EVALUATION OF SERVICES AND PROGRAMS OF THE TRUMBULL LIBRARY SYSTEM THROUGH COST BENEFIT ANALYSIS AND PATRON PERCEPTION

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ABSTRACT

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TITLE: EVALUATION OF SERVICES AND PROGRAMS OF

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PERCEPTION

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Library Science

INSTITUTION: Southern Connecticut State University

YEAR: 2011

This study seeks to determine the value of The Trumbull Library System's programs and services to its patrons and its community. A consumer surplus cost benefit analysis established the collection's monetary value and return on investment (ROI) using annual report data from 2006 - 2007 to 2008 - 2009 and market value pricing. A two-week, in-library, anonymous survey of adult, library card and non library cardholders measured users' perception of value. The two components combined to support the main conclusions: (1) the collection has value; (2) the collection averaged \$5.35: \$1.00 ROI over the three years; (3) 165 survey participants rated positively those services in which they participate; and (4) content analysis identified nine most valuable services as well as areas for improvement. Based on this comprehensive evaluation, the library can conduct further studies, manage more effectively, design a services portfolio, and provide tangible results to its community and funders.

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A special thanks to The Trumbull Library System's patrons for their participation in my project and to the staff for their involvement, effort, and enthusiasm in this and all of my assignments.

I especially want to recognize my Special Project Advisor, Dr. Mary E. Brown, Ph.D. Professor, for the patient guidance she provided throughout the development of this Special Project. To all of my professors in the Library Science Department for the learning experiences provided to me during my training for the Master's Degree I extend my deepest appreciation.

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CHAPTER ONE: INTRODUCTION

Project Purpose and Description

Libraries have struggled to articulate their value to their communities in terms other than basic cost-accounting statistics. As the value and perception of library services continue to evolve, it is essential libraries identify, measure, and communicate their worth in terms the public appreciates. The Trumbull Library System (TLS) acknowledged this challenge and requested a comprehensive evaluation of its services and programs. By measuring efficiencies and understanding patron perception of services, the study's purpose is to deliver a combined baseline assessment of current value from which the library can allocate resources to craft a portfolio of services that best serve the community. Using the *Placing a Value on Public Library* Services: A St. Louis Case Study (SLPL)(1998) and the Placing an Economic Value on the Services of Public Libraries in Suffolk County, New York (Suffolk County)(2005) study as models, a cost benefit analysis was conducted using the consumer surplus methodology to determine the value of services from July 2006 to June 2009. Once established, the collection value was compared to taxpayer and funder support to determine return on investment (ROI) per annum. To give a complete performance assessment, this analysis was paired with a two-week, in-library, anonymous survey that measured users' perceived value of services.

Significance and Relevance

From user input and collection value, TLS can determine how well it is meeting the goals outlined in its mission statement. Each service category can be assessed by its compliance with the goals and mission of the library, its value to the individual, its delivery costs, and if it is delivered by another community institution. This approach can help set service delivery guidelines, reallocate resources, and avoid duplication of services where demand is best served by one host. By focusing on valuable and effective core services, TLS can demonstrate high user satisfaction rates, a positive ROI to taxpayers and funders, and support previous cost benefit analysis studies performed by various sized libraries. Additionally, the results will provide the impetus to other medium and small-sized libraries to implement their own cost-benefit analysis to show value and fiscal responsibility to their respective communities. Ultimately, results will support the American Libraries Association's (ALA) Draft 2015 Strategic Plan's proposed Advocacy and Public Policy Objective (2) to increase public awareness and the value and impact of all types of libraries and the role of librarians and staff (American Library Association, p. 4).

Background (Literature)

Historically, libraries have relied upon cost-accounting methodologies that compare inputs (financial resources) to outputs (circulation, library visits, material usage, program attendance) for the development, assessment, and justification of their programs and services (Nitecki, 2004, p. 41; Rudd, 2000, p. 18). Even today, many libraries turn to Hennen's American Public Library Rating (HAPLR) Index as the definitive benchmark tool, based on its cost-accounting outputs, to determine best practices and to compare one's performance (Hennen, April 2010, Rating Methods). Although cost accounting is a valuable tool in producing quantity outputs, it does little to assess the quality of the product or to quantify the social value that is

produced. In 1985, libraries adopted the Gap Model of Service Quality from the business sector. It shows an integrated view of service quality that measures the performance gap between consumer-company relationships. It proposes customers are the best judge of whether a service was delivered to their perceptions of expectations and importance; therefore organizations should include their customer in the assessment process to understand the value of and ways to improve service (Parasuraman, Zeithanl, & Berry, 1985, p. 45). Although this method measures the impact of service on the individual, it does not measure the impact on the community (Haynes, 2004, p. 287).

In 1993, the Government Performance and Results Act (GPRA) required federal agencies by Y2000 to have in place goals with resource descriptions, established performance indicators, and measurement tools to prove their value for continued support and to report on these criteria every year starting in Y2000 (Nitecki, 2004 p. 35). In 1995, the United Way required not-forprofit agencies applying for grants to show the benefit their service gave to their participants including details of how funds met stated goals with measured initial, intermediate, and longterm outcomes (United Way of America, 1996, "Program Outcome Model"). The same year, the St. Louis Public Library (SLPL) received funding from the Public Library Association for a three-year study to determine which methodologies suited evaluating the value of library services to the community. The SLPL researchers, Holt, Elliott, & Moore (1999), chose cost benefit analysis as its benefits-measurement model. Cost benefit analysis is an economic tool that evaluates the direct benefits of projects that use taxpayers' money for society's benefit such as pollution control and dams (Watkins, Background, para. 1). Because of its applications, Holt et al. (1999) felt it matched the way public libraries deliver services and the way citizens think about taxes invested in public service organizations (Cost Benefit Analysis, para. 6).

The SLPL study cited three cost benefit analysis methodologies they felt appropriate: contingent value, cost-of-time, and consumer surplus. Contingent value has been used in judicial proceedings such as the Exxon Valdez damage suit (Holt & Elliott, 2003, p. 430) to give an idea of the indirect value or cost of a service or program based on two hypothetical questions. The first is the willingness-to-pay (WTP); how much would respondents pay to have something that they currently do not have. The second is the willingness-to-accept (WTA); how much would respondents accept to give up something that they already have. By implementing the two questions, an institution can evaluate the service's indirect value. Cost-of-time requires respondents to value their choice to spend time at the library rather than in some other activity (Holt, Methods to Measure Direct Benefits, para. 7). The SLPL study reported WTA estimates of benefits were higher and provided no reliable quantitative measure of value and were therefore less reliable that WTP estimates. Also, SLPL found cost-of-time measures were the least useful of all cost benefit analysis measures (Holt & Elliott, 2003, p. 430 & 438). Similarly, Duncan (2008) reasoned that assigning value to the time used by patrons in accessing library services assumes that the patron "would not spend the time if the action were not profitable" (p. 149), that this time "equals earning income", and that "library time may substitute for other kinds of recreational time to which no dollar value can easily be assigned" (p. 149).

The third methodology, consumer surplus, compares a service's total cost and usage to its market price, or an estimated user value. The market or estimated value represents the user's cost to acquire the item if the library were unavailable, as well as the value the user derives from the item at every use without having to outlay funds to acquire it again (Levin, Driscoll, & Fleeter, 2006, p.9). Any excess value remaining is a consumer surplus from which a total value of library services can be calculated (Duncan, 2008, p. 142). The method to achieve the surplus varies

between studies. The Suffolk County (2005) study chose to use *New York State Annual Reports* for *Public and Association Libraries* and industry sources with usage to determine "the value of tax dollars used to operate public libraries" which follows the SLPL study methodology (p. 3). One of the problems with consumer surplus is accurately determining a service's market or estimated value, as there may not be an equivalent in the marketplace (Watkins, Principles, para. 1). In this case, studies placed a zero value (Holt, et al., Methodology Test, para. 6).

Libraries have selected other methods to assess their value to the community. For example, the *Taxpayer Return on Investment in Florida Public Libraries: Summary Report* (2004) claimed that every dollar invested in Florida libraries caused a wage increase of \$12.66 (p. II). Another study undertaken by Carnegie Mellon University Center for Economic Development (CED) (2006) used a secondary economic impact model, IMPLAN, to measure a library's impact on jobs and economic output (p.2). Using a survey, CED determined that for every \$1.00 invested in the library system, \$3.00 of economic benefit was obtained in the form of spending by patrons at other establishments (CED, p. 41). This high rate of return was complemented by the fact that Carnegie Library of Pittsburgh (CLP) is the area's most visited regional asset with over 2 million visitors (CED, p.2). This placed CLP in league with museums and other tourist attractions making the study irrelevant to most public libraries (Holt, Elliot, & Moore, Methods to Measure Direct Benefits, para. 9).

While the SLPL study (1998) acknowledged that indirect benefits are implicitly provided by libraries, the study also concluded these values were impossible to precisely qualify and the high ROI that estimated indirect benefits often produced diminished the credibility of the studies as there is no hard data to support the findings (Holt et al., SLPL Project Focused on Direct Benefits, para. 5).

Goals and Objectives

The goal of this study was to present a preliminary overview of the value of TLS' programs and services. The consumer surplus methodology would determine the monetary value of the collection and a positive ROI to the community with the survey measuring user satisfaction rate and perception of programs and services. From the combination, the study would assess efficiencies, service value, and service gaps with the results easily repeated, understood, and credible by supporters and funders.

Ethics Governing the Project

All survey research was conducted according to Southern Connecticut State University's Human Research Protection Program in conformity with federal guidelines for human subject research as applied by the Institutional Review Board of Southern Connecticut State University. All research was conducted in compliance with relevant laws protecting the privacy of library transactions and the highest standards for use privacy as articulated in the principles and documents of the American Library Association. This study adhered to the moral and ethical behavior research policies and procedures for the protection of human subjects of research that underlie *The Nuremberg Codes, The Helsinki Declaration*, and *The Belmont Report*.

Author's Qualifications

The author is a graduate student in the Department of Information and Library Science, having completed twenty-four (24) credits toward the Master of Library Science (MLS) degree. The author is currently enrolled in ILS 580 Research in Information and Library Science, the special project proposal course for the MLS program, under the direction of Dr. Mary E. Brown, Professor and Graduate Faculty. On January 11, 2010, the author successfully completed the NIH Web-based training course "Protecting Human Research Participants" Certification Number

359566 (see Table A1 to view certificate). The Institutional Review Board (IRB) at Southern Connecticut State University has reviewed and approved this study (see Table A2 to view the approval letter). In addition, The Trumbull Library System has employed the author as Program Coordinator since September 2007.

Conclusion

As there are many evaluation methodologies available to libraries to measure performance, it is important to identify the problem in order to employ the best method. Because this study will focus on the direct benefit value of library services and programs, the SLPL and Suffolk County studies' methodologies are best suited to provide consolidated data to help the library manage more efficiently, market services more effectively, provide tangible results to funders, and establish a foundation on which to build further studies.

CHAPTER TWO: METHODOLOGY

Overview

To achieve a more comprehensive understanding of the library's value to users and return on investment, the study consisted of two complementary components. A consumer surplus cost benefit analysis, modeled after the Suffolk County study, provided service categories' dollar value and the collection's return on investment. The second part employed a survey to measure users' experience, satisfaction, and perceived value with the same services. Although presented sequentially, the cost benefit analysis and survey can be conducted simultaneously.

Design of project

Part I: Consumer Surplus Analysis of Library Services

The first step in implementing a cost benefit analysis was creating a "service-user matrix" (Elliott, et al, p. 16) to reflect the library's portfolio of services and to help visualize their relationship with users. Because the matrix became the basis for the consumer surplus methodology as well as the accompanying survey, the design used terms patrons would understand. For this study, the service-user matrix (see Appendix B) identified 16 service categories and, because many library services are available to the general public, one general user class.

Instrumentation.

Upon establishment of the service-user matrix, statistical figures for the 16 service categories were collected from TLS' 2007 – 2009 annual reports then assessed whether users

would purchase or rent the item in the market if the library were unavailable. Once determined, sources to establish the consumer surplus value of items in the categories were identified.

The value of the collections.

As TLS' purchase information for the three years was not easily accessible, *Bowker* Annual Library Almanac's (2009, pp. 473-538) was sourced to establish the average cost for books, paperbacks, and audiobooks to estimate value. To approximate TLS' acquisition price for each item, TLS' book and vendor discounts were applied to the *Bowker* or market cost establishing a more conservative value. Where the 2007 – 2009 discounts were not available for the category 2009 – 2011 discounts applied (see Table C1, Table D1, and Table E1 for the value of the collection per year). For missing prices on AV resources and technical services, current market prices were sourced and adjusted for inflation (Friedman, 2009). For example, it was determined that users would purchase a playaway whose average purchase price in 2007 was \$42.49 (Dixon, 2007). Adjusting for inflation and reducing by TLS' 2009 – 2011 discount schedule established playaways' market value per annum. CDs' market value was established by reducing Wal-Mart's 2010 \$12.00 purchase price by TLS' 2007 – 2009 discount schedule. Determining that most users would rent DVDs if the library were not available, Blockbuster's 2010 \$4.00 rental price established that market value. However, as CD and DVD technology and service may be replaced no further discount was applied. Cassettes and VHS tapes have no market equivalent and were given zero value. Newspapers and magazines were valued at 2010 newsstand prices as cover prices have remained relatively stable from 2007 to 2009 and no discount was applied.

The value of library services: circulation and reference transactions.

TLS' reference transactional guideline is six minutes or one-tenth of an hour. If the library were unavailable, users would have to purchase research services from a consultant. The SLPL (1998) study priced reference and research services at \$50.00 per hour from an information broker services company (Holt, et al, Methodology Tested, Table 2). This estimate was adjusted for inflation and multiplied by one-tenth to establish TLS' estimated transactional dollar value per user per annum. This study sourced the Suffolk County study for ILL services' value. The Suffolk County (2005) study used the Association of Research Librarians' (ARL) 2003 research study that determined the average cost of ILL services was \$27.00 per user (p.5). Again adjusting this figure for inflation established TLS' ILL services value per user per annum. Then multiplying each category's circulation number by its market value equaled the total estimated value of circulation and reference transactions per annum (see Table C2, Table D2, and Table E2).

The value of library services: databases and computer usage.

Ascertaining electronic resources' market dollar value has been difficult for many of the previous studies. The user values range from SLPL's evaluation that databases and computers can be used for free at a local community center (Holt, et al, Methodology Tested, Table 2) to the \$10.00 value per retrieved article as stated in the *Value for Money: Southwestern Ohio's Return from Investment in Public Libraries* (SWOhio) study (2006, p.16). With the increasing cost of database services, Suffolk County's (2005) \$29.00 average cost per user (p. 6) was used and adjusted for inflation. In-library computer time can be reserved at one-hour intervals to a maximum four hours per day and the library tracks total sessions without delineating average or actual usage time. FedEx Office charges \$.30 per minute or \$18.00 per hour to use their

computers, Microsoft applications, and Internet access (V. Morella, personal communication, March 12, 2010). Assuming that each TLS session lasts one hour, an inflation adjusted FedEx Office fee established the session value per user per annum (see Table C3, Table D3, and Table E3).

The value of library services: programming services and meeting room use.

The library offers a variety of programs to the public including storytimes, author talks, book clubs, lectures, music, computer classes, movies, and business and career workshops. The study sourced and adjusted for inflation SLPL study's (1998) \$9.00 per program per user value to establish program's hourly dollar value to users per annum (see Table C4, Table D4, and Table E4) (Kamer, p. 6). In addition the Main and Branch libraries offer four rooms as meeting space for various, outside not-for-profit and town organizations. The 2009 average hourly rental fee, adjusted for inflation, multiplied by the number of outside groups using the space established the value per hour per annum (see Table D5, Table E5, and Table F5).

Part II: Survey

Subjects.

The service-user matrix identified one general user class: men and women, 18 years old or older, library card and non library card holders. As TLS does not maintain the demographic breakdown of its adult card holders, the sample size (n = 200, Cl 95% [6.91]) (Creative Research Systems, Sample Size Calculator, 2010) is based on the Town of Trumbull's 2009 total population (N = 35,047) (Town of Trumbull, Demographics, 2010).

Instrumentation.

The survey included a reconfigured service-user matrix from 16 to 13 categories. Allages books were combined into *Books*, all audiobooks into *Audiobooks (CD / Tape / Playaways)*

and computer programs into *Adult Programs*. Electronic database access was separated into *in-library* and *from home*. Within this matrix, participants rated satisfaction with services and programs from 1 (*very satisfied*) to 4 (*very dissatisfied*) with an option of 5 (*don't use/don't know*). The remaining questions identified services used, open-ended of service perception with an area for comments, and demographics (see Appendix F1).

Process.

Due to the short survey period and the concern that emailing the survey to TLS' electronic mail list subscribers was a violation of the agreement to send only event notifications, the library drew upon its previous success and elected to conduct a paper survey. The library agreed that it was appropriate to email notification and invitation to subscribers to participate (see Appendix F2). With staff support (see Appendix F3 for internal blog post), flyers promoted the survey (see Appendix F4). Anonymous surveys were conveniently located in the Main and the Fairchild-Nichols branch libraries' lobbies as well as at the Main Library's Children's Circulation Desk near dedicated survey collection boxes opened only by the author (see Table F5 for collection box signage). Responses were limited to one per household and no payments or gifts were given to participants. Surveys were collected, numbered, scanned, manually entered into a Microsoft Excel spreadsheet, and stored in a secure location. Open analysis captured recurring themes on a content analysis worksheet.

Conclusion

By including TLS' discount formulas to determine the collection's value, the cost benefit analysis resulted in conservative market values. Multiplying the market values by the number of uses for each service established an overall value of the collection per annum. When compared to the library's annual operating budget, the result yielded a direct return on annual taxpayer and

funder investment. It is important to note that this study did not include the value of materials used in the library to different users or the value of accumulated material. Therefore, the collection's reported value and return on investment will be more conservative than if these aspects were included in the study. The convenience sample methodology matches the exploratory research goal of a baseline analysis of users' perception of library value.

CHAPTER THREE: PROJECT RESULTS

Overview

The consumer surplus cost benefit analysis showed TLS' collections returned an average \$5.35 to every \$1.00 invested over the three years. 165 survey participants rated positively those services in which they participate while content analysis determined nine services most valuable to participants. In addition the same services were identified for improvement and future development. No adverse events occurred during the development of either component of the study.

Development of the Product

The study's original premise was to conduct a cost-to-run program per attendee analysis from July 1, 2006 to June 30, 2009 to determine if TLS was effectively using programming budgets. Under advisement from Dr. Mary Brown, Southern Connecticut State University's Graduate Faculty member and Special Project Advisor, the study grew to include a consumer surplus analysis of all services for the same period and added a patron perception assessment. Collection of TLS' program and service data for the three years and subsequent calculation of consumer surplus values commenced March 8, 2010 and the survey period began March 18, 2010. Both ended April 1, 2010. The special project report was prepared in accordance with the *Graduate Studies Special Project Requirements and Guidelines* as proposed March 13, 2010 in

combination with the Publication Manual of the American Psychological Association, 6^{th} edition (2010).

Research Study Results

Part I: Consumer Surplus Analysis of Services.

Since TLS is funded by local tax dollars and other funding sources, it is important to compare the dollar value of service to invested dollars. For the fiscal year 2008 - 2009, TLS conducted 504,762 transactions in six service categories valued at \$9,074,405.18 as shown in Table 1 (see Table C6 and Table D6 for previous years' figures).

Table 1: Estimated Value of Services, 2008 – 2009

Service	Number of Uses	Total Dollar Value		
Circulation of materials	412,167	\$7,806,637.94		
Reference activities	30,572	\$177,929.04		
Databases	5,851	\$197,412.74		
Computer usage	42,566	\$723,622.00		
Programming	13,224	\$155,910.96		
Meeting rooms	382	\$12,892.50		
TOTAL	504,762	\$9,074,405.18		

For the same period, the annual operating budget totaled \$1,734,719 as shown in Table 2.

Table 2: Trumbull Library System's Revenue, 2008 - 2009

Type of Revenue	Dollar Amount
Town appropriated budget	\$1,549,092.00
Other sources	\$185,627.00
ANNUAL OPERATING BUDGET	\$1,734,719.00

Therefore, \$1,734,719 operating budget generated \$9,074,405.18 in library services returning \$5.23 on every \$1.00 invested. When compared to previous years (see Table C7 and Table D7), for each dollar spent to operate the library, taxpayers and funders received an average \$5.35 in benefits from library services over the three-year period as shown in *Figure 1*.

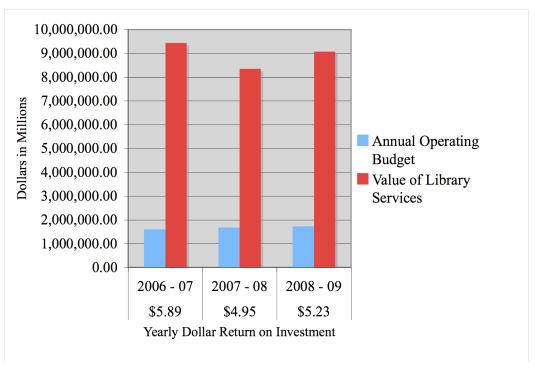


Figure 1: Yearly Return on Taxpayer and Funder Investment, 2006 - 2009

Figure 2 illustrates the average distribution of library services per average \$1.00 investment for the three-year period.

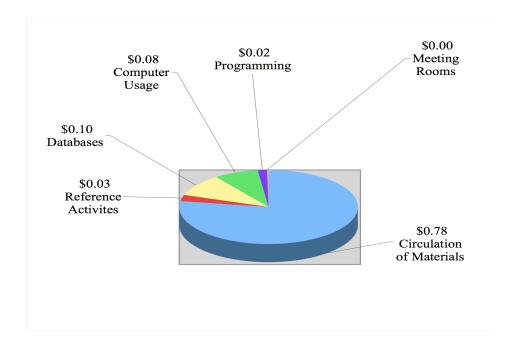


Figure 2: Average Distribution of Benefits by Library Service, 2006 – 2009

Operating budgets increased 8% over the three years (see Table C7 and Table C8). Although total materials owned decreased (4%) for the same period, large increases in material acquisitions occurred in adult playaways (31%), young adult audiobooks (22.5%), adult fiction (16.5%), children's audiobooks (21%), and DVDs (21%). In comparison, total circulation increased 21% while other services experienced a reduction in usage: reference questions (-8%), database searches (-1,300%), computer usage (-2.1%), and meeting rooms (-35.1%). Due to the global economic downturn in 2008-2009, cost of materials decreased.

Part II: Survey.

The 165 responses to the convenience sample survey were a majority female (81%), 17% male, and 2% no response (see Table G1, Table G2, and Table G3 for demographic comparisons). The Pearson Correlation test between the population's and the sample's age and sex was not statistically significant however the correlation between population's and the survey's education level attained is significant as seen in Table 3 and confirmed by *t*-tests (see Table G4 and Table G5).

Table 3: Correlation between Population and Survey Demographics

	Age	Male	Female	Education
Pearson Correlation	.811	.142	.884	.997
N	4.000	4.000	4.000	3.000
P	.189	.858	.116	.049

Question 1 (How frequently do you use our library?) had the highest response (n = 159) with a mean slightly less than once a week and a mode at least once a week. T-tests confirmed no correlation between this question and sex, age or education (Table G5). Question 2 asked

participants to rate satisfaction with programs and services. The satisfaction, dissatisfaction, and don't use/don't know responses' percentage means were 60% (n = 1,184/1,960), 2% (n = 46/1,960), and 37% (n = 730/1,960), respectively. In Questions 3 through 7, respondents selected which programs they had participated in from a list. Question 3 (If you or your family members participated in Children's Programs: please select which one(s)) had the highest total response (n = 154) with storytimes the highest individual response (n = 70). Young adult programs had the lowest total response (n = 31) with the Teen Advisory Group receiving no responses (see Table G6 for the top ten responses to individual programs or services). Content analysis of responses indicated recurring themes across Questions 8 through 10 as shown in Table 4 (see Appendix H for additional user comments).

Table 4: Recurring Themes in Questions 8 through 10

Service	Number of Responses per Question			
	Q. 8	Q. 9	Q. 10	Total
Storytimes	33	6	13	52
Adult programs	12	6	30	38
Computers (online services)	26	5	2	33
Children's programs	15	0	13	28
CDs, DVDs, and audiobooks	3	19	1	23
Author talks	9	0	10	19
Staff	14	0	2	16
Books	13	2	1	16
Parking	0	14	0	14

Note: Question 8 (Please comment on which program or service you found most valuable to you and why.), Question 9 (If you were unsatisfied (*sic*) with a program or service, please tell us why.), and Question 10 (What types of programs would you be interested in seeing at the library in the future?)

Refinement of the Product

After two peers reviewed this report, editorial and presentation changes were made to enhance delivery. In addition, TLS' Assistant Library Director conducted a review to assist in the analysis and interpretation of the outcomes. Dr. Brown reviewed the special project report for content and literary style and scored it against the special project rubric.

Conclusion

The consumer surplus calculations to determine collection value and ROI for the three years were lengthy yet easily administered and understood. The convenience sample survey within the library captured library users during the sample period. Respondents provided valuable data on their preferences and perceptions.

CHAPTER FOUR: CONCLUSIONS AND RECOMMENDATIONS

Interpretation of the Results

The study's results supported a majority of initial expectations. In addition to proving collection value, the cost benefit analysis exceeded the projected ROI. The survey reported users' value of programs and services but did not conclusively measure users' satisfaction rate. In-library convenience sampling, survey structure, and survey time period influenced the accuracy of the results. The intended sample (n = 200) was not achieved. The actual sample (n = 200)165) changed confidence intervals from Cl 95% [6.91] to Cl 95% [7.61]. Don't use/don't know responses (37%) influenced the validity of satisfaction rates therefore the intended satisfaction rate (90%) was not met. Participants responded to services they or family members use. Further studies may reveal whether high response rates in adult and children's services versus high don't use/don't know and low young adult responses were a result of demographics, misunderstanding of the question, unfamiliarity with the service to be able to identify usage, knowledge of service but don't use it, or not applicable. If it is determined that participants selected don't use/don't know based on the logic of the last two options, the sample base decreases (n = 1,230) and satisfaction response means increase to 96% (n = 1,184/1,230) satisfied and 4% (n = 46/1,230) dissatisfied. As participants were library users, responses could be seen as overzealous support of the library and, when combined with the sampling method, sample size, and frequency of don't use/don't know responses, seen as unrepresentative of the population. Nevertheless, open-ended

question responses cross-referenced to the cost benefit analysis results provided valid insight to users' perceived value of services and programs.

Assumptions to establish market value, even when discounted or adjusted for inflation, did not include allocated overhead or invested capital and may have resulted in higher collection values and overall ROI. Conversely, the collection values do not include in-library use or the benefit of using the service repeatedly without further expense. Replacing or building this diverse collection has cost and value to the community and validates the study's overall results.

When comparing the cost benefit analysis to the survey, service gaps and trends appeared. During the three years, the library increased material acquisitions in some collections but the intended realignment did not meet overall demand. Participants rated CDs, DVDs, audiobooks, and books valuable and requested more and updated items in these collections. Participants also commented on long waits for book holds. Users' unwillingness to wait long periods for a book to become available may have influenced the 26% increase (1,570 to 2,113) in ILL transactions over the three years. As the library continues to monitor collection acquisitions to circulation rates, the library could consider the following to meet demand and reallocate resources:

- In answer to users' dissatisfaction with DVD rental fees, demonstrate how fees support the DVD collection
- As circulation is low in young adult and children's playaways collections, reallocate budget to children's books

Reference questions decreased 8% (33,079 to 30,572) over the three years. This service has high user interface and users commented staff assistance was a valuable service. To better understand user needs and monitor changes in reference transactions, TLS could consider

tracking the type of question and length of assistance in addition to the current tracking methods. In preparation for future studies, TLS could consider the following:

- Source market value of reference transactions to confirm study's results
- Conduct focus groups or interviews to identify and understand service gaps
- Hold educational and promotional sessions during day and evening open houses, as suggested by one user, and place promotional or instructional videos on website and linked to the databases

Database search discrepancies are a result of iCONN changing their counting methodology over the three-year period, thus invalidating the service's collection value.

Nevertheless users rated *database searches from home* a fourth valuable service. To meet users' needs and maintain services, TLS could consider taking the following actions:

- Collect iCONN statistics for three years
- Monitor hits on the website and catalog to determine databases accessed for future promotion and planning
- Partner with reference and computer services to load promotional and pathfinder videos on the website
- Source database market value to validate study's results and to prepare future cost benefit analyses

Computer usage increased 1% (n = 42,001 to 42,566) from 2007 - 2008 to 2008 - 2009 and many participants commented the library helped during the recent economic recession with online job searches, email, etc. One user commented that the library's computers are, "one of two favorite 'free' services", while another commented on the library's dated computer systems stating, "I have to go to another library to do my *Turbo Tax*". Based on FedEx Office's 2010

hourly fees, computer usage is a value-added service and to clearly assess its worth in the future a definition of session times is recommended. The study did not capture free Wi-Fi use in the library as an electronic resource. As more establishments offer free Wi-Fi, TLS competes to provide a service whose cost a commercial entity may be able to include in other fee-based amenities and therefore appear invisible to the user. As technology costs rise and the library increases services to virtual users 24/7/365, it will be important to demonstrate electronic resource's (including Wi-Fi) value and cost within the library's collection. In order for TLS to proactively mange electronic resources, the library could consider the following:

- Conduct detailed cost benefit analysis to validate market value and the study's results
- Survey in-library Wi-Fi users to identify use and value
- Monitor yearly as technology changes and expenses increase

Programming attendance decreased 8% (12,233 to 13,224) from 2007 – 2008 to 2008 - 2009. Participants found storytimes and adult programming most valuable as well as the areas for most improvement. Participants requested more and updated children's programming as well as higher level computer classes, business programs, and career workshops. Although responses may have reflected the sample population, participants were supportive and wanted to come to library programs. In order to implement effective change and remain within budget, the library may consider the following steps:

- Hold management-led brainstorming sessions to explore means to address users' responses and to meet the library's mission and goals with limited funds
- Have management review current programs and presenters to understand effectiveness
- Conduct cost benefit analysis of program budgets for efficiencies

- Conduct focus groups or interviews with populations not addressed in this study
- Conduct outcomes based evaluation of a program or a series of programs to measure its specific value to users

The library offers meeting rooms as a community service. With decreased programming events and stabilized rates, TLS could consider speaking with previous and current groups to explore reasons in decreased use. In addition, The library could consider updating this study to include custodial and overhead costs for future analysis.

Using the study's results, individual collection categories' ROI could benefit from further research. However when dividing an individual collection's total consumer surplus value by its annual operating budget, its individual ROI may appear more profitable than another service's ROI. Further analysis of the comparative circulation numbers may conclude that for the money invested, another service provides a higher usage ratio. In order to obtain a clearer picture of TLS' services' and efficiencies within the respective operating budgets, the library could consider a more in depth cost accounting analysis in the future.

Lastly, survey material stated results would be shared with participants. After review of this report, TLS could consider various audience-appropriate methods to share results. Some recommendations are: Board of Trustees meeting, staff meeting, an executive summary available to participants and public, bookmarks highlighting this study's results as well as subsequent changes implemented as a result of this report, follow-up press article, and a full copy of this report available upon request.

Significance and Implications for Practice

Although this study produced a higher ROI than SLPL's \$4.38 and Suffolk County's \$3.93 ROI, it supports their methodologies to combine a cost benefit analysis with a survey to

measure a library's direct value to the individual and community. The recent economic downturn validated the model as users turned to the library for services normally purchased elsewhere. Because the market value per item changes to reflect a community's socioeconomic status, this study can be replicated to yield legitimate results for medium to small—sized libraries and other not-for-profit institutions. Although sample size was less than intended, the responses were valuable and will assist TLS to understand users' value perception of services. As proposed in ALA's Draft 2015 Strategic Plan and outlined at the Institute of Museum and Library Services (IMLS) workshop, the goal is to communicate the value of programs to the community, accountability, and justifying the budget and value of the institute to those who allocate resources and determine what programs should be expanded, replicated or recognized (Rudd, 2000, p. 20).

Lessons Learned

Based on the results and experiences in the development of this study, a stratified sample of adult, Trumbull resident, library cardholders would produce statistically significant results. The survey process would include an introduction letter from the library director to ask for participation. In addition to separating don't use/don't know into separate response categories, it is recommended to change 'don't use' to 'not applicable' to increase the validity the scores. Although there did not appear to be duplication of responses in this study, it is recommended the survey be administered by an electronic survey company or be interactive on the library's website to ensure participant confidentiality and remove undue influence by the researcher or employees. To reduce input errors, use of a statistical software program would be warranted especially if analyzing a large survey sample. Alternatively, if Microsoft Excel is the only tool available, it is recommended to develop a dual entry system. As suggested by Elliott et al.

(2007), the survey would be administered during February or March as part of a ten-month development program to allow time to properly source market values and promote (pp. 51-52). Promotional materials are very important as the local newspaper wrote a human-interest story in support of this study. Although responses did not measurably increase as a result, the event illustrated that promotion and support is critical in successful research.

Although possibly more costly, time consuming, and not as easily transportable to other libraries as the consumer surplus methodology, a true cost benefit analysis includes detailed cost accounting methods resulting in a more accurate assessment of collection values, efficiencies, and ROI; however consumer surplus methodology and a survey together are viable solutions for staff and budget strapped institutions to measure their value to the individual and the community. Most importantly, when analyzing the value of a library's collection to its users, remember to include the staff as a category to be rated. Participants added staff as a valuable service.

Conclusion

At one time libraries were above reproach as the public realized their importance in promoting educational value to all. During the Depression of the 1930s not a single library closed in the United States (Bundy, p.3). As funders demand outcome based evaluations compounded by the challenge of remaining current in today's rapidly changing technological world, the need to define meaningful outcomes and to measure their values should be paramount in a library's attempt to understand a service's efficiency and effectiveness (Kaufman & Watstein, 2008, p.227). Given this climate, it is understandable that TLS requested a comprehensive evaluation of performance to include a survey of users' perception of services and programs.

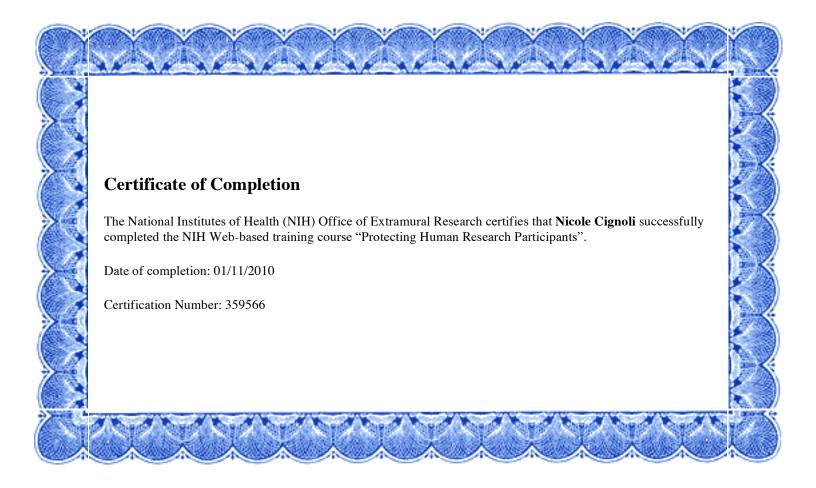
By combining the two components, the study showed TLS has value to the community and participants value library services. Data provided useful information to assess current performance in order to balance resource allocation and service decisions with user needs and perceptions in support of the library's mission statement. User needs and the library's role always change. This study provided the foundation for continuous improvement to maintain the library's effectiveness and value to funders and the community.

APPENDICES

APPENDIX A: IRB FORMS

Appendix A1: NIH Certificate of Completion

Certification Number: 359566 http://phrp.nihtraining.com/users/cert.php?c=358566



Appendix A2: IRB Letter and Protocol Number



APPENDIX B: TRUMBULL LIBRARY'S SERVICE-USER MATRIX

	General Users
Adult Books	
Young Adult Books	
Children's Books	
Playaways	
Books on CD/tape	
DVDs/VHS	
Music	
Magazines/Newspapers	
Reference/research services	
Electronic databases	
Computers	
Children's programs	
Teen programs	
Adult programs	
Computer programs	
Meeting rooms	

Note: Adapted from "Measuring Your Library's Value: How to Do a Cost-Benefit Analysis for Your Public Library", by Elliott, D. S., Holt, G. E, Hayden, S. W., & Holt, L. E. 2007. Chicago, IL: American Library Association.

APPENDIX C: TRUMBULL LIBRARY'S 2006 – 2007 SPREADSHEETS

Table C1:

Estimated Value of Collection, 2006 – 2007

Materials Owned	Number	Market comparison	Estimated or Proxy Value per Item	Total Estimated Value	Source of Value Estimate
	34,351	, , , , , , , , , , , , , , , , , , ,			Bowker Annual Library Almanac,
Adult fiction		Purchase	\$15.38	\$528,318.38	TLS' 2007-09 discount
Adult nonfiction	46,067	Purchase	\$50.61	\$2,331,450.87	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult paperback	1,609	Purchase	\$9.60	\$15,446.40	Bowker Annual Library Almanac, TLS' 2007-09 discount
Large print	2,551	Purchase	\$21.56	\$54,999.56	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult books	8,606	Purchase	\$25.66	\$220,829.96	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult paperback	565	Purchase	\$8.38	\$4,734.70	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's books	53,303	Purchase	\$12.16	\$648,164.48	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's paperback	3,651	Purchase	\$6.13	\$22,380.63	Bowker Annual Library Almanac TLS' 2007-09 discount
Reference	6,550	Purchase	\$83.24	\$545,222.00	Bowker Annual Library Almanac, TLS' 2007-09 discount
	2.205	D 1	Ф0.06	#20 24 5 10	Wal-Mart 2010 purchase price,
Music	2,285	Purchase	\$8.86	\$20,245.10	TLS' 2007-09 discount
DVDs	5,552	Rent	\$4.00	\$22,208.00	Blockbuster
Adult audiobooks (CD)	1,872	Purchase	\$21.38	\$40,023.36	Bowker Annual Library Almanac TLS' 2007-09 discount
Playaways	1,822	Purchase	\$31.83	\$57,994.26	2007 average price adjusted for inflation, TLS' 2009-11 discount
Young adult audiobooks (CD)	158	Purchase	\$22.61	\$3,572.38	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's audiobooks (CD)	344	Purchase	\$14.49	\$4,984.56	Bowker Annual Library Almanac, TLS' 2007-09 discount
PERIODICALS					
Adult	7,762	Purchase	\$5.00	\$38,810.00	2010 Newsstand Price
Young adult	104	Purchase	\$3.22	\$334.88	2010 Newsstand Price
Children's	400	Purchase	\$5.00	\$2,000.00	2010 Newsstand Price
TOTAL	177,552			\$4,561,719.52	

Table C2:

Estimated Value of Circulation and Reference Transactions, 2006 – 2007

			Estimated or Proxy		
		Market	Value per	Total Estimated	
Materials Owned	Number	comparison	Item	Value	Source of Value Estimate
Adult fiction	65,389	Purchase	\$15.38	\$1,005,682.82	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult nonfiction	54,691	Purchase	\$50.61	\$2,767,911.51	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult paperback	2,159	Purchase	\$9.60	\$20,726.40	Bowker Annual Library Almanac, TLS' 2007-09 discount
Large print	8,668	Purchase	\$21.56	\$186,882.08	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult books	13,389	Purchase	\$25.66	\$343,561.74	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult paperback	584	Purchase	\$8.38	\$4,893.92	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's books	108,241	Purchase	\$12.16	\$1,316,210.56	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's paperback	10,993	Purchase	\$6.13	\$67,387.09	Bowker Annual Library Almanac, TLS' 2007-09 discount
Reference	15	Purchase	\$83.24	\$1,248.60	Bowker Annual Library Almanac, TLS' 2007-09 discount
Music	11,269	Purchase	\$8.86	\$99,843.34	Wal-Mart 2010 purchase price, TLS' 2007-09 discount
DVDs	50,536	Rent	\$4.00	\$202,144.00	Blockbuster
Adult audiobooks (CD)	8,434	Purchase	\$21.38	\$180,318.92	Bowker Annual Library Almanac, TLS' 2007-09 discount
Playaways	110	Purchase	\$31.83	\$3,501.30	2007 average price adjusted for inflation, TLS' 2009-11 discount
Young adult audiobooks (CD)	588	Purchase	\$22.61	\$13,294.68	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's audiobooks (CD) PERIODICALS	771	Purchase	\$14.49	\$11,171.79	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult	6,390	Purchase	\$5.00	\$31,950.00	2010 Newsstand Price
Children's	521	Purchase	\$5.00	\$2,605.00	2010 Newsstand Price
ILL Services	1,570	Purchase	\$30.39	\$47,712.30	TLS Annual Report, avg. cost of ILL per ARL in 2003 \$27.00, adjusted for inflation
		Pı	oxy Dollar Po	er Use	
Reference questions	33,079	Purchase	\$6.34	\$209,720.86	
Total	342,748			\$6,259,333.75	

Table C3:

Value of Databases and Computer Usage, 2006 – 2007

Type of Service	Yearly Cost	Number of Searches	Proxy Dollar Per User	Total Proxy Dollar Value	Source of Proxy Value Estimate
Online Database Searches	\$30,723.00	64,848	\$32.64	\$2,116,638.72	\$29.00 average cost per Google answers in 2003, adjusted for inflation
Technology		Total	Session		
Center		Sessions	Value per		
Computer			Hour or per		
Use			User		
		43,378	\$16.80	\$728,750.40	FedEx Office
TOTAL		30,723		\$2,845,389.12	

Table C4:

Value of Library Programming, 2006 – 2007

		Proxy Dollar	Total Proxy	
	Participants	Value per User	Dollar Value	Source of Value Estimate
TOTAL	12,178	\$11.40	\$138,829	TLS Annual Report, St. Louis Public Library 1998 study \$9.00 adjusted for inflation

Note: Adapted from "Placing an Economic Value on the Services of Public Libraries in Suffolk County, New York: A Research Report by The Long Island Association," by Kamer, P. M., Dr. June 2005. pp. 4 – 7. Usage statistics obtained from The Trumbull Library System's Annual Report.

Table C5:

Value of Meeting Room Use, 2006 – 2007

	Number of			
	outside Groups	Proxy Dollar	Total Proxy	Source of Proxy Value
	usage	Value per Hour	Dollar Value	Estimate
				Average proxy dollar per
TOTAL	516	\$32.65	\$16,847.40	hour of all four rooms

Table C6:

Estimated Dollar Value of Services Provided in 2006 – 2007

Service	Number of Uses	Total Proxy Dollar Value
Circulation of Materials	340,961	\$6,179,188.67
Reference Activities	34,649	\$257,433.16
Databases	64,848	\$2,116,638.72
Computer usage	43,378	\$728,750.40
Programming	12,178	\$138,829.20
Meeting rooms	516	\$16,847.40
TOTAL	496,530	\$9,437,687.55

Table C7:

Estimated Dollar Value of Services Provided in 2006 – 2007

Type of Revenue	Dollar Amount		
Town appropriated budget	\$1,447,493.00	\$1,602,139.00	Operating Budget
Other Sources	\$154,646.00	\$9,437,687.55	Library services
ANNUAL BUDGET	\$1,602,139.00	\$5.89	ROI

APPENDIX D: TRUMBULL LIBRARY'S 2007 – 2008 SPREADSHEETS

Table D1: Estimated Value of Collection, 2007 – 2008

			F-4:4-4		
			Estimated or Proxy		
		Market	Value per	Total Estimated	
Materials Owned	Number	comparison	Item	Value	Source of Value Estimate
		-			Bowker Annual Library Almanac,
Adult fiction	30,527	Purchase	\$17.97	\$548,570.19	TLS' 2007-09 discount
					Bowker Annual Library Almanac,
Adult nonfiction	43,671	Purchase	\$50.79	\$2,218,050.09	TLS' 2007-09 discount
					Bowker Annual Library Almanac,
Adult paperback	1,790	Purchase	\$10.50	\$18,795.00	TLS' 2007-09 discount
	2.550	D 1	#27.10	Φ π ο οο ο ο1	Bowker Annual Library Almanac,
Large print	2,779	Purchase	\$25.19	\$70,003.01	TLS' 2007-09 discount
Young adult	2.047	D 1	#22.20	#05 402 40	Bowker Annual Library Almanac,
fiction	3,847	Purchase	\$22.20	\$85,403.40	TLS' 2007-09 discount
Young adult nonfiction	284	Purchase	\$26.59	\$7,551.56	Bowker Annual Library Almanac, TLS' 2007-09 discount
	284	Purchase	\$20.39	\$7,331.30	
Young adult paperback	475	Purchase	\$8.66	\$4,113.50	Bowker Annual Library Almanac, TLS' 2007-09 discount
рарегоаск	4/3	Fulchase	\$6.00	\$4,113.30	Bowker Annual Library Almanac,
Children's books	52,646	Purchase	\$12.59	\$662,813.14	TLS' 2007-09 discount
Children's	32,040	Turchase	\$12.39	\$002,813.14	Bowker Annual Library Almanac,
paperback	3,649	Purchase	\$6.19	\$22,587.31	TLS' 2007-09 discount
puperouek	3,017	Turenase	ψ0.17	Ψ22,307.31	Bowker Annual Library Almanac,
Reference	5,551	Purchase	\$83.54	\$463,730.54	TLS' 2007-09 discount
	-,		4 0 0 10 1	4,,	Walmart 2010 purchase price, TLS'
Music	2,448	Purchase	\$8.86	\$21,689.28	2007-09 discount
DVDs	7,346	Rent	\$4.00	\$29,384.00	Blockbuster
Adult audiobooks	ŕ			•	Bowker Annual Library Almanac,
(CD)	1,484	Purchase	\$23.63	\$35,066.92	TLS' 2007-09 discount
					2007 average price adjusted for
Adult playaways	2,665	Purchase	\$33.03	\$88,024.95	inflation, TLS' 2009-11 discount
Young adult					Bowker Annual Library Almanac,
audiobooks (CD)	200	Purchase	\$33.03	\$6,606.00	TLS' 2007-09 discount
Young adult					2007 average price adjusted for
playaways	7	Purchase	\$31.65	\$221.55	inflation, TLS' 2009-11 discount
Children's					Bowker Annual Library Almanac,
Audiobooks (CD)	408	Purchase	\$15.58	\$6,356.64	TLS' 2007-09 discount
Children's					2007 average price adjusted for
playaways	19	Purchase	\$33.03	\$627.57	inflation, TLS' 2009-11 discount
PERIODICALS					
Adult	4,871	Purchase	5.00	\$24,355.00	2010 Newsstand Price
Young adult	123	Purchase	3.22	\$396.06	2010 Newsstand Price
Children's	238	Purchase	5.00	\$1,190.00	2010 Newsstand Price
Total	165,028			\$4,315,535.71	ibraries in Suffolk County New Yor

Table D2:

Estimated Value of Circulation and Reference Transactions, 2007 – 2008

Item Circulation	Circulation	Estimated or Proxy Value per Item	Total Estimated Value	Source of Value Estimate
Adult fiction	69,175	\$17.97	\$1,243,074.75	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult nonfiction	57,152	\$50.79	\$2,902,750.08	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult paperback	2,191	\$10.50	\$23,005.50	Bowker Annual Library Almanac, TLS' 2007-09 discount
Large print	8,439	\$25.19	\$212,578.41	Bowker Annual Library Almanac, TLS' 2007-09 discount
Music	13,639	\$8.86	\$120,841.54	Bowker Annual Library Almanac, TLS' 2007-09 discount
DVDs	58,811	\$4.00	\$235,244.00	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult spoken word	10,459	\$23.63	\$247,146.17	Bowker Annual Library Almanac, TLS' 2007-09 discount
Playaways	431	\$33.03	\$14,235.93	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult fiction	14,086	\$22.20	\$312,709.20	Wal-Mart 2010 purchase price, TLS' 2007-09 discount
Young adult nonfiction	28	\$26.59	\$744.52	Blockbuster
Young adult paperback	365	\$8.66	\$3,160.90	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult spoken word	309	\$33.03	\$10,206.27	2007 average price adjusted for inflation, TLS' 2009-11 discount
Children's books	113,895	\$12.59	\$1,433,938.05	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's spoken	,			Bowker Annual Library
word	1,265	\$15.58	\$19,708.70	Almanac, TLS' 2007-09 discount
Reference	10	\$83.54	\$835.40	
Periodicals				2010 Newsstand Price
Adult	6,065	\$5.00	\$30,325.00	2010 Newsstand Price
Children's	769	\$5.00	\$3,845.00	
ILL services	1,617	\$31.54	\$51,000	
Reference questions	31,595	\$6.58	\$207,895	
Total	357,089		\$6,814,349.42	

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Table D3:

Value of Databases and Computer Usage, 2007 – 2008

Type of		Number of	Proxy Dollar	Total Proxy	Source of Proxy
Service	Yearly Cost	Searches	Per User	Dollar Value	Value Estimate
Online Database Searches	\$42,613.00	10,165	\$33.88	\$344,390.20	\$29.00 average cost per Google answers in 2003 adjusted for inflation
Technology			Session		
Center	Total		Value per		
Computer	Sessions		Hour or per		
Use			User		
		42,001	\$17.00	\$714,017.00	FedEx Office 2010, adjusted for inflation
TOTAL	\$42,613.00	42,613		\$1,058,407.20	

Table D4:

Value of Library Programming, 2007 – 2008

Type of	D	Proxy Dollar	Total Proxy	C CVI D
Service	Participants	Value per User	Dollar Value	Source of Value Estimate
TOTAL	14,233	\$11.84	\$168,519	TLS Annual Report, St. Louis Public Library 1998 study \$9.00 adjusted for inflation

Table D5:

Value of Meeting Room Use, 2007-2008

	Number of	Proxy Dollar		
	Outside Groups	Value per	Total Proxy	
	Usage	Hour	Dollar Value	Source of Proxy Value Estimate
TOTAL	498	¢22 90	\$16,877.22	2009 avg. per hour for all four
IUIAL	498	\$33.89	\$10,077.22	rooms, adjusted for inflation

Table D6:

Estimated Dollar Value of Services Provided in 2007-2008

Service	Number of Uses	Total Proxy Dollar Value
Circulation of	260 410 00	ФС 040 000 16
Materials Reference	368,410.00	\$6,848,802.16
Activities	33,212.00	\$257,947.43
Databases	10,165.00	344,390.20
Computer usage	42,001.00	\$714,017.00
Programming	14,233.00	\$168,518.72
Meeting rooms	498.00	\$16,807.50
TOTAL	468,519.00	\$8,350,483.01

Note: Adapted from "Placing an Economic Value on the Services of Public Libraries in Suffolk County, New York: A Research Report by The Long Island Association," by Kamer, P. M., Dr. June 2005. pp. 4 – 7. Usage statistics obtained from The Trumbull Library System's Annual Report.

Table D7:

Estimated Dollar Value of Services Provided in 2007 – 2008

Type of Revenue	Dollar Amount		
Town appropriated budget	\$1,465,837.00	1,686,388.00	Operating Budget
Other Sources	\$220,551.00	\$8,350,483.01	Library services
ANNUAL OPERATING			
BUDGET	\$1,686,388.00	\$4.95	ROI

APPENDIX E: TRUMBULL LIBRARY'S 2008 – 2009 SPREADSHEETS

Table E1: Estimated Value of Collection, 2007 – 2008

		Market	Proxy Value per	Total Estimated	
Materials Owned	Number	comparison	Item	Value	Source of Value Estimate
Adult fiction	41,139	Purchase	\$15.71	\$646,294	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult nonfiction	41,952	Purchase	\$52.12	\$2,186,538	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult paperback	1,825	Purchase	\$10.48	\$19,126	Bowker Annual Library Almanac, TLS' 2007-09 discount
Large print	2,784	Purchase	\$22.03	\$61,332	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult fiction	3,879	Purchase	\$21.99	\$85,299	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult nonfiction	284	Purchase	\$26.41	\$7,500	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult paperback	468	Purchase	\$8.50	\$3,978	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's books	53,484	Purchase	\$14.12	\$755,194	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's paperback	3,643	Purchase	\$6.35	\$23,133	Bowker Annual Library Almanac, TLS' 2007-09 discount
Reference	5,548	Purchase	\$85.73	\$475,630	Bowker Annual Library Almanac, TLS' 2007-09 discount
Music	2,218	Purchase	\$8.86	\$19,651.48	Wal-Mart 2010 purchase price, TLS' 2007-09 discount
DVDs	7,001	Rent	\$4.00	\$28,004.00	Blockbuster
Adult audiobooks (CD)	1,821	Purchase	\$25.54	\$46,508.34	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult playaways	88	Purchase	\$32.90	\$2,895.20	2007 average price adjusted for inflation, TLS' 2009-11 discount
Young adult audiobooks (CD)	204	Purchase	\$23.64	\$4,822.56	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult playaways	7	Purchase	\$32.90	\$230.30	2007 average price adjusted for inflation, TLS' 2009-11 discount
Children's audiobooks (CD)	435	Purchase	\$23.50	\$10,222.50	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's playaways	19	Purchase	\$32.90	\$625.10	2007 average price adjusted for inflation, TLS' 2009-11 discount
PERIODICALS					
Adult	3,942	Purchase	\$5.00	\$19,710.00	2010 Newsstand Price
Young adult	154	Purchase	\$3.22	\$495.88	2010 Newsstand Price
Children's	294	Purchase	\$5.00	\$1,470.00	2010 Newsstand Price
Total	171,189			\$4,398,659.63	

Table E2:

Estimated Value of Circulation and Reference Transactions, 2008 - 2009

		Proxy Dollar	Total Estimated	
Item Circulation	Circulation	Per User	Value	Source of Value Estimate
Adult fiction	74,957	\$15.71	\$1,177,574	Bowker Annual Library Almanac,
Adult nonfiction	63,168	\$52.12	\$3,292,316	TLS' 2007-09 discount Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult paperback	1,875	\$10.48	\$19,650	Bowker Annual Library Almanac, TLS' 2007-09 discount
Large print	9,080	\$22.03	\$200,032	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult fiction	16,663	\$21.99	\$366,419	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult nonfiction	344	\$26.41	\$9,085	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult paperback	362	\$8.50	\$3,077	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's books	126,685	\$14.12	\$1,788,792	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's paperback	11,645	\$6.35	\$73,946	Bowker Annual Library Almanac, TLS' 2007-09 discount
Reference	3	\$85.73	\$257	Bowker Annual Library Almanac, TLS' 2007-09 discount
Music	17,781	\$8.86	\$157,540	Wal-Mart 2010 purchase price, TLS' 2007-09 discount
DVDs	66,234	\$4.00	\$264,936	Blockbuster
Adult audiobooks (CD)	13,553	\$25.54	\$346,144	Bowker Annual Library Almanac, TLS' 2007-09 discount
Adult playaways	783	\$32.90	\$25,761	2007 average price adjusted for inflation, TLS' 2009-11 discount
Young adult audiobooks (CD)	417	\$23.64	\$9,858	Bowker Annual Library Almanac, TLS' 2007-09 discount
Young adult playaways	22	\$32.90	\$724	2007 average price adjusted for inflation, TLS' 2009-11 discount
Children's audiobooks (CD)	1,251	\$23.50	\$29,399	Bowker Annual Library Almanac, TLS' 2007-09 discount
Children's playaways	158	\$32.90	\$5,198	2007 average price adjusted for inflation, TLS' 2009-11 discount
PERIODICALS				
Adult	6,264	5.00	\$31,320	2010 Newsstand Price
Children's	922	5.00	\$4,610	2010 Newsstand Price
ILL services	2,113	31.42	\$66,390	Avg. cost of ILL per ARL in 2003, adjusted for inflation. TLS Annual Report
Reference questions	30,572	5.82	\$177,929.04	Value per hour based on SLPL 1998 outside research fee, adjusted for inflation
Total Circulation	444,852		\$8,050,957.44	

Note: Adapted from "Placing an Economic Value on the Services of Public Libraries in Suffolk County, New York: A Research Report by The Long Island Association," by Kamer, P. M., Dr. June 2005. pp. 4 – 7.

Usage statistics obtained from The Trumbull Library System's Annual Report. Table E3:

Value of Databases and Computer Usage, 2008 - 2009

Type of	Yearly	Number of	Proxy Dollar	Total Proxy Dollar	Source of Proxy Value
Service	Cost	Searches	Per User	Value	Estimate
Online Database Searches	\$38,247.00	5,851	\$33.74	\$197,412.74	\$29.00 average cost per Google answers in 2003, adjusted for inflation
Technology		Total	Session		
Center		Sessions	Value		
Computer			per Hour		
Use					
		42,566	\$17.00	\$723,622.00	FedEx Office 2010, adjusted for inflation
TOTAL		\$48,417.00		\$921,034.74	J

Adapted from Suffolk County, New York, Cooperative Library System's 2005 Report

Note: Adapted from "Placing an Economic Value on the Services of Public Libraries in Suffolk County, New York: A Research Report by The Long Island Association," by Kamer, P. M., Dr. June 2005. pp. 4 – 7. Usage statistics obtained from The Trumbull Library System's Annual Report.

Table E4:

Value of Library Programming, 2008 - 2009

Type of Service	Participants	Proxy Dollar Value per User	Total Proxy Dollar Value	Source of Value Estimate
TOTAL	13,224	\$11.79	\$155,910.96	TLS Annual Report, St. Louis Public Library 1998 study \$9.00, adjusted for inflation

Table E4:

Value of Meeting Room Use, 2008 - 2009

	Number of Outside Groups Usage	Proxy Dollar Value per Hour	Total Proxy Dollar Value	Source of Proxy Value Estimate
TOTAL	382	\$33.75	\$12,892.50	2009 average \$33.75 per hour of all four rooms, adjusted for inflation

APPENDIX F: SURVEY MATERIAL

Appendix F1: Survey

How valuable are We to You?

To better serve you, The Trumbull Library System is conducting a survey about your experience and satisfaction with library services and programs. Please take 10 minutes to complete the survey and return it to a Survey Box located in the Main Library or Fairchild-Nichols Branch.*

PLEASE COMPLETE ONE (1) SURVEY PER HOUSEHOLD

- 1. How frequently do you use our library? 1 Once a year 2 Once every six months
 - 3 Once a month or more 4 At least once a week 5 This is my first use
- **2.** Please rate your or your family members' satisfaction with Trumbull Library's programs and services. Please place an (X) in each category.

	Very			Very	Don't
	-	0-4:-64	I I 4: - C 4		
	Satisfactory	Satisfactory	Unsatisfactory	Unsatisfactory	Use/Know
Books	1	2	3	4	5
Audiobooks (CD / Tape /	1	2	3	4	5
Playaways)					
DVDs/VHS	1	2	3	4	5
Music	1	2	3	4	5
Magazines / Newspapers	1	2	3	4	5
Reference / research	1	2	3	4	5
services					
Computers	1	2	3	4	5
Library electronic services	1	2	3	4	5
in the library					
Library electronic services	1	2	3	4	5
from home					
Children's programs	1	2	3	4	5
Teen programs	1	2	3	4	5
Adult programs	1	2	3	4	5
Meeting rooms for non-	1	2	3	4	5
library sponsored events					

- **3.** If you or a family member participated in Children's Programs: please select which one(s).
 - 1 Special Events 2 Storytimes 3 Summer Reading
- **4.** If you or a family member participated in Teen programs, please select which one(s).
 - 1 Craft/activity 2 Gaming 3 Movies 4 Special Events 5 Summer Reading 6 TAG

5.	If you or a family member participated in Adult Programs: please select which one(s).
	1 Arts/Music 2 Author Talk 3 Book Club 4 Bus/Career 5 Computer Courses
	6 Lectures 7 Movies 8 Summer Reading
	(Please continue to the back
6.	If you or your family members accessed electronic services in the library, please select which one(s). 1 Library website 2 Online catalog 3 Databases 4 Internet 5 Email account 6 Other
7.	If you or your family members accessed electronic services from home, please select which one(s). 1 Library website 2 Online catalog 3 Renew materials 4 Search databases 5 Other
8.	Please comment on which program or service you found most valuable to you and why.
9.	If you were unsatisfied with a program or service, please tell us why.
10.	What types of programs would you be interested in seeing at the library in the future?
11.	Your Sex: 1 Male 2 Female

*By participating, your answers will be included in our research. All survey answers are kept confidential. If you have any questions or concerns, please contact Nicole Cignoli at ncignoli@trumbull-ct.org or Southern Connecticut State University's Human Research

1 High school graduate 2 2 year degree3 College graduate 4 Graduate degree

12. Your Age Group: **1** 18-29 **2** 30-39 **3** 40-49 **4** 50-59 **5** 60-69 **6** 70 or over

Protection at 203-392-5243.

13. Your highest education level:

Thank you for your time,
The Trumbull Library System

Appendix F2: Survey Invitation

Trumbull Library <<u>tlsnewsletter@gmail.com</u>> wrote:

How Valuable is the Trumbull Library to You?

That's the question The Trumbull Library is asking you from now until April 1st. To better serve you, we are conducting a survey about your experience and satisfaction with library services and programs.

Surveys are located at either the Main or Branch Circulation Desk so please take 10 minutes to complete and return one to a Survey Box located in the Main and Branch Library lobbies

Participant Requirements

Adults – 18 years or older

One (1) survey per household

By participating, your answers will be included in our research. All survey answers are kept confidential. If you have any questions or concerns, please contact Nicole Cignoli at ncignoli@trumbull-ct.org or Southern Connecticut State University's Human Research Protection at 203-392-5243.

Thank you for your time,

The Trumbull Library System

If you have received this e-mail in error or duplication, our apologies.

Trumbull Library Programming Team

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Appendix F3: Trumbull Library Internal Blog posting

For Immediate Release:

How Valuable are We to You?

That's the question we'll be asking our patrons between March 18th and April 1st. As part of my graduate program special project, I will put out anonymous, in-house surveys asking patrons to rate the value of various TLS services as to usage.

I have flyers announcing the survey that I'll put out on Thursday (or earlier if I can).

Surveys will be placed in the Main and Fairchild lobbies along side survey boxes. If you can talk it up in conversation, I'd greatly appreciate it.

Participant Requirements

Adults – 18 years or older

One (1) survey per household

Once I complete my report (due April 25th), I'll be happy to share my findings with the staff. If anyone has any questions or concerns, please have them contact me.

Thank you for your help - one more time - on my degree!

Nicole

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How valuable are we to You?

The Trumbull Library System is conducting a survey about your experience and satisfaction with library services and programs.

Your participation is important to the success of the study.

Please take 10 minutes to complete the survey and return it to a Survey Box located in the Main Library or Fairchild-Nichols Branch.

Participant Requirements

- > Adults 18 years or older
- > One (1) survey per household
- > Survey ends April 1, 2010

By participating, your answers will be included in our research.

All survey answers are kept confidential and will remain in a secure location.

If you have any questions or concerns, please contact Nicole Cignoli at ncignoli@trumbull-ct.org or Southern Connecticut State University's Human Research Protection at 203-392-5243.



Thank you for your time,

The Trumbull Library System

*

*

Deposit Your

How valuable are we to You?

Survey Here

To better serve you, The Trumbull Library System is conducting a survey about 1'Your participation is important to us so please take 10 minutes to complete a survey and return it here.

Participant Requirements

- > Adults 18 years or older
- > One (1) survey per household
- > Survey ends Thursday, April 1, 2010

By participating, your answers will be included in our research. All survey answers are kept confidential and will remain in a secure location. If you have any questions or concerns, please contact Nicole Cignoli at ncignoli@trumbull-ct.org or 203-452-5197 or Southern Connecticut State University's Human Research Protection Program at 203-392-5243.

APPENDIX G: SURVEY RESULTS

Table G1:

Comparison of Population Sex Levels to Sample's Adjusted Sex Levels

	N	Male	Fe	emale
Age in years	Population	Adjusted sample	Population	Adjusted sample
18-24	1,213	0	1,202	3
25-49	5,321	6	5,479	70
50-59	3,512	5	3,734	18
65+	2,516	16	3,324	43
TOTAL	12,562	27	13,739	134

Note: Population data are from Town of Trumbull's 2009 total population (N = 35,047)(Town of Trumbull, Demographics, 2010).

Adjusted sample required aligning Sample's sex levels with the Town of Trumbull's.

Table G2:

Comparison of Population's Age Levels to Sample's Adjusted Age Levels

Town Age		% of	Adjusted		% of
in years	Number	population	Sample age	Number	population
18-24	2,415	9	18-29	3	2
25-49	10,800	41	30-49	76	47
50-64	7,246	28	50-59	23	14
65+	5,840	22	65+	59	37
Total	26,301	100		161	100

Note: Population data are from Town of Trumbull's 2009 total population (N = 35,047)(Town of Trumbull, Demographics, 2010).

Adjusted sample age required aligning Sample's age levels with the Town of Trumbull's.

Table G3:

Comparison Education Levels between Population and Sample

Education 25+	Town	% of population	Sample	% of population
High school	5,633	26	13	8
Some college	4,942	23	10	6
Bachelors or more	11,384	52	137	86
Total	21,959	100	160	100

Note: Population data are from Town of Trumbull's 2009 total population (N = 35,047)(Town of Trumbull, Demographics, 2010).

Table G4:

Paired T Tests - Population (Pop.) to Sample Demographics

	Male		Female		Age		Education	
	Pop.	Sample	Pop.	Sample	Pop.	Sample	Pop.	Sample
Mean:	3140.50	6.75	3434.75	33.500	6575.35	40.25	7319.67	53.33
Std. Dev.:	1731.84	6.70	1757.46	29.400	3471.15	33.24	3536.73	72.47
N Pairs:		4.00		4.00		4.00		3.00
Mean								
Difference:		3133.75		3401.25		6535.00		7266.33
SE of Diff.:		865.452		865.76		1722.13		2000.22
Eta								
Squared:		.776		.79		.78		.82
T-Score:		3.62		3.93		3.80		3.63
P:		.04		.039		.03		.07

Note: Population data are from Town of Trumbull's 2009 total population (N = 35,047)(Town of Trumbull, Demographics, 2010).

Table G5:

Paired T Tests of Question 1 (Q.1) to Sample Demographics

	Q. 1	Sex	Q. 1	Age	Q. 1	Education
	1.000	11.000	1.000	11.000	1.000	12.000
Mean:	3.870	1.826	3.870	1.826	3.870	3.776
Std. Dev.:	1.032	.380	1.032	.380	1.032	1.445
N Pairs:	161		161		161	
Mean						
Difference:	2.043		2.043		.093	
SE of Diff.:	.085		.085		.138	
Eta Squared:	.782		.782		.003	
T-Score:	24.004		24.004		.677	
P:	.000		.000		.499	

Note: Question 1. (How frequently do you use our library?)

Table G6:

Top Ten Responses to Individual Programs or Service in Questions 3. through 7.

No. Responses	Question
107	7. Website from home
86	6. Website in-library
79	7. Online catalog from home
75	6. Online catalog in-library
69	3. Children's summer reading
67	7. Renew materials from home
50	3. Children's special events
44	7. Search databases
40	6. Internet use in library
39	5. Adult lectures

Note: In Questions 3 To 7, respondents selected from a list which programs they had participated in.

APPENDIX H: USERS RESPONSES TO QUESTIONS 8 THROUGH 10

- The Children's Programs are invaluable for several reasons: the activities are perfect for each age; it's a great way to meet neighbors; it's free! Several people I know would be completely willing to pay for these programs. Keep up the great Children's Programs!
- The Children's Library has been invaluable to our family. The resources are terrific!
- Make the Children's programs more dynamic, less repetitive.
- More children's programs for two-year olds and elementary school aged kids (even if
 it is once a month), computer typing course, puppet shows from popular children's
 books.
- More gaming computers in the Children's Library both libraries. More conveniently located OPAC in Children's.
- The Children's storytimes, music programs, and Baby Café were professionally run.

 It's important for children to know that books are FUN! Times are great!
- I wish there were no charge for DVDs, like Westport Public Library. DVDs often skip when I get them home. Could use updated selection, less love story type stuff.
- I really only take books out of the library.
- The new non-fiction area is my "must stop". Would like to see more current non-fiction books and more conservative vs. liberal books so there is a balance.

- I love being able to renew books online from home and place books on hold. It is very convenient to just pick them up at the desk since I have young children.
- Long holds for books.
- Audiobooks are great and have become an essential part of my drive time expand offerings to include more titles.
- Hold a library orientation once a month day and night.
- I like the new teen area. More arts performing for pre-teens.
- Parking more handicapped spaces and safe parking when there are events.
- We save money by using email at the library as unemployed, cannot afford Internet service at home. Our other favorite "free" service is the book and DVD collections.
- If you were unsatisfied with a program or service, please tell us why Never!
- More programs for adults arts, music, lectures, health workshops, fiction book club, authors (especially local authors), cultural/international day (read a book from another country, food, crafts, etc.), teaching crafts, films of substance/foreign films and discussion groups.
- More family programs movies on Saturday or Sunday afternoon.
- When I was unemployed, the Trumbull Library provided me with a place to go to research companies, work on job search via the Internet, and provide a cool place in the summer. This staff is very knowledgeable and helpful. They have made the library a place for the community.
- Business reference larger section and more classes or groups.
- The computers' operating system is old, needs to be updated. I have to go to another library to do my Turbo Tax.

- Need to take ideas from Fairfield Library including story space/small group meeting space, updated computer classes, business classes, and other adult programs. Offer these courses in the evening.
- Kindle books
- Adult library programs tend to be special types of programs that you cannot find anywhere else.
- Always satisfied. You have a great set of employees. All of them are so helpful and friendly. Thank you for this wonderful library!

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