enabled the “rapid prototyping and the ability to transplant experience gained from renovating or building one library to the renovation or building of another” (Hallowell et al., 2001, p. 3), making the change process itself simpler, less costly, and more efficient. It has dramatically improved efficiency and convenience for patrons, who can now borrow a book from any library and return it anywhere, and perform many circulation tasks on their own with little to no wait, all making for greater familiarity and ease of use. It has even benefited individual libraries and librarians, by freeing up money in acquisitions budgets and enabling individual libraries to become “responsible for a certain range of the total collection” (Hallowell et al., 2001, p. 7), rather than each needlessly replicating the holdings of all the others.

Thus, the story of Singapore’s libraries is a story of integrated change. The Singapore government’s financial and logistical support of the NLB has been crucial. This support has enabled the establishment and implementation of centralized leadership structures throughout its gradual transformation. The ability to draw upon leaders with management leadership experience, such as Dr. Chia and Dr. Varaprasad, has enabled the NLB to develop into a global information enabler.

Based on the available published material, it is apparent to us that the NLB's managerial leadership has proven to be crucial to NLB's growth and success. The NLB's management team has used its leadership skills to ensure that current and future decision making remains in line with NLB's mission objective. It is our opinion that this detailed planning, as referenced in this report, is evidence of the NLB's efficient usage of government funding and logistical support. This support has enabled the NLB to explore developmental goals without being inhibited by managerial expertise or budgetary limitations.

In short, whether designing new information portals, new cultural exhibits, or new outreach programs, it is apparent that the NLB's ability to coordinate all activity through a core group of experienced managers has simplified the logistics of information delivery by the National Library of Singapore. This core group of managers has worked hard to establish the mechanisms which ensure that the planning, design, and implementation of new patron services can be effectively accomplished. It is not simply library operations which have become more coordinated and integrated, but the very style of management—indeed, the very change process itself.

In conclusion, it is our opinion that the high level of coordination among NLB managers, outside industry experts, and between the NLB and the Singapore government has resulted in the NLB becoming an enabler of change in the structures and methods of information delivery. We refer to this multi-level process as an “integrated change.” Based on the information it has made available in published articles and reports, it is clear to us that the NLB is working tirelessly to achieve its goal of becoming a “learning nation” (Sabaratnam, 1997).

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Group Assessment for Group 2:Timeline:

1. 1/27/09: Susan started the process off with an entry in the Group 2 Course Discussions Board, posing a question to all about how the group members preferred to proceed.
2. 1/30/09: James submitted his contact information in the Group 2 Course Discussions board and invited the others to follow suit, which we did.
3. 2/12/09: Susan posted a question in class week 5 Discussion Board about appropriateness of (proposed) group plan for dividing work and received affirmative reply (plus qualification) from Professor Krasulski.
4. 3/05/09: James located and downloaded in repository for group the 2000-20005 NLB Annual Reports.
5. 3/06/09: James located and downloaded in repository for group the 2006 NLB Annual Report .
6. 3/06/09: James posted suggestion in the Group 2 Course Discussions Board proposing a group chat, which was followed by a series of emails among the group and the decision to utilize phone calls (by dyads) and emails (sent to whole group) instead, as more efficient solutions.
7. 3/08/09: George emailed and posted to the Blackboard Small Group area a proposed outline on challenges and improvements presented in the target article, inviting

discussion of issues and soliciting further suggestions of possible paper structures. This outline was effectively adopted by the group in future drafts.

8. 3/08/09: James located and downloaded in repository for group a series of published articles that discuss the Singapore library experience.
9. 3/08/09: Susan posted some encouraging words on group project experience in class week 9 Discussion Board.
10. 3/08/09: James alerted group, via email, that he was placing PDF files of published articles relevant for our project in the Blackboard Small Group project section.
11. 3/08/09 - 3/12/09: James located and downloaded for group several more published articles that discuss the Singapore library experience.
12. 3/12/09: more discussion (group emails from Jill & Susan) about how to best discuss progress on project as a group.
13. 3/12/09: James emailed to group a list of references of relevant articles he has obtained.
14. 3/13/09: James located and downloaded in repository for group more published articles that discuss the Singapore library experience.
15. 3/13/09: James sent group email alerting all of us to external file repository he has established for group use in a different location, because of space limitations in Blackboard Small Group area, providing login information to all.
16. 3/14/09: series of phone conversations and emails between George and James discussing issues in target area to focus on in project paper.

17. 3/14/09: James posted rough draft of project paper in Blackboard Small Group Course Discussions.
18. 3/14/09: series of phone calls & emails from James to other group members alerting all to his post.
19. 3/15/09: Susan talked by phone with James and Jill about project progress and posted (in Blackboard Small Group Discussions) and emailed (to all) an update, delineating some pieces she proposed to add to the paper, including the Group Assessment, and asking all to send individual time-lines to her to incorporate into group time-line (which the others followed through with).
20. 3/15/09: James and Jill compared notes on project progress via phone call.
21. 3/16/09: further discussions between Susan and James by phone and email, agreement NOT to add further papers that cite the target article (which Susan had proposed), as reference material James has already obtained is more than sufficient.
22. 3/16/09: James posted (and emailed announcement to all) 4 subsequent revisions to his first draft.
23. 3/17/09: more discussion by phone between Susan and James.
24. 3/18/09: Susan reviewed George's outline and edited James' draft, detected that the paper was still in need of an introduction defining presenting problem and a conclusion identifying "single critical factor", added those in, and posted (in Blackboard Small Group Discussions) and emailed (to all) updated/revised & integrated draft.

25. 3/18/09: James talked with Susan by phone, amended Susan's draft, posted and emailed amended draft to all.
26. 3/18/09: more discussion by phone between James and George concerning project logistics, report conclusions and organization.
27. 3/18/09: James alerted Jill, by phone, about updated file.
28. 3/18/09: George edited and expanded on amended/integrated draft, and posted and emailed revision to all.
29. 3/18/09: Jill added to draft and emailed to all.
30. 3/18/09: George submitted word counts on various drafts (entered below) to demonstrate substantial contributions by all to final product.
31. 3/18/09: collaboration between James and Jill to reformat Jill's draft, which was done in a Mac program with different formatting relative to the Word versions the rest of us were using.
32. 3/19/09: further drafts by James and George to format paper for formal submission, emailed to all.
33. 3/19/09: Susan sent draft of Group Assessment to all for editorial comments.
34. 3/19/09: Susan added references to final draft of final product.
35. 3/19/09: Susan revised Group Assessment and added to final draft of final product.

Individual Contributions:

We effectively tried and succeeded in the experiment initially proposed by Susan of working together, collegially, as a team, rather than defining individual “sections” or “roles” at the outset. In a sense, this approach is analogous to the “rowing crew” example described by Handy (1995), inasmuch as we all spontaneously assumed various “managerial” roles. Thus, George was a “leader” in “jump-starting” us with an outline. James assumed the responsibility of organizing us, by submitting the first draft and then incorporating all the future revisions into it.

Susan assumed a somewhat “administrative” role (but wouldn’t be insulted if anyone wanted to refer to this as relatively “secretarial”) in writing up the first draft of the Group Assessment, and adopting other tedious but important jobs like typing up the references, which were compatible with her OCD personality and also could be fulfilled relatively close to the deadline, in light of other competing jobs (in other realms) that she was juggling simultaneously. Jill was great in following up with thorough proofreading and additions of concepts that she found had not been covered by others.

Everyone truly rose to the challenge of finding valuable ways to contribute without being prodded or supervised by a nominal “manager”. George put it very eloquently when he described the process that evolved, without having especially planned it this way in advance, as “iterative” rather than segmental. George, as noted above, submitted word counts of the successive drafts, to document various contributions, as follows:

First Outline (George): 325 words

First Prose Draft (James): 1100 words

First Integrated version (Susan): 1800 words

Second Integrated version (George): 3200 words

Third Integrated version (James): 3400 words

Fourth Integrated version (Jillian): 4100 words

All that being said, if pushed to name a “manager”, we all concur that James’ very generous oversight, research to obtain additional material, close communication with all the group members, and supervision of the integration of revisions into the final draft, would qualify him for this title. Still, we would like to argue that working more as colleagues, than as manager/manages, inspired us all to go above and beyond the call of duty with our contributions. Some of us could have rested on our laurels, as far as our class grades having been ensured by our track records. But not wanting to let our group-mates down was a greater motivation for us. And we all now feel far more secure, given that all 4 of us have carefully combed through the final product, that as a group, we have provided good quality control for what we are submitting!

A few words are warranted here about the strategy used by James when he performed the literature search that yielded a great deal of valuable material utilized in this project: The annual reports for 2000-2006 from NLB were found on the NLB web site. A “GOOGLE advanced search”, for PDF files only, was used to locate papers that referenced papers published on the NLB of Singapore.

One unexpected difficulty that we ran into in this experience, worth mentioning here, is that of incompatibilities between the various word processing programs used by the each group member. Formatting often doesn’t carry over well, e.g. from a Mac to a PC, as we discovered.

And, differences in operating systems added to the complexity. For example even among PC programs, Susan was temporarily hung-up by a forced transition from one PC (Windows XP) to another (Vista) and forced to adapt to OpenOffice which was the program available on her “new” (refurbished) computer.

Fortunately, James alerted Susan to the possibility of downloading Microsoft Office from the Drexel IRT web site, which eased the transitions back and forth between revisions. But this frustrating experience alerted us all to the importance of confirming compatibility between various software products at the beginning of a project, especially in this day and age in which virtual organizations are increasingly prevalent. That being said, James’ proficiency with computers, and ability to set up a storage site for documents for us, to get around the limitations in Blackboard, was a real godsend!

We would like to emphasize the importance of two concepts which we have discussed extensively in class, in this experience:

- 1) **Communication** : As is clear in the timeline, there was VERY extensive communication (often redundant, e.g. email + group area post + phone call) among all of us. Much of this was via dyads, since we did not have the technological wherewithal to conduct a conference telephone call. Nonetheless, we found verbal exchanges via telephone to be more conducive to the group organization than online chat. This is ironic as we are engaged in this writing assignment as part of a distance education online class.

Two drawbacks of using the blackboard group section were noted: The first issue had to do with the group area discussion board. Our group found that it took multiple steps or mouse

clicking operations to get into that area to see whether any posts had been added. Thus, our tendency was to migrate to our Drexel email instead. The second issue had to do with timeliness. Due to the group member's schedules, phone conversations were found to be the most expedient way in which to coordinate individual efforts. But through redundancy we covered all the bases very effectively.

- 2) **Trust:** It helped a great deal in this exercise that we were given the opportunity to have input into the composition of our group. We have all had ample evidence, from observations of each others' interactions in the class discussion boards, to feel secure that each of us would pull our share of the load. (Susan is hopeful that her relatively late-in-the-game contributions were not too stressful for those who prefer to have work finished farther back from the wire.)

Admittedly, some of us were not too keen to find a group project required for this class. But we have learned a great deal from this experience, both about the target subject matter, and about group dynamics, and are grateful for this opportunity!