QUALITATIVE EVALUATION OF A POLYTECHNIC LIBRARY AS A LEARNING & SOCIAL HUB

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Abstract

The purpose of this study is to evaluate the effectiveness of a polytechnic library as a social and learning space for the institution. The Republic Polytechnic library is the first library in Singapore to conceive and utilize physical space based on the Problem-Based Learning pedagogy. The study provides insights as to how this library functions as an integrated hub for work, life and play; which may be useful for library managers interested in designing library spaces to encourage socialisation, relaxation and discussion. The study was conducted in 2007 with a sample size of 15 students and staff. A qualitative survey research method, involving the Critical Incident Technique, was used to evaluate the library's performance as a social hub. Results from the study revealed that the top three positive values perceived by respondents were Library Atmosphere, Design, and Function of the library respectively. Majority of the respondents agreed that the library's living-room concept suited the problem-based learning environment well. Through this study, the authors created an evaluation tool useful for the library to conduct future assessments. By implementing this framework evaluators can gain insights to user perceptions and aid them in future decision-making process. In addition, learning points were suggested from the experiences of Republic Polytechnic which used library space in an unconventional manner.

1.   Background

At the Republic Polytechnic (RP) library, the use of space is essential. It is the first library in Singapore to conceive and use physical space differently from other academic libraries. Based on the Problem-Based Learning pedagogy that it has adopted, spaces in the library are intentionally designed for group work and discussions. The choice of furniture, the library provides numerous large tables and chairs to allow students to gather and engage in group discussions. Shelves are designed to be movable so that they can double-up as space dividers to facilitate small group discussions within the same space. The library also provides unconventional facilities such as X-Box consoles, card and board games, pool tables, electric instruments (piano and guitar) for students to freely utilize during their information search. It has recently launched its new website[1] and is working on the library blog as well.   In fact, the library hopes to suppress silence rather than noise. Therefore, the library aims to support its problem-based learning community through ensuring that the use of its space is designed to allow users to experience new things, create new discoveries and gather in groups for conversations and discussions just as they would in their own living room space. As such the study hopes to evaluate the library's success in its usage of space to construct an environment suitable for the institution.   The research moves away from traditional assessment of quantitative assessment of library's success and impact through designing a qualitative evaluation approach.

2.   Research Objectives

The purpose of this study is to examine the Republic Polytechnic library as an important social and learning space for its school community. The study evaluates how well the library performs its role as

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[1] RP library website can be found at http://www.rp.sg/lib

a social and learning hub and whether the library's environment and place has an impact on the community.

The following research sub-objectives were used in our evaluation:

- **Allowing collaborations & interactions:** To investigate if students and teachers gather in groups for discussion and whether find out the proportion of the community who see the library as a living room space.
- **Provision of resources** :To find out if the polytechnic community turns to the library resources(print, non print, electronic) for work/assignment and leisure needs
- **Self-help & independent learning:** To find out if students are able to use the library's resources independently (tying in with PBL's independent learning environment)
- **Flexible spaces for thinking and learning:** To investigate if the library space indeed facilitates individual/group thinking and as well as online learning.
- **Experiential learning:** To see if students are engaged in experiential learning in the library and whether the library is seen as an extension of the classroom.

3.   Literature Review

For the purpose of this study a literature review was done to understand the role of PBL libraries as well as the concept and significance of library space in fostering learning communities (in the context of academic libraries). Studies on qualitative approaches to evaluating library and information services were also scanned.

Literature review on PBL libraries demonstrates that libraries serving PBL tend to have more students using the library; they also use the library longer and more frequently; they use the library as a place to study and meet; and lastly they tend to use resources more extensively as compared to students in a traditional education programme. (Marshall, J.G., Fitzgerald, D., Busby, L., & Heaton, G., 1993; Watkins, 1993)

Increasingly, curricular, pedagogical and assessment approaches are evolving at higher learning institutions which now focuses on student-centred and problem-based learning as well as information literacy development. These have had an impact on the design of academic libraries to support problem-based learning. (Bundy, 2004). This importance of academic library space planning and environment is echoed by Powell (2002) who remarked that the design of library space can either aid or weaken the students' capacity to achieve their academic potential. The academic library experiences of Saint Mary University, University of Western Ontario and Queen's University in Kingston, identifies the growing interest for libraries to ensure proper space usage and design and significant positive results for providing relaxing and simulating environments. (Houlihan, 2005; Mitchell, 2004).

In "The Library as Place", Freeman (2005) states that, libraries of the future should ensure it, as an "extension of the classroom, library space needs to embody new pedagogies, including collaborative and interactive learning modalities." Demas (2005) further highlights the value of library as place and the role it performs. "The variety and combination of resources, services, spaces, and activities renders the library a destination of academic adventure and serendipitous discovery."

A review of qualitative methods in library evaluation includes focus groups, user interviews and reflection-in-action analysis. These involve areas often excluded from quantitative approaches such as external social factors, the emotional aspects, (Kuhlthau, 1993) and their perceptions of the institution and the people who work in it (Radford, 2001). Durrance & Fisher (2003) found that qualitative method 'illuminate aspects of libraries, library services, and library users' perspectives in ways we have not had access to in previous research'. Moreover qualitative research is "non-controlling, holistic and case oriented, about processes, open and flexible, diverse in methods, humanistic, inductive and scientific" (Fidel, 1993).

Libraries have recognised the limitations of purely quantitative evaluations and the need for qualitative evaluation to make sense of raw data and help design improvement. Haynes (2004) advocates for the use of blended evaluation of quantitative and qualitative approaches. "Library evaluation has employed quantitative methods to establish usage trends and baselines and to gather the demographic data which is vital for public accountability and funding. But it also must use qualitative methods if it is to gain real insights into the experience of service users and the wider community's needs."

4.   Scope & Methodology

This study was conducted during the semester of academic year 2006 – 2007 and the students and staff of RP were identified as the community of users in this study. Data was collected within two weeks to ensure that time periods were not far apart. However, as the data collection period unfortunately overlapped with the polytechnic semester vacation, the authors acknowledged that the lower number of students encountered within the library might be a limitation.

Flanagan's Critical Incident Technique (Radford, 2006) was adopted as the main methodology to evaluate Republic Polytechnic's performance as a social hub. The Critical Incident Technique (henceforth CIT) was a procedure for gathering important facts concerning behaviour in defined situations (Fisher & Oulton, 1999). It represented a qualitative way of drawing out the most memorable aspects of an event or experience (Radford, 2006) by typically asking respondents to recall a time when they had a successful or an unsuccessful experience in a specific setting, and thereafter, to describe the factors that cause the event to be successful or unsuccessful.

A total of 15 respondents (8 staff and 7 students) participated for this study. Data collection was divided into 2 phases – (1) the interview on critical incidents and (2) a short 15-question survey to supplement the interview data and to confirm the opinions of the respondents. The interview questions included the following:

1. Think about the times you have visited the RP library. Remember a time when you had a *good* experience in the library. Please describe in detail what happened.
2. What are the reasons that made this a good experience?
3. Now, recall a time when you had a *bad* or unpleasant experience in the library. Please describe what happened.
4. What are the factors/ reasons that made this an unpleasant experience in the RP library?
5. What do you think of RP library as compared to other libraries (i.e. public, other schools etc)
6. RP library was designed based on the "living room library" concept. To what extent do you think it is successful (in terms of design and user experience)?
7. Is "living room" a good concept for the library? (with respect to RP's learning environment)
8. If you have the power to change something about / in the RP library, what would it be?

After the interview was conducted, respondents were subsequently requested to fill up the quantitative questionaire, which was focused on respondents' perception of library facilities/services. The questions acted as measurement indicators against the 3 foundations and dimensions of a social hub: (1) Work – Whether the library supports academic outcomes (2) Learn –Whether the library supports self-help and independent learning; (3) Play – whether the library allows collaborations and interactions.

5.   Findings and Analysis

A total of 15 interviews were carried out, comprising 8 teachers (6 males and 2 females) and 7 students (1 male and 6 females), who came from various schools / faculties within the polytechnic. Out of these 15 interviewees, 55.3% were female and 46.7% were male. A majority of students (85.7%) interviewed had been with the polytechnic for more than a year.

5.1 Qualitative Analysis

For qualitative research studies, the aim was to make sense of the data through summarising and describing the data (Fisher & Oulton, 1999). Qualitative data for this study is sorted by **content** and **relational** scope (Watzlawick, Beavin & Jackson, 1967; Radford, 1996). Content-oriented statements were those that focused on information exchange (e,g. Could not find books, completed school project) while relational-oriented statements were those that dealt with feelings and attitudes of the participants (e.g. felt relaxed, the facilities are problematic). The data obtained through the interviews were transcribed and each critical incident coded with a unique number. The incidents for each question were then carefully examined and sorted out according to themes and further grouped according to content and relational dimensions.

5.1.1 Positive Critical Incidence

To measure the critical incidence for having a successful visit to the library, interviewees were asked to think about the times when they had a good experience in the RP library and to describe as much detail what had happened and what factors made the visit a good experience. From the interview, the content–oriented statements were grouped together and 8 themes surfaced:

- Enjoyed Atmosphere
- Carried out Discussions
- Completed Work / School Project
- Enjoyed Personal Space
- Found a Book
- Attended Library Programmes
- Enjoyed Reading
- Used the X-box Game

The 8 themes are explained below:

Enjoyed Atmosphere

A total of 12 respondents (6 staff and 6 students) mentioned that they enjoyed the library's atmosphere. For example, Respondent A, a staff, said, "I was quite **entertained** by the impromptu **piano playing** by the student. The music just made the **atmosphere nice** and I think it's even better than piped-in music". Similarly, Respondent B, a 2nd year student mentioned, "I like the **environmen**t where I can study while listening to nice melody played by students".

Carried out discussions

3 respondents (1 staff and 2 students) shared that they carried out discussions in the library. For example, Respondent C, a final year student, put it this way "It would have to be the times when I have **discussions** at the library. Each time I have discussions at the library, my friends and I are able to come up with ideas for our project".

Completed work/school project

3 respondents (1 staff and 2 students) brought up the completion of work/ school project as the factor that contributed to their positive experiences. Respondent D, an alumnus, put it across this way - "One of the good experiences I have at the library was doing my final year project (FYP) at the library. All my project meetings were done at the library, we did almost everything in the library that time and we **completed the project** at the library!"

Enjoyed personal pace

2 respondents (both students) attributed the positive experience to the ability to enjoy personal space in the library. Respondent E, an alumnus, said, "The library is **spacious** so you can get your own personal space which makes concentrating on your work easier. You don't get disturbed by others and you don't have to care about others around you as the tables are spaced out".

Found a book

A total of 2 respondents (1 staff, 1 student) shared that they found a book they wanted at the library and that made it a pleasant library visit. For example, Respondent F, a 2nd year student, said "There was this one time, I was searching Google online for some information and I found this title that was recommended by the website. I later came to the library and search the library OPAC and I found out that the book was available at the library. I thought that was just "brilliant".

Attended a library programme

1 staff brought up the point about attending a library programme. Respondent G, recalled "But if I recall the last good experience I had was probably when I **attended a talk** at the library… I enjoyed the talk and I guess the **ambience** of the library also played a part".

Enjoyed reading

Respondant H, a staff shared that he enjoyed reading at the library as "The library just makes me **feel calm and at ease to read**. I feel totally relaxed while reading my book."

Used X-box Game

Respondent I, a 2nd year student, student commented on his usage on the X Box game which made the library visit a pleasant one. He said, "The x-box service is brilliant, I can **play and enjoy myself**".

On the other hand, relational-oriented statements included items that dealt with emotions and attitudes of the interviewees. These included enjoying the company of friends, feeling less stress, and encountering helpful librarians. The relational-oriented statements were further grouped into 4 themes:

- Social Aspect
- Felt Relaxed
- Librarians Attitudes and
- Unanticipated Discovery

Social Aspects

7 respondents (5 staff and 2 students) felt that being able to socialize in the library contributed to their positive experience. Respondent J, a staff, shared that "The environment creates a relaxed and informal atmosphere, so it's suitable for me to wrap up of my feedback session with the students. In my opinion, the library does not give you the sense of "studying" or its "lesson time", The environment is not too serious or solemn. It **makes socialising with the students easier**".

Felt Relaxed

A total of 7 respondents (4 staff, 3 students) felt relaxed in the library. Respondent K, a staff, said "I feel totally relaxed while reading my book. I also feel that it helps bring me outside of my work". While Respondent L, a first year student, thought that "The library's atmosphere is really nice and it made me feel relaxed even when I had some work to do".

Librarians' Attitudes

6 staff commented that the librarian's attitudes contributed positively to their library visits. For example, Respondent M indicated that , "So far I have had very good experiences with the library's reference help they rendered. I recalled a speech, which I had to write to help address, a group of principals on innovation in education. I approached the library staff and she was able to get all the relevant articles and books on current research areas in this topic. It made my work easier as my time is saved".

Unanticipated Discovery

A total of 4 respondents (2 staff, 2 students) attributed their positive library visits to unanticipated discovery. For example, Respondent N, a 2nd year student, said, "Playing the x-box games at the library. I never thought that this would be available at the library. So when my friends and I heard

that the library has this, we were very excited".

5.1.2 Negative Critical Incidence

For negative incidences, staff and students were asked to recall the times they had experienced a bad and unpleasant time at the library. It was noted that interviewees, especially staff, were less critical in their negative experiences and there were two staff that reported that they had no bad experiences in the library whereas all the students were able to provide negative experiences. The responses were sorted out into content and relational statements. 3 themes emerged for content-oriented responses:

- Could not Find Books/Information
- Library Atmosphere Problematic, and
- Library Design / Facilities Problematic.

Could not find books/information

5 respondents (2 staff, 3 students) lamented on their inability to find books and information during their library visit. For example, Respondent C, a final year student, said" I can remember there was this once we had a test on immunology and my friends and I went to the library to look for books to look through the topic. But when we went to the library, all the books on immunology were borrowed out and there were no books left. It was really a bad and worrying experience especially just before the test".

Library Design/ Facilities Problematic

4 respondents (2 staff, 2 students) indicated that the problematic library design/ facilities contributed to a negative library experience. Respondent E, an alumnus, shared that "I was at the 3rd level over at the other side and there is an entrance but it is not opened and I tried another entrance which was also not opened. I was very irritated as I had to make my way to the 1st level main entrance just to get into the library when I actually wanted to access the 3rd level".

Library Atmosphere Problematic

3 respondents (1 staff, 2 students) commented on the problematic library atmosphere. Respondent F, a 2nd year student, said "Some inconsiderate people tend to talk too loud in the library. So I couldn't concentrate and complete my work. But yet we can't do anything as our library need not be silent".

On the other hand for relational-oriented responses, 4 themes surfaced:

- Other Users' Problematic Behaviour
- Librarians' Attitude
- I Got Lost, and
- I Could not Eat and Drink

Other users' problematic behaviour

3 respondents (2 staff, 1 student) brought up this issue as a factor contributing to a negative library experience. Respondent J, a staff, had this to say, "We had a talk going on near the café and the speaker was talking when students nearby were oblivious about the event taking place. They continued to talk and laugh loudly and enjoyed themselves playing pool. It was quite an unpleasant experience as the students' merry making disturbed the speaker and the audiences of the talk. I was rather annoyed at the noise the students were making".

Librarian's Service

2 students pointed the negative library experience to librarian's service. For example, Respondent C, a final year student, said "Also I'm not too sure what other related books I can refer to. There is no librarian walking around for me to ask for help".

I Get Lost

1 second-year student, Respondent N recalled, "I recalled the time when I almost got lost finding the photo-stating room. I wanted to copy something so I went to look for a copier but since the library is quite big, and they do not have very good signage and directory in the library".

I Could Not Eat & Drink

1 second-year student, Respondent I, had this to offer, "Well the only thing I have is the issue with

food and drinks. I was playing the x-box game and brought in some food from outside but was told by the security guard no food and drinks in the library. But I told him it's funny because the café is also in the library, which serves food and drinks. … It's a weird contradiction to have café at the second floor and no food and drinks in the library".

5.1.3 Perception of the Library

Interviewees were also asked about their perception of the RP Library as compared to other libraries (i.e. academic libraries or public libraries). The results revealed that all the interviewees felt that the library was indeed different and special as compared to other libraries and a total of 6 themes were identified:
- Library Atmosphere
- Design
- Function of the library
- Variety of services provided
- Library staff, and
- Collection

The top three positive values went to Library Atmosphere, Design, and Function of the library respectively. For library atmosphere, most respondents indicated that they liked the spacious feeling and the relaxing atmosphere. For design aspects, they mentioned the nice furniture as well as the designated areas for discussions. Other aspects such as variety of services provided, and library staff were also indicated as positive factors that made the library different. Interestingly, collection was highlighted as a lacking factor compared to other libraries.

5.1.4 Library as a Living Room Concept

In order to discover the acceptability level of the library amongst the RP community, respondents were asked during the interview the extent to which the library had been successful in its "Living Room Library" concept (in terms of design and user experience) as well as to comment if this concept was suitable with respect to their school environment. It was found that the living room concept was well-received by a majority of the interviewees (13 of the 15 interviewees) and they agreed that it was a good concept for the library as it tied in with the learning environment and mission of RP. Only 1 respondent was neutral and 1 did not agree with the concept. When the authors examined the comments made by the respondent who had low acceptability level, it was discovered that he did agree that the concept was "great for PBL discussion". As such, the acceptability level of this concept was high amongst the RP community.

In addition, respondents were also asked to think about something that they would like to change in the library if they had the power to do so. This represented an area where the library could improve their impact. 14 out of 15 interviewees responded to this question and results revealed that the students' main area for improvement was the library collection whereas for staff, their concern was with improving usage of the library.

5.2 Quantitative Analysis

The quantitative questionaire at the end of the interview aimed to find out about the respondents' perception of the library's facilities and services. Specifically, the respondents felt that the RP library **allowed for collaboration and interactions**. 60% of respondents made use of the library for PBL discussion and interactions *frequently* while 80% either agreed or strongly agreed that the library environment acted like a living room space. The RP library ranked quite highly too when respondents were asked to rank a list of sources that they usually turned to for work/ assignments/ academic purposes. Results showed that Internet is the respondents' first port of call with the RP library a close second. In addition, RP library **promoted self-help and independent learning.** A majority of the respondents (66%) indicated that they sought assistance infrequently, illustrating independent learning and a 100 % of the respondents either agree or strongly agree that the library's services encourage self-service usage. Finally, the RP library was perceived to **provide flexible spaces for thinking and**

learning. All respondents either agree or strongly agree that the library had adequate spaces for group and individual thinking & learning. In fact, qualitative results from the interview revealed that a number of respondents actually felt that the library was huge but under-utilized. In addition, 80% of the respondents either agree or strongly agree that the library environment and facilities created an atmosphere that allowed them to be ***actively engaged in online learning***.

Overall, respondents have indicated that the library as a place had impacted them in the following areas, listed according to the frequency chosen:
1. Attended or participated in a work/ group discussion
2. Took a break at the library café
3. The library is a comfortable place to think, read, write or study *(tie for second place)*
4. Completed or made progress on school work / teaching
5. Learned about new books, videos, music etc
6. Others, please specify: improve gaming skills

6.   Conclusion and Learning Points for Library Managers

Republic Polytechnic Library is the first library that has conceived and utilized physical space differently from other libraries in Singapore. Based on the Problem-Based Learning pedagogy, it positioned itself as the social hub of the school community and portrayed itself as the Living Room Library. Based on the results, the library's impact was evident as the community acknowledged the importance of the library as a social and learning space.

Some learning points could be drawn from the experiences of Republic Polytechnic library.

(1) Firstly, the utilization of space and types of services rendered by the library were all based on the behaviour of their patrons (consisting of youth aged 17-19 years old and teachers) as well as the problem-based learning concept the school has adopted. For example, instead of containing the noise in the form of project rooms like most libraries, RP library did just the opposite (i.e. allowed sounds and noise in the whole library) and "contained" the silence instead (in the form of having Quiet Rooms). To meet the needs of teachers and staff (the minority population), the library set aside a teachers' lounge and a separate Quiet Room for teachers only. In addition, many facilities in the library catered to the lifestyle and preferences of young patrons. These included pool tables, X-BOX consoles and musical instruments for patrons to freely utilize and unwind during information searching. Patrons could get connected to the Internet in the library using his own laptop (in accordance to the PBL policy, every student and teacher in RP owned a laptop) through the inherent Wi-Fi network. In terms of communication, students could also make use of instant messaging (a new media communication tool commonly used among youths) to make reference enquires in the huge library instead of making their way to the first level counter to reach the librarians. This mode of enquiry was favoured by the youths who preferred to engage in non face-to-face communication. In terms of furniture and space utilization, large tables and numerous chairs are provided to allow students to gather and engage in group discussions, in line with problem-based learning.

(2) Secondly, traditional library services were not neglected, despite having other new and innovative facilities and services. The results revealed that the main area for improvement was still the library collection. Although the patrons appreciated how different the RP library was, they still expected the library to be strong in its traditional areas (i.e. library collection). This emphasized the importance of traditional library services, and that a successful library still required strong fundamentals in traditional services.

For future research, a follow-up study could be conducted to evaluate perception/impact changes on library users over the years. This could be done by conducting a perception /impact study using (Critical Incident Technique) on the first year students and subsequently another impact study on the same group of students when they reach the end of their third year in Republic Polytechnic, i.e. a longitudinal study. Resources permitting, it would be recommended to increase the sample size of interviewees and survey respondents so that more in-depth qualitative data could be analysed for emerging themes.

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