

**Use and Perceptions of Comparative Statistics
by Ohio Public Libraries**

May 2008

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EXECUTIVE SUMMARY

Purpose of the Survey

This exploratory study was conducted to obtain information for a scholarly paper the author is preparing for a library assessment conference. The purpose was to gain a general understanding of how Ohio public libraries use comparative library statistics, including how often comparisons are made, types of statistical data used, and how valuable libraries believe this practice to be.

Methodology

Data were collected via an online questionnaire and telephone interviews. A stratified random sample of 90 Ohio Public libraries was drawn from urban and non-urban counties in Ohio. Thirty-five libraries responded to the online questionnaire and seven libraries participated in telephone interviews.

Compared with the entire population of Ohio public libraries, respondents to the survey represent more medium to large libraries than Ohio public libraries as a whole. Also, no responses were received from libraries with resident populations between 100,000 to 249,999 (or respondents from this category chose not to reveal this information). As a result, the survey gives inadequate representation to smaller, rural libraries and to communities of 100,000 to 249,999 population.¹ The reader should keep these limitations in mind when interpreting the findings.

Findings

All of the libraries report that they routinely review *input statistics* (data reflecting resources that libraries use to provide services, such as expenditures, staffing, volumes held, and so on). They also regularly review *output statistics* (data reflecting service utilization, such as circulation, visits, reference transactions, and so forth). All libraries also report that they have compared their statistics at one time or another with those of other libraries.

Respondent libraries typically review total expenditures and materials expenditures monthly. Other in-house input data are reviewed quarterly or annually. Among output statistics, circulation data are viewed monthly by nearly 85% of the libraries. Networked services such as Internet terminal usage, electronic materials use, and website use are also reviewed monthly by about two-thirds of the libraries. Other output statistics such as reference transactions, visits, and program attendance are typically reviewed less often (quarterly or annually).

¹ Since this was an exploratory study only, no effort was made to solicit additional respondents to remedy this under-representation.

About one-fourth of the libraries compare their operational statistics to other libraries monthly or quarterly. Seventy-eight per cent made comparisons every six months or every year. There is consensus among the libraries regarding only three statistics seen as appropriate for comparisons: total expenditures, materials expenditures, and circulation. More than 90% of the libraries report using these three statistics in comparisons. About 75% of the libraries compare staffing data. (Open-ended questionnaire comments and also interview responses suggest that these are usually in connection with salary surveys.)

Besides the four statistical items mentioned in the prior paragraph, there is no common set of indicators that libraries compare themselves on. Roughly 45% of the libraries compare themselves with others on print material holdings, audio/visual holdings, and databases. Even less (39%) compare their visit counts with counts from other libraries. The study did not determine the extent to which availability of data affected these utilization patterns.

About 75% of the libraries select peer libraries for statistical comparisons based on the other libraries' population or community demographics, or by identifying libraries with statistics similar to the library's data. The top three sources for comparative statistical data for these libraries are the State Library of Ohio (95%), HAPLR ratings (55%), and the Public Library Association (48%).

More than 95% of the libraries believe that comparing library statistics is moderately or highly valuable for understanding the library's own statistics and for reporting to Boards of Trustees. About 75% see the comparisons as useful for operational and financial decision-making, marketing and advocacy, and accountability purposes.

Implications

The survey corroborates themes that are undoubtedly familiar to Ohio public libraries. It is clear that libraries do make deliberate efforts to compare their own statistics with other libraries. At the same time, this practice is at odds with a basic tenet of public librarianship, the notion that each library and its community are unique. To be sure, libraries spend more time analyzing their own in-house statistics to monitor operations, staffing, workflow, new services, and so forth.

Perhaps the main reason for libraries to review comparative statistics is to maintain a general awareness of trends in other libraries' statistical data, rather than to draw specific, actionable conclusions about one's own data. Such a generic use of comparative statistics would definitely be a reflection of a longstanding dilemma in the library profession—the lack of standard criteria by which libraries can judge their own statistics, other than by using their own historic data. Again, this lack is a direct outgrowth of an ideology that stresses the uniqueness of each public library and its community setting. Given this ideology, it seems reasonable that comparisons of standardized statistics would be a secondary concern for Ohio's public libraries.

REPORT

This survey was conducted in preparation for a scholarly paper I am preparing for the Association for Research Libraries 2008 Assessment Conference (www.libraryassessment.org). For purposes of this study, comparative library statistics refers to a library's comparison of its own operational statistics with statistics from other libraries identified as peers of the library. These statistics have typically been collected according to standardized definitions promulgated by library consortia, state library authorities, the Public Library Association, or the Federal-State Cooperative System (recently renamed the Public Library Statistical Cooperative).

For more than twenty years, the practice of comparing one library's statistics with other libraries has been espoused by the Public Library Association as a part of the *planning and managing for results* approach to management (Van House et al., 1987). The practice is also integral to performance measurement as envisioned by the Urban Institute and others (see Morley, Bryant, and Hatry, 2001, Hatry, 2006, and Ammons, 2001).

Purpose of the Survey

The purpose of the survey is to obtain a general impression of how Ohio public libraries use comparative library statistics, including how often comparisons are made, types of statistical data used, and how valuable libraries believe this practice to be.

Methodology

In March 2008 I randomly selected 90 public libraries from the *Directory of Ohio Public Libraries* (State Library of Ohio, 2008). Since the purpose of the study is to acquire a general sense of how libraries use comparative statistics, I employed a simple strategy to obtain a reasonable assortment of libraries:² I classified each Ohio county as either urban—having a major city within its boundaries—or non-urban—having no major city within its boundaries. Major cities are: Akron, Cincinnati, Cleveland, Columbus, Dayton, and Toledo. I used a stratified sampling approach: First, I drew two samples of counties (urban vs. non-urban). Then, I randomly selected 65 libraries from the sample of urban counties (since these areas also included numerous suburban libraries) and 25 from the non-urban sample.

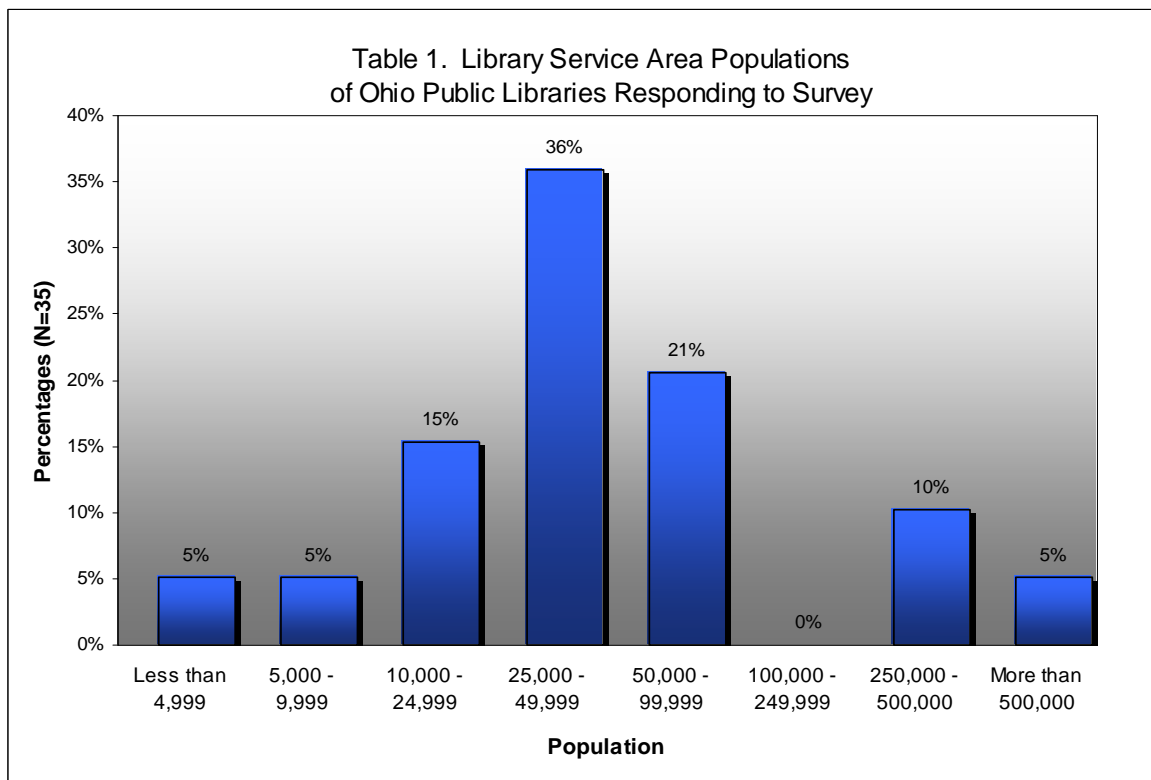
In March 2008 I sent letters via U.S. mail to directors of the 90 libraries requesting their participation in the study. When a library chose to participate, they were asked to contact me and choose either a brief telephone interview or request the link to the online questionnaire. (See questionnaire at www.plstatreports/compare/2008questionnaire.) Seven libraries participated in interviews and 35 responded to the questionnaire, in part or in full. Responses obtained via interviews have remained confidential, and questionnaire respondents were anonymous.

² The *Directory of Ohio Public Libraries* does not include population, expenditure, or other operational data. I chose not to spend time retrieving this information elsewhere and linking it with data in the directory.

Findings from Questionnaire Respondents

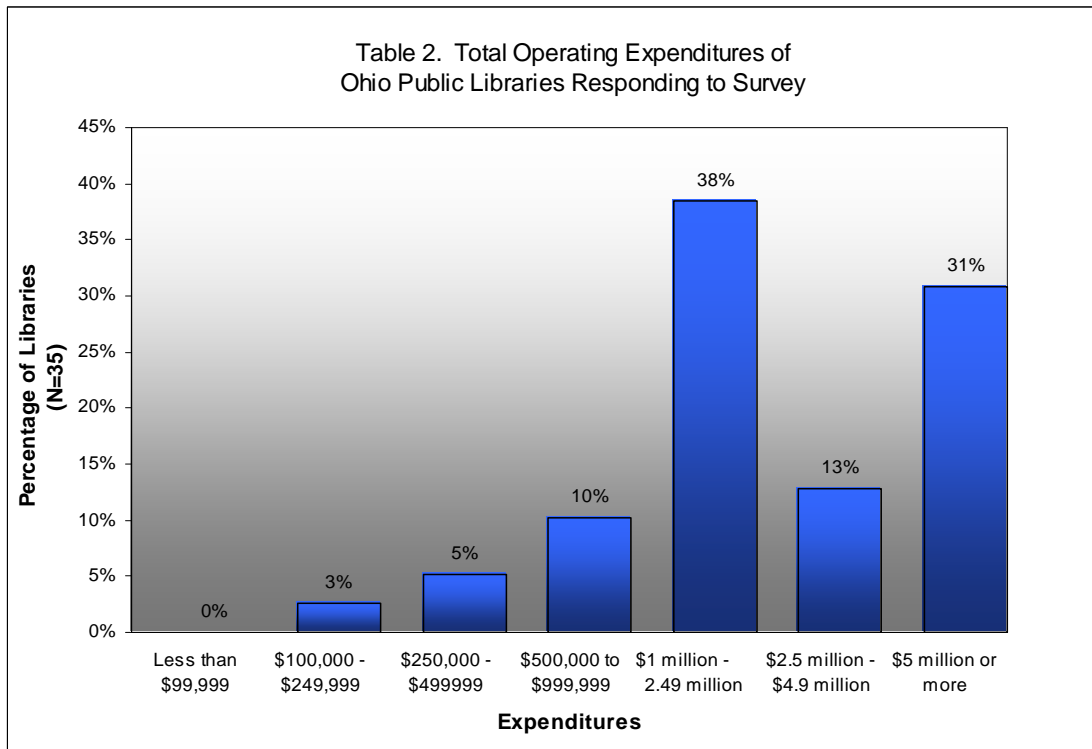
Library Demographics

To assure that respondents remained anonymous, only two questionnaire items pertained to demographic characteristics of the libraries: service area population and total library expenditures. Tables 1 and 2 present the libraries' responses to these two questions. More than half of the responding libraries (57%) had service areas with populations between 25,000 to 99,999. No library within the 100,000 to 249,999 population range responded to the survey. Therefore, the reader must keep in mind the possibility that libraries from Ohio cities of this size may differ from study respondents. Since the study was exploratory (and the budget quite limited!), no further effort was made to include libraries from this missing category.



Total operating expenditure categories in Table 2 were derived from the National Center for Educational Statistics (NCES) study by Bassman et al. (1998). Note in the table that 72% of the respondents were from libraries with operating expenditures of one million dollars or more. This high proportion suggests that the stratified sampling approach utilized in this study was insufficient. Likely due to a combination of sampling error and respondent self-selection, a disproportionate number of respondents to this survey are from libraries with higher overall expenditures, compared with the total population of Ohio public libraries.

Table 3 compares respondents with the 2005 expenditure data from the State Library of Ohio. The table reveals a mismatch between responding libraries and the larger population of libraries, based on the 2005 data. In general, this survey over-represents medium and larger libraries and under-represents smaller libraries. (This is true for all categories other than in the \$2.5 million to \$4.9 million.) As a result, findings from the survey reflect medium to

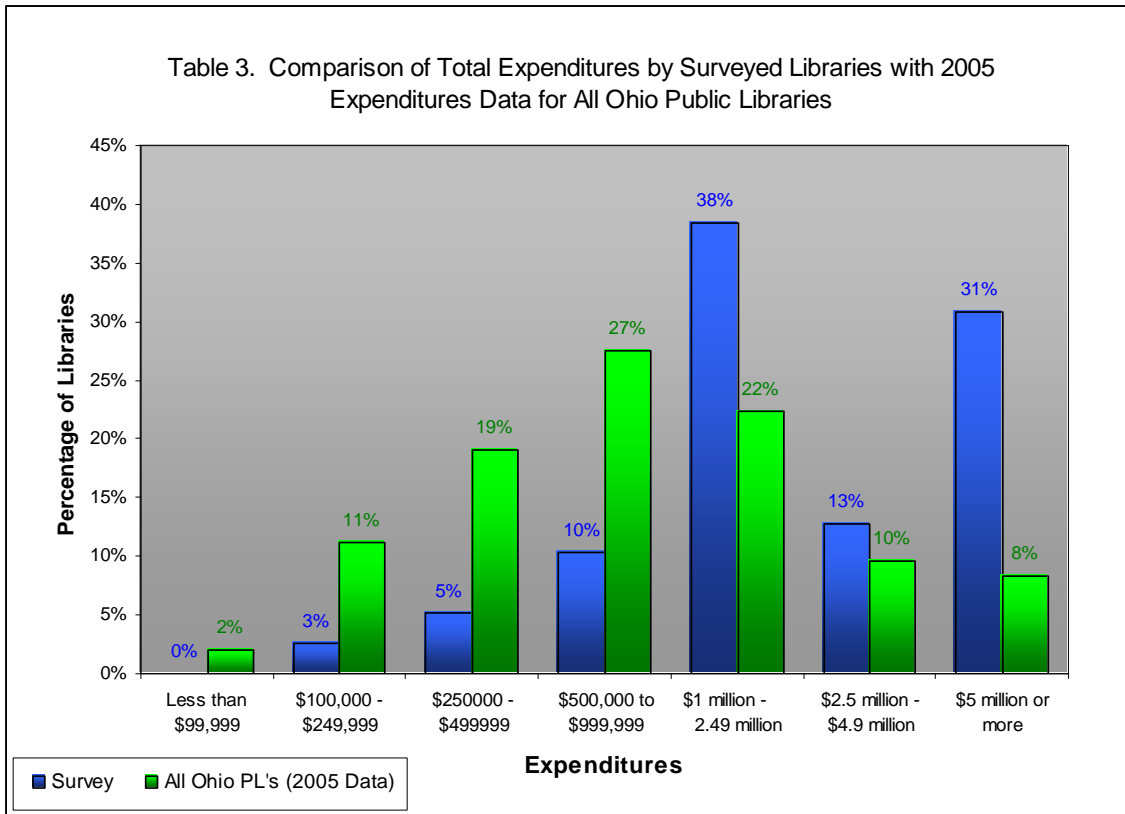


large—that is, primarily urban and suburban—libraries more than smaller and rural libraries, despite the fact that no libraries with service area populations between 100,000 and 249,999 were among survey respondents. From one perspective this may be acceptable, since medium to large libraries represent the greatest share of overall utilization of public library funds in Ohio. On the other hand, if library statistical comparisons are considered to be good managerial practice, then the study should reflect public libraries of all sizes and community types. In this latter case, a more in-depth study would be required to address the unevenness of this study. For the purposes of this study, as long as the under-representation of some libraries is recognized, the results can be useful for describing how comparative library statistics are used in general.

Managerial Use of Library Statistics

One study question concerned how often library executives or management teams use standard library statistics in-house, regardless of whether they make comparisons with other libraries. Table 4 shows the frequency in which libraries responding to the questionnaire review standard *input statistics*. (Since respondents could select more than one statistical indicator, the

sum of percentages in the table exceeds 100%.) The questionnaire did not define *input statistics* but, rather, provided a listing of typical input measures shown in the table.



In Table 4 medium blue highlighting indicates categories which 50% or more of the libraries chose as the frequency with which their executive teams review various input measures. Also, lighter blue highlighting combines the quarterly and monthly categories to form a single category that, in this case, also exceeds 50%. From the table it is evident that nearly two-thirds of reporting libraries review both operating and print materials expenditures monthly. In contrast, other categories like print material counts, subscriptions, and so forth are reviewed annually.

Table 5 indicates *output statistics* that libraries reported as being reviewed by their managerial team periodically. (Since respondents could select more than one statistical indicator, the sum of percentages in the table exceeds 100%.) As with the prior table, medium blue highlighting in this table indicates categories that 50% or more of the libraries report as the frequency with which their management teams review various *output statistics*. Most notably, 83% of all libraries review circulation data monthly. And about two-thirds review interlibrary loan, internet terminal use, and library website usage measures on a monthly basis. Reference transactions are reported as being reviewed either quarterly or monthly by 58% of the libraries. In-house use of library materials is reviewed annually or more often by more than 60% of

reporting libraries. In sum, a majority of responding libraries report reviewing all of these output measures at least annually.

<i>Statistical Indicator</i>	<i>Annually</i>	<i>Quarterly</i>	<i>Monthly</i>	<i>Weekly</i>	<i>Rarely</i>	<i>Not Sure</i>
Operating expenditures	12%	9%	65%	15%	0%	0%
Print Mat. Expenditures	12%	18%	62%	9%	0%	0%
Electronic Mat. Expenditures	39%	21%	36%	3%	0%	0%
Print Materials	56%	9%	29%	3%	3%	0%
Print Subscriptions	74%	12%	15%	0%	0%	0%
Audio/Video Materials	58%	9%	30%	0%	3%	0%
Databases	63%	14%	6%	6%	6%	6%
Internet terminals	51%	11%	14%	9%	6%	9%
FTE Staff	79%	6%	12%	0%	3%	0%

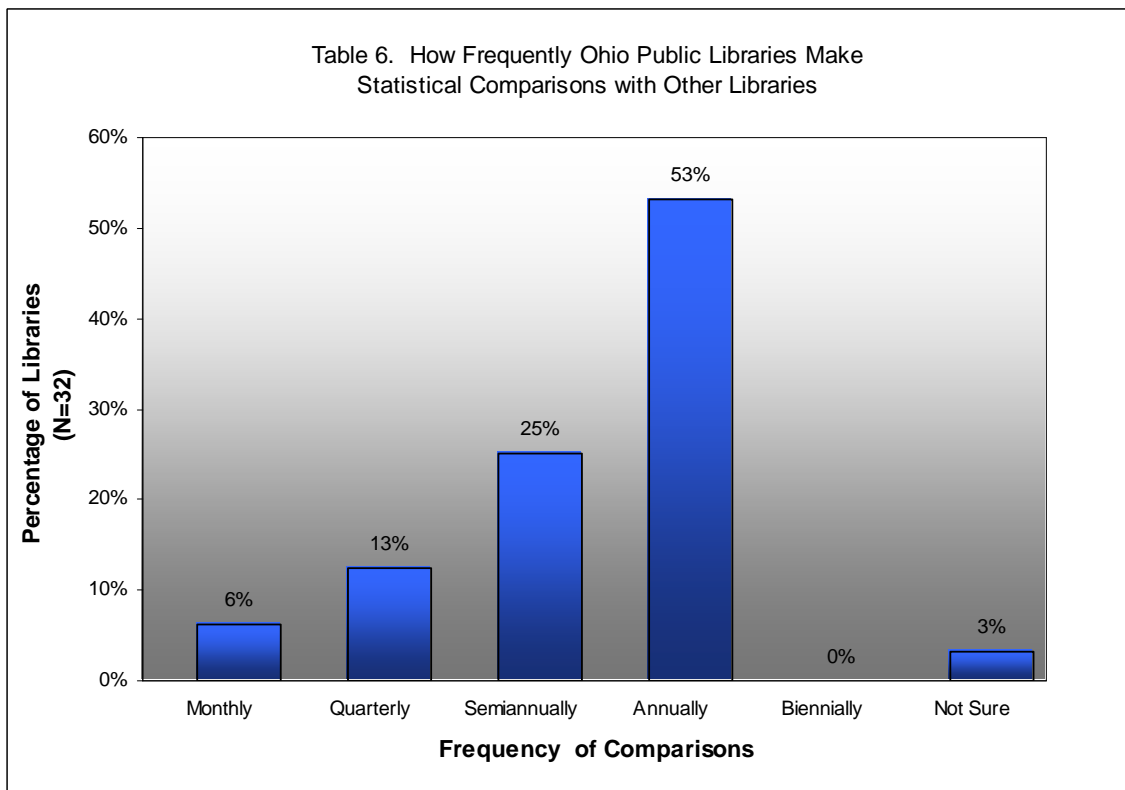
<i>Statistical Measure</i>	<i>Annually</i>	<i>Quarterly</i>	<i>Monthly</i>	<i>Weekly</i>	<i>Rarely</i>	<i>Not Sure</i>
Circulation	9%	0%	83%	9%	0%	0%
In-house Mat. Use	21%	12%	26%	3%	34%	0%
Interlibrary loan	23%	6%	66%	6%	0%	0%
Visits	21%	15%	54%	6%	3%	0%
Reference Transactions	32%	24%	34%	0%	9%	0%
Program attendance	32%	9%	51%	6%	0%	0%
Electronic Mat. Use	19%	6%	60%	0%	9%	0%
Internet Terminal Use	15%	6%	66%	3%	3%	3%
Website Use	12%	9%	63%	0%	9%	3%

Use of Comparative Statistics

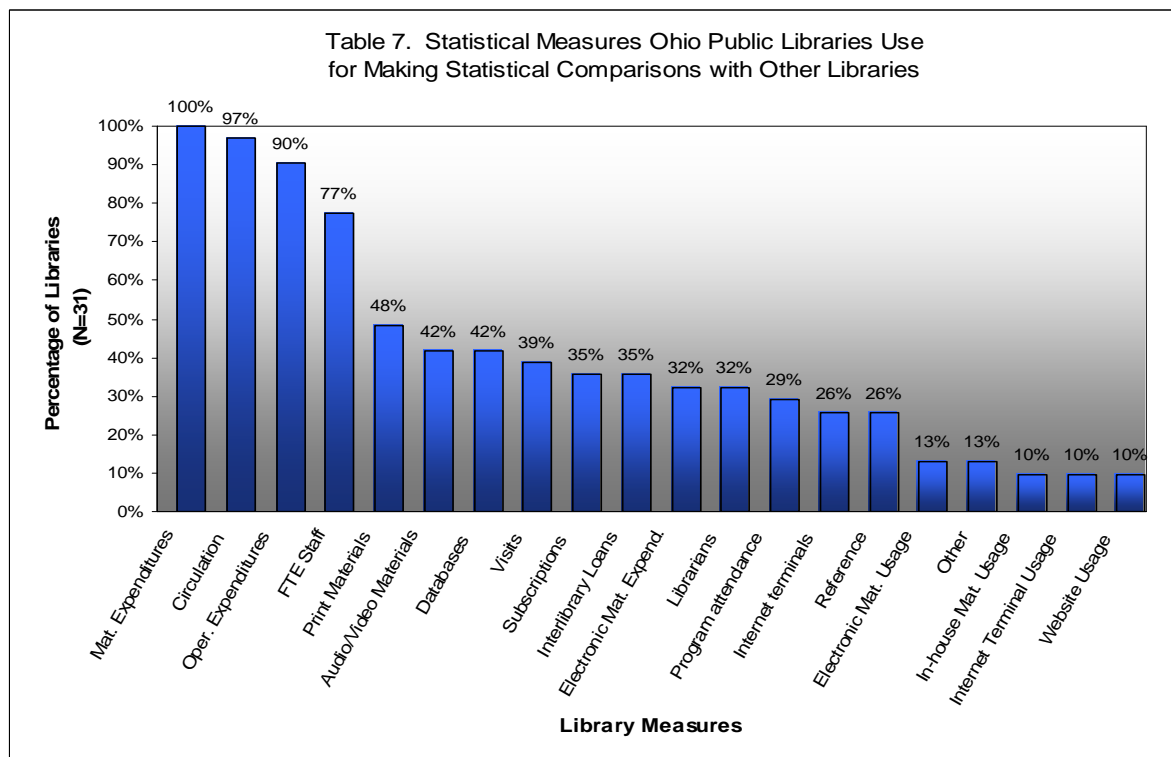
The survey questionnaire asked whether, in the past two years, libraries had made comparisons of their own statistics with those of other libraries. Two (about 6%) of the libraries had not made these comparisons. Of the 33 who did make comparisons within the past two years, one respondent did not complete the questionnaire. Thus, Table 6 presents the frequency with which the 32 libraries who do make comparisons at least biennially compare their statistics with those of other libraries. Seventy-eight percent of these libraries say that they compare their statistical data semi-annually or annually, and 19% report doing so quarterly or monthly. Three percent of the libraries were not sure how frequently they make these comparisons.

Among libraries reporting making comparisons at least biennially, Table 7 indicates which statistical indicators the libraries select for these comparisons. (Since respondents could select more than one indicator in this question, the sum of percentages in the table exceeds 100%). Three statistical indicators are used to make comparisons with other libraries by 90% or

more of the libraries. Two of these indicators involve expenditures: One hundred percent of the responding libraries report comparing their library with others on material expenditures, and 90% do so on total expenditures. For the third indicator, circulation, 97% of the libraries say they make comparisons with other libraries using this indicator. Staffing statistics are used for comparisons by nearly 80% of the libraries, although open-ended questionnaire comments and also interview comments suggest that these comparisons may be for salary studies rather than for performance assessment per se.



Other than these four statistical indicators—material expenditures, total expenditures, circulation, and staffing—there are no others that a majority of libraries report using in their interlibrary comparisons. Almost 50% of the libraries compare themselves on print material holdings, and 42% do so for audio/visual materials and databases. Thirty-nine percent of the libraries responding to this question report comparing visit counts with other libraries. About one-third compare their statistics on subscriptions, interlibrary loans, electronic material expenditures, and number of masters degree librarians. Less than 30% of the libraries utilize the remaining statistical indicators shown in Table 7 in interlibrary comparisons.



Another questionnaire item queried libraries about how they select peer libraries when making comparisons. Their responses appear in Table 8. (Respondents could indicate one or more selection methods, making the sum of percentages in the table exceed 100%.) The table indicates that nearly 75% of the libraries made selections based on population or demographic variables. Seventy-seven percent of the libraries select libraries having statistical indicators that are similar to the library's own data. Very few (6%) libraries say that they select peer libraries based on programming and service offerings. Some libraries did comment in open-ended comments that they compare themselves to other libraries in their county, regardless of library size or community demographic makeup.

Table 9 reports sources from which libraries obtain comparative library statistical data. (Respondents could indicate one or more source of statistical data, making the sum of percentages in the table exceed 100%.) Ninety-four percent of responding libraries obtained data from the State Library of Ohio. Fifty-five percent report using the HAPLR ratings, and 45% the Public Library Association. Slightly more than one-third of the libraries referred to annual reports published by peer libraries. NCES data are used by less than one-fourth of the reporting libraries (presumably due to the unavailability of recent statistics from NCES).

Respondents were asked to estimate the value of comparing their library's statistics to those of other libraries for various purposes, such as accountability, improving service quality, and so on. Table 10 gives responses to this question in tabular format and Table 11 shows the

Table 8. Bases Upon Which Ohio Public Libraries Select Peer Libraries for Comparisons

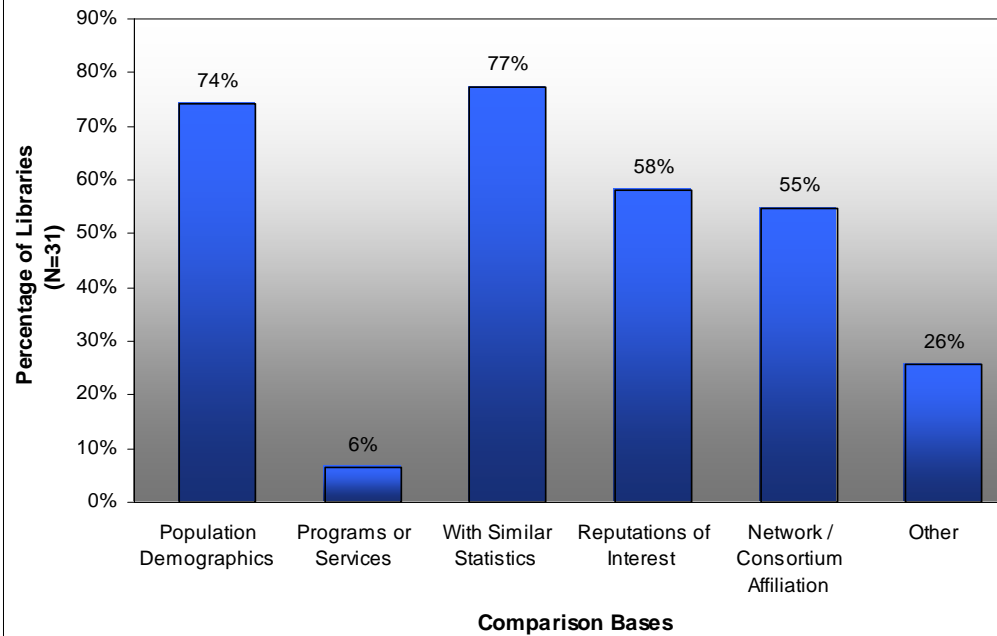
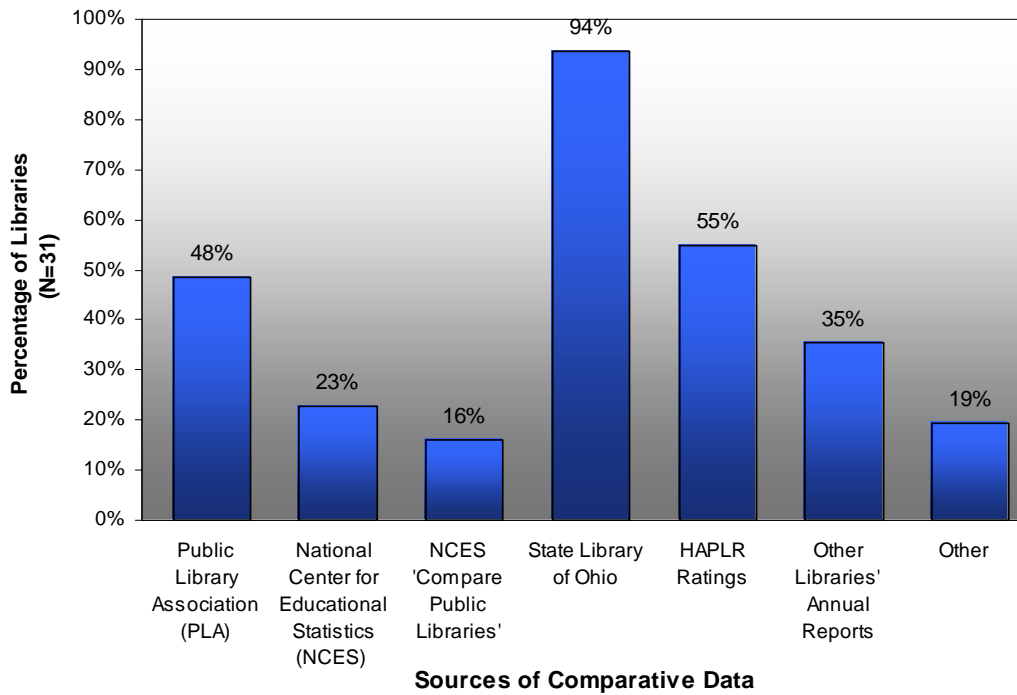


Table 9. Sources of Statistical Data that Ohio Public Libraries Use for Comparisons

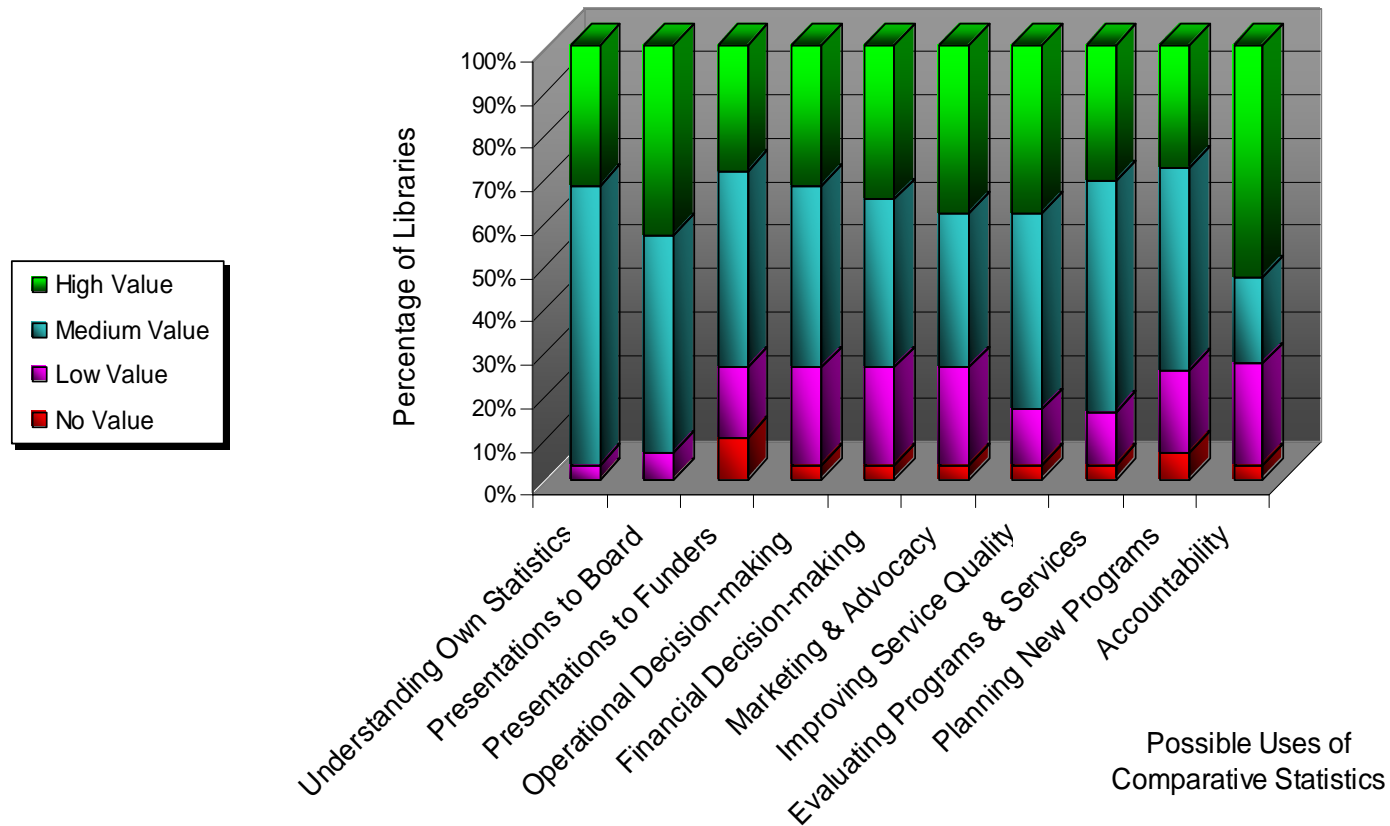


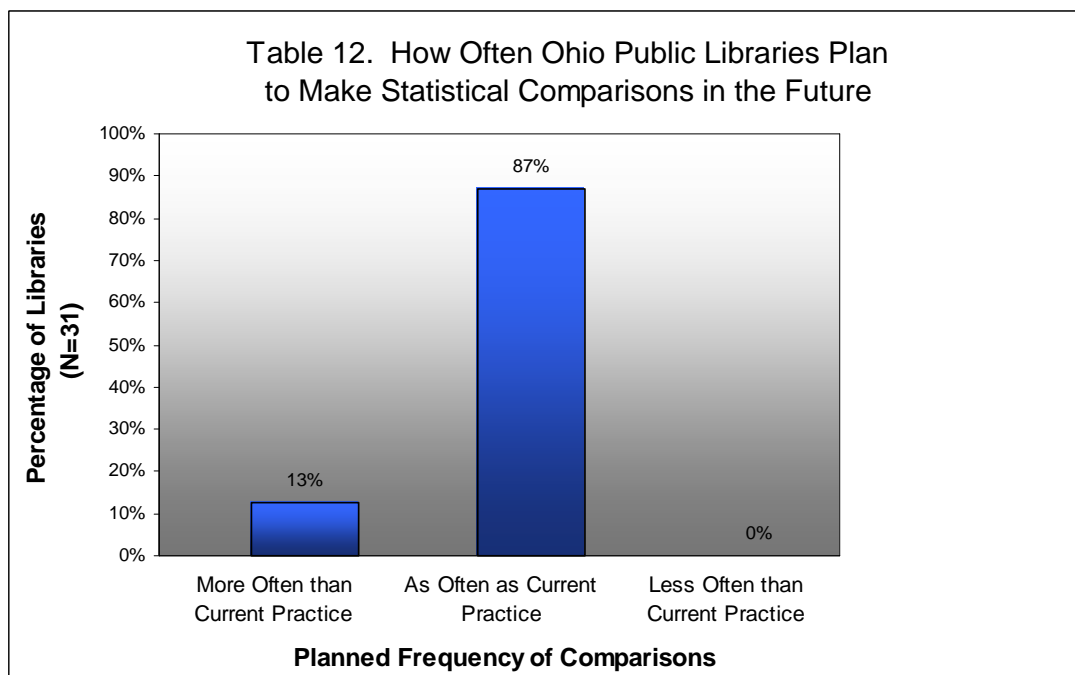
<i>Possible Uses of Comparative Statistics</i>	<i>No Value</i>	<i>Low Value</i>	<i>Medium Value</i>	<i>High Value</i>	<i>Not Sure</i>
Understanding Own Statistics	0%	3%	65%	32%	0%
Presentations to Board	0%	6%	52%	45%	0%
Presentations to Funding Sources	10%	16%	45%	29%	0%
Operational Decision-making	3%	23%	42%	32%	0%
Financial Decision-making	3%	23%	39%	35%	0%
Marketing & Advocacy	3%	23%	35%	39%	3%
Improving Service Quality	3%	13%	45%	39%	3%
Evaluating Programs & Services	3%	13%	55%	32%	0%
Planning New Programs	6%	19%	48%	29%	0%
Accountability	3%	23%	19%	52%	0%

distribution of responses graphically. Ninety-seven percent of respondents felt that comparative statistics had a medium or high value for understanding the libraries' own statistics, and 94% said the same for making presentations to boards. No respondents felt the statistics had no value for these purposes. However, 26% felt the statistics are of little or no value for presentations to funding authorities, operational or financial decision-making, library marketing and advocacy, planning new programs, and for accountability. The use given the highest rating by the most libraries was accountability: 52% of libraries rated this use as having high value.

Finally, libraries were asked about their future plans for using comparative library statistics. Table 12 indicates that the vast majority (88%) plan to make comparisons with the same frequency as they have in the past.

Table 11. Ohio Public Libraries' Perceptions of Value of Comparative Statistics for Various Uses





Findings from Interviews

I conducted interviews with seven Ohio public libraries—one large urban library, four suburban libraries, one rural, and one smaller county library with a service area of primarily Appalachian population. One suburban library and the smaller county library said they had no pressing need to compare their statistical data with other libraries. For the smaller county library, this was due to the unavailability of peer libraries serving communities similar to this library’s population. In one way or another, all of the libraries stressed the uniqueness of their local service area and the implications of this factor for delivering programs and services.

Five of the libraries reported making statistical comparisons at least annually. For one suburban library, comparative statistics were an essential part of the funding formula for allocating Ohio’s Library and Local Government Support Fund. Understandably, this library was especially sensitive to its own data in comparison with peer libraries’ data.

In general, statistics were compiled by these libraries at the executive level. Departmental managers were usually not involved in comparing data to other libraries. (There were a couple of questionnaire respondents whose open-ended comments said that departmental staff were involved in both collection and analysis of statistics.) Some of the libraries interviewed were fairly proactive in collecting and utilizing statistics, although primarily for in-house review and management. In these libraries, statistics were used to compare branch operations, to look for opportunities for performance improvement, to make staffing decisions, and so on. One library had compiled a rather extensive analysis of data from the Public Library Association’s Public Library Data Service (PLDS), comparing itself with scores of other libraries

in Ohio and nationally. One suburban library has been using an in-house management statistics scheme with categories that precedes, but roughly parallels, the Balanced Scored “perspectives” of authors Robert Kaplan and David Norton.

Availability of data is an important determinant of the extent to which libraries might use comparative data. Two of the interviewed libraries participated in the CLEVNET consortial system, where fairly sophisticated reports (for example, circulation by material format and by subject) are available. Also, those with SIRSI integrated library system’s “Director’s Station” feature were able to extract detailed information about materials usage, although comparable data from peer libraries may not be available.

Directors who did compile comparative data reported routinely sharing these with Boards of Trustees. A popular use of comparative data for these libraries was salary comparisons. Two of the libraries reported using circulation and visits statistics for monitoring its own branches, and one library planned to use the data for facilities planning. A couple of the libraries mentioned HAPLR ratings and acknowledged that they had relied on these.

Implications

The survey is illuminating in the sense that it corroborates certain themes that Ohio public libraries likely recognize already. Over the years, Ohio public libraries have followed the lead of advisors like the Public Library Association and others who promote statistical comparisons. Comparing library statistics is routine for almost all libraries.

Nevertheless, there is a fundamental contradiction between the practice of comparing statistics with the notion that each library and its community are unique—a strong tenet of Ohio public librarianship. As the interviews suggest, libraries utilize statistics more intensively to monitor their operations in areas as customer service, staffing, facilities planning, reporting to Boards, and so forth. These statistics indicate where services or programs may be lagging and in need of attention. Data from other libraries are not usually relevant for these purposes, except for salary surveys, apparently.

Although the survey questionnaire did not explore how libraries actually use comparative statistics, the interviews suggest that these statistics are seen as part of a larger picture in which a library’s in-house interpretation of its own data is primary. It may well be that Ohio public libraries use comparative statistics more to stay abreast of statistical trends among other libraries. Indeed, most library directors are clearly knowledgeable about differences between their libraries and each alternative library whose data they might review. One director said the only comparisons he makes is qualitative visits to other libraries to gain ideas about operational and programmatic options. One large urban library had peers primarily in other states. Data from these libraries were useful as a general gauge of service volumes and the like, but not very relevant to local programming and management decisions.

Data from the survey suggest that libraries consider a general awareness of statistics from other libraries to be important. However, the fact the only measures routinely compared are

expenditures and circulation implies that comparisons are not essential to ongoing management of Ohio's public libraries.

There is one central issue neither the questionnaire nor interviews addressed: Libraries continue to operate without standard criteria by which to evaluate their own statistical data, other than the library's historical statistics. One group of medium size Ohio public libraries produces comprehensive statistical comparisons of its members on various output measures. However, these data are necessarily inconclusive since they lack key information about what statistical levels are appropriate given the unique composition and needs of each library's community. This theme—the uniqueness of libraries and their community settings—will likely continue to color the meaning of comparative statistics among Ohio's public libraries.

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