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COLLECTION EVALUATION AND ACADEMIC REVIEW

A Pilot Study Using the OCLC/AMIGOS Collection Analysis CD

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Abstract — *An academic library collection evaluation methodology conceived and planned within the broader context of assessment is described. Focusing on the evaluation of a library's collection of special education and counseling monographs, the pilot methodology calls for several collection-centered and client-centered evaluation techniques. The OCLC/AMIGOS Collection Analysis CD, selected as one collection-centered evaluation method, is described, and its value as an evaluation tool for monographic holdings is discussed.*

Keywords — *Collection, Evaluation, Academic, Libraries.*

INTRODUCTION

The current emphasis in higher education on assessment — of personnel, programs, services — provides a useful backdrop for contemplating the role and significance of academic library collection evaluation efforts. The purpose of this article is to suggest that academic libraries embrace the higher education assessment movement and develop collection evaluation models that both complement and support the broader assessment efforts of their parent institutions.

In 1992–1993 the Sarah Byrd Askew Library of The William Paterson College of New Jersey embarked upon a four-phase project to develop such a collection evaluation model, using the College's Department of Special Education and Counseling and relevant portions of the Library's collection, as a pilot study. The four phases of the project are as follows:

1. To provide descriptive data about the Library's special education and counseling book and audiovisual collections based upon analyses of a randomly selected subset of these materials;

2. To analyze the collection using two collection-centered evaluation techniques consisting of the recommended list-checking method and statistical comparisons with other libraries;

3. To analyze the collection using three client-centered evaluation techniques based upon circulation statistics, data from a materials availability study, and user feedback gained through focus group interviews; and

4. To analyze the holdings and use of relevant portions of the Library's journal collection.

Despite the fact that as of this writing, only Phases One and Two have been completed (Phase Three is in progress), the purpose of this article is to set forth the concepts, ideas, and methodological considerations that have guided the project. Moreover, the article will focus in detail on the uses and benefits of the OCLC/AMIGOS Collection Analysis CD (CACD) as one tool for providing statistical comparisons of collections among libraries as used in Phase Two of this research. A future article will report the confluence of findings derived in each of the four phases, as well as an analysis of the relative value of each of the techniques in contributing to an overall assessment of the collection. Based upon these results, a collection assessment model which contributes meaningfully to the College's academic review process will be recommended.

THE CAMPUS ASSESSMENT CONTEXT

William Paterson College is a publicly funded four-year liberal arts college located in northern New Jersey. Offering a diverse undergraduate curriculum and master's degree programs in several fields, the college enrolls more than 10,000 students. The college's Sarah Byrd Askew Library, with an annual materials budget in excess of $500,000, houses a collection of more than 250,000 titles and is served by a professional staff of 20.

While the concepts of assessment and academic review have a strong tradition at William Paterson, the college's current efforts date back to 1987 with the initiation of a variety of strategic planning efforts. Over a period of five years the college has adopted both Mission and Vision Statements, Long-Range Strategic Directions, Priority Strategic Goals, a Master Plan, and a Five-Year Plan. Included under the Five-Year Plan umbrella is an Academic Plan approved in 1992. A central theme in all of these documents and one so fundamental to the culture of the College as to be noted in the Mission Statement is the concept of assessment. At William Paterson College assessment is viewed as an ongoing commitment with a pragmatic focus of providing a basis for change to achieve desired outcomes [1].

The College's academic plan calls for a process of program review, defined as "an essential tool for systematically examining major programs to ensure that both the *mix* of programs and the *quality* of the programs are appropriate for the mission of the college" [2]. During the 1992–1993 academic year, five departments were selected by the Provost to initiate the self-study process embodied in the College's Academic Plan.

It is within this context that the Library began to consider the development of a methodology for evaluating its collections which would support and complement the College's own academic department review process. Unlike public libraries, academic libraries have distinct service and collection missions driven by the teaching and research needs of their institutions' academic departments and curricula. It seems appropriate that individual department reviews should include assessments of the degree to which the College's Library contributes to the

overall success of the teaching and research missions of the department. And, conversely, that effective evaluations of the Library collections should be conducted within the context of the academic disciplines which they were developed to support. Thus, the overall purpose of the assessment project began to unfold and it was proposed that a methodology be developed for evaluating the Library's collection that would support and complement the College's own academic department review process. The goal of the project was to develop and test a pilot collection evaluation methodology that would provide data relevant to the departmental reviews and that could be used on a regular basis by the Library in support of departmental reviews.

Planning for this project began in January, 1993. The head of Collection Development met with the chairperson of the Department of Special Education and Counseling (one of the five departments targeted for review) and described her ideas about collection assessment and academic review. With agreement from the chairperson, the Department of Special Education and Counseling was selected for the pilot study. However, when the program review document to be used by the department in conducting its self-assessment was examined for information about the adequacy of the Library's materials and services in meeting departmental goals, the document was found to be lacking. Although the program review document required extensive analysis of several components of program quality, such as faculty, students, curriculum, pedagogy, and community service, the only segment relevant to the Library appeared under the heading "Staff, Facilities and Equipment." In this section of their review, department members were asked to indicate whether a variety of resources ranging from library materials to computing facilities and travel funds had been sufficient to develop and maintain excellence, to determine the extent to which these resources were shared with others and could thus be enhanced, and how the historic patterns of support in these areas had contributed to or inhibited the department's progress toward excellence. In summary, the document failed to require the kind of in-depth analysis of the Library's collections envisioned by the Library staff.

Despite this setback, planning for the project continued. The Head of Collection Development prepared a written proposal for developing a collection assessment model, which she hoped would complement the College's academic review process. The proposal called for the development of a pilot study in which several collection assessment techniques would be applied to the Library's special education and counseling collections. Upon completion of the pilot study, the results of the various assessment techniques as well as the techniques themselves were to be evaluated by library professionals, department representatives, and members of the College's academic administration. Thus, a collaborative effort would result in the development of a collection assessment model which would contribute meaningfully to future academic reviews. The project was endorsed by the Associate Vice-President for Academic Affairs as an example of the College's ongoing commitment to assessment.

As the planning proceeded, four methodological objectives were articulated. First, the methodology developed for analyzing the collection must be intellectually and professionally sound and the data collection techniques must be based upon defensible principles of social science research. Second, the methodology must be pragmatically useful in the context of everyday life in a busy academic library; it should be designed so that the limited number of staff and modest financial resources would not be overextended. Third, the methodology should complement the broader academic review process of which it is part; it should produce results, data, and measurements that could be meaningfully interpreted within the context of the department's own self-study. Fourth, the methodology should go beyond the traditional descriptive statistics usually associated with collection evaluations. In keeping with develop-

ments in the field of accreditation, the methodology should seek to include qualitative information about how the library contributes to the learning and research processes of its clientele.

DEVELOPMENT OF A PILOT STUDY METHODOLOGY:
WHAT THE LITERATURE SAYS

While the idea of trying to assess the quality of library collections is hardly new (literally hundreds of studies and articles have been written), the profession has been unable to agree upon a common philosophical or methodological basis for collection evaluation. Moreover, in the absence of such a philosophical foundation, it is not surprising that there also has been no general agreement upon the techniques or tools for conducting such assessments. Consequently, the professional literature on collection evaluation is both abundant and diverse. There are, however, several important guides that document and organize this vast literature.

Bonn's work, although written almost 20 years ago, remains the standard literature review on collection evaluation [3]. He provides an excellent overview of the complexities involved in collection evaluation, reviews six major evaluation strategies, and relates evaluation efforts to methods of materials selection. Wiemers et al. approach the topic from a more pragmatic perspective, focusing on evaluation approaches useful for the practicing academic collection development officer [4]. In contrast, Magrill offers a review of collection evaluation efforts organized by library type [5]. She concludes that particular influences and conditions beyond those associated with the type of library often impact upon the selection of evaluation techniques.

Hall provides a practical approach to the topic and suggests a broad range of methods and techniques culled from the literature and selected for their pragmatic value [6]. His work, intended as a training manual for the collection assessment librarian, goes beyond simple description and incorporates "the broader rationale, explanation, and discussion" necessary for informed evaluation projects [7]. The Resources and Technical Services Division of the American Library Association, in its 1989 *Guide to the Evaluation of Library Collections*, provides a succinct overview and checklist of the critical elements typically associated with collection evaluation efforts [8]. The *Guide* also details in a concise, readable format the advantages and disadvantages traditionally associated with the major evaluation techniques.

Most recently, Nisonger has prepared what may become the seminal review of collection assessment efforts in academic libraries [9]. Published in 1992, this bibliography consists of 617 annotated entries describing assessment efforts published since 1980 deemed relevant to academic library practitioners and library science educators. Of particular value in Nisonger's work, beyond the excellent annotations, is its topical arrangement, numerous notes, and comprehensive indexes. These elements work together to make this bibliography a true guide to the field. Moreover, Nisonger's work includes an important chapter on automation applications to collection evaluation, thus contributing greatly to the profession's current understanding of the topic.

Despite the efforts of these authors to document and organize the vast literature of collection evaluation, the fact remains that there has been little consensus regarding a useful evaluation methodology. Most evaluation efforts have been concerned with the tools or techniques of assessment rather than with the research values and principles that govern them. Methodological considerations influence not only the choice of techniques (the methods) but the analysis and interpretation of the findings.

The problem of defining, determining, and measuring quality in library collections remains an age-old, thorny issue for the profession. While falling short of a well-defined methodology, the profession seems to agree that evaluations should be based upon both "collection-centered" and "client-centered" techniques and that strictly quantitative measures should be supplemented with qualitative data. The literature describes several collection-centered techniques, such as checking library holdings against recommended lists or bibliographies or the use of statistical comparisons of holdings to another library or group of libraries. These measures focus on the holdings themselves, irrespective of their use or users. Client-centered techniques, on the other hand, typically examine which materials are used, how often, and by whom, irrespective of the object of use itself. Numerous user and circulation studies have been developed along these lines. Proponents of collection-centered methods suggest that "quality" can be assessed as an intrinsic value of a library resource without regard to the broader institutional context of the library. In contrast, proponents of the client-centered techniques suggest that use in and of itself denotes "quality" and that all uses are inherently valuable.

A PROPOSED COLLECTION EVALUATION METHODOLOGY

The pilot study developed at William Paterson College was based upon two presuppositions. The first presupposition is that the current emphasis on assessment in higher education can provide a viable and important methodological basis for collection evaluation. Assessment concepts pertaining to the value of informed self-study, the goal of improvement, and the importance of both quantitative and qualitative measures have been incorporated into the evaluation plan.

The second presupposition is that academic departmental reviews or assessments not only provide an important methodological foundation for collection evaluations, but that the collection evaluations contribute significantly to the departmental assessments themselves. A complementary relationship exists between the academic review and the collection evaluation.

The pilot collection evaluation study planned for William Paterson College's Department of Special Education and Counseling consists of four phases. Phase One provided descriptive data about the Library's book and audiovisual collection as it relates to the teaching of special education and counseling at William Paterson College. The interdisciplinary nature of the discipline required an extensive analysis of the curriculum and of the Library of Congress Classification System to determine appropriate call number ranges, as well as shelflist measures to determine the size and subject distribution of titles within the call number ranges identified as those constituting the discipline. Additional descriptive data, such as the age, publisher type, interest level, and physical condition of the materials were obtained by analyzing 400 titles chosen randomly from the collection estimated to contain about 4,800 book and audiovisual titles.

Phase Two of the pilot focused on two collection-centered analyses. The list-checking method was used to provide a comparison of holdings with a recommended or "core" bibliography and the OCLC/AMIGOS Collection Analysis CD (CACD) [10] (described in detail later in this article) was used to obtain statistical comparisons of holdings with other libraries.

The third phase of the pilot (currently in progress) specifies that a variety of client-centered techniques be employed. An analysis of circulation data from the 400-title random sample will be conducted and a materials availability study and focus group discussions with faculty and

students are planned as part of this client-centered approach. It is hoped that the focus group analysis will provide significant qualitative data about the collection and that this information can be meaningfully compared and contrasted with that obtained through more quantitative methods. Phase Four of the plan calls for an analysis of the holdings and use of the Library's journal collection.

THE OCLC/AMIGOS COLLECTION ANALYSIS CD

As described above, one of the most commonly used methods of collection evaluation is to examine one's own library holdings statistically with those of another library or group of libraries. Traditionally such data as collection size, collection growth rates, numbers of item circulated, and materials expenditures are published in library annual reports, state and federal statistical compilations and often in professional accreditation reports and in the literature of the field. Frequently these data are provided without further analysis, interpretation, or investigation, and the reader is left with the assumption that "more is better." However, in recent years there appears to be an emphasis on using more sophisticated statistical comparisons than simple title and volume counts. The OCLC/AMIGOS CACD software and datafiles, introduced in 1989 as the products of a joint venture between OCLC and the AMIGOS Bibliographic Council, represents an important step forward in making statistical comparisons of holdings among libraries more meaningful. Developed by OCLC and marketed by AMIGOS, the Collection Analysis CD is a stand-alone, microcomputer-based system providing statistical and bibliographical information based upon a library's or libraries' holdings records contained in the OCLC Online Union Catalog. Using a combination of compact disc and floppy disk storage media, the system enables the subscriber (as the "evaluator") to compare the local library's holdings with those of up to 14 predefined peer groups of OCLC member academic libraries, based upon collection size. Subscribers may also elect to purchase up to four user-defined peer groups of OCLC academic member libraries.

In 1992 William Paterson College Library purchased the CACD (containing records from 1979 to 1989) to explore its value for local collection evaluation purposes. The CACD consists of approximately 1.7 million OCLC bibliographic records for items published within an 11-year period and which are owned by at least one academic library member of OCLC. Excluded from the database are serials, monographic series, government publications, theses, dissertations, records not containing either Library of Congress or National Library of Medicine call numbers, and records representing items published outside the particular 11-year subset. William Paterson also purchased the data for one additional user-defined peer group consisting of the 37 state college libraries in Pennsylvania, Connecticut, New York, and New Jersey.

The primary purpose of the CACD is to enable subscribing libraries to compare, statistically and bibliographically, their holdings with those of one or more groups of libraries called peer groups. These comparisons may then be used within a variety of collection development and evaluation contexts. Documentation accompanying the CACD suggests its utility in a variety of decision-making contexts including: cooperative collection development decisions, acquisition strategies, the development of new courses or academic programs, accreditation reviews, preservation planning, annual and long-range budgeting, and fund allocations [11].

Several published and unpublished reports describe many of these uses of the CACD. In an unpublished report, Flo Wilson, Associate Director at Vanderbilt University, describes

using the CACD as both a bibliographer's tool and as a management tool in the collection-building process [12]. At Vanderbilt, the CACD was used to provide an overview of the Vanderbilt holdings compared to an Association of Research Libraries peer group. A series of analyses were prepared comparing such measures as holdings rates, holding scores, and uniquely held titles. A particularly interesting analysis also plots holdings rates against Vanderbilt University's current collecting levels as specified in its conspectus.

Wanda Dole, Assistant Director at the State University of New York at Stony Brook, reports using the CACD to determine if library collecting levels were consistent with stated university priorities [13]. Using two different peer groups for comparison, the study examined holdings based on academic department and on program priority. Joy provides an excellent overview and introduction to the CACD and several of its potential uses [14]. He also recounts experiences at the University of Vermont using the CACD for purposes of reaccreditation, for reviewing current collecting levels, and for verifying collection development policy goals.

Vellucci describes how various CACD reports can be used by three distinct user groups: resource-sharing groups, individual libraries, and individual persons as users [15]. In addition to such applications as retrospective collection development, resource sharing, and list-checking, Vellucci suggests that effective use of the system often begins with quantitative analyses, which, when combined with other information or further exploration, engender qualitative assessments.

HOW THE CACD WORKS

The CACD works by providing the subscribing library (the evaluator) with a variety of statistical and bibliographic reports. Statistical reports, called Metrics, are available at two levels of Library of Congress Classification specificity. At the broader level, called Collection Metrics, reports are generated based upon the 32 Library of Congress/National Library of Medicine subject class divisions while at the Subcollection Metric level, reports are based upon the 500 subject divisions specified by the National Shelf List. At the bibliographic level, called Bibliographic Lists, lists of titles held can be narrowed to a specified Library of Congress class number.

A series of six reports: Counts, Proportions, Holdings Distributions, Overlap, Gap, and Uniqueness can be generated for any permissible subject range at the Collection and Subcollection levels. These reports compare the evaluator's holdings with the holdings of the specified peer group and provide such valuable comparative data as:

- The number of titles held by the evaluator and by the peer group as a whole, as well as the statistical average of the peer group members
- The comparative size of the evaluator and the statistical average of the peer group members
- The percentage of titles held by the evaluator and by the peer group within a particular call number or call-number range relative to the total number of titles held by the evaluator and the peer group for that class range
- The numbers (and percentages) of titles and holdings for which there is overlap between the evaluator and the peer group
- The distribution of the evaluator's titles relative to the distribution of those titles among the peer group libraries

- The number of titles held by the peer group but not by the evaluator and the relative distribution of these titles among the peer group libraries
- The number of unique titles among the collections of the peer group, the evaluator, and the statistical average of the peer group members.

The Bibliographic Lists option enables the user to generate and print bibliographic lists of the title overlap and title gap between the evaluator and the peer group; lists of the evaluator's and peer group's holdings; and lists representing the unique titles of both the evaluator and the peer group.

THE OCLC/AMIGOS CACD IN THE PILOT STUDY: FINDINGS

In the pilot study conducted at William Paterson College, the CACD was used as a collection-centered method for evaluating the Library's special education and counseling collection as it compares statistically and bibliographically with the holdings of a predefined peer group consisting of the 37 state colleges in the mid-Atlantic region. The statistical overview in this pilot study consisted of analyses of title counts, proportions, overlap, gap, and uniqueness. Holdings distribution reports, which detail the numbers of titles within various subgroups of the peer group, were deemed less useful for the purposes of this study.

The statistical and bibliographic comparisons between an evaluator's own collection and those of a peer group offered by the CACD are based upon title and holding counts grouped by Library of Congress classification numbers. Accordingly, the CACD analysis began with the identification of 18 discrete Library of Congress class numbers or class ranges representing the scope of the disciplines of special education and counseling as taught at William Paterson College. These 18 class ranges are presented in Table 1.

The data in Table 1 represent the number of the titles held by William Paterson College and by its peer group within the 18 Library of Congress call number ranges identified as representing the interdisciplinary nature of special education and counseling as taught at William Paterson College. The data indicate that, in aggregate, the peer group holds 4,567 titles (Column A) and William Paterson holds 1,641 titles (Column B). Column C represents the College's overall holdings rate (.36) and the holdings rate for each of the Library of Congress subdivisions, as calculated by dividing the College's title counts by the peer group title counts. The data in Column C suggest that, relative to the peer group, William Paterson's collection is strongest (holdings rate of .48) in the subclass HQ 809 covering the topic domestic violence. Conversely, the data in Column C indicate that the weakest area of the College's collection (holdings rate of .10), relative to its peers, is in the subclass LB 2343 spanning the topic student guidance and counseling.

The data presented in Column D represent the hypothetical holdings of a statistically generated average peer group member. The data in Column E provide the holdings rates of the College compared to those of this hypothetical average peer member, in contrast to Column C which compares the College's holdings to those of the entire peer group. Thus the data in Column D indicate that, on average, a peer group library has the largest holdings in the class ranges LC 4001-5158 (26.3 titles) and RJ 496-507 (22.6 titles). When the relative strength of William Paterson is measured against this hypothetical average peer member as in Column E, the data indicate that in the class range HQ 809, the College holds more than 17 times the number of titles as does the average peer member.

TABLE 1
NUMBERS OF TITLES HELD AND HOLDING RATES:
WPC AND PEER GROUP

	A	B	C	D	E
LC class	Number Titles Held by Peer Group	Number Titles Held by WPC	Holding Rate WPC to Peer Group	Number Titles Held by Avg. Peer	Holding Rate WPC to Avg. Peer
BF176	65	20	0.31	1.8	11.38
BF637.C6	181	40	0.22	4.9	8.18
BF698	270	74	0.27	7.3	10.14
BF721–723	570	254	0.45	15.4	16.49
GV183	35	11	0.31	0.9	11.63
GV445	58	14	0.24	1.6	8.93
HQ10	67	10	0.15	1.8	5.52
HQ773–774	120	49	0.41	3.2	15.11
HQ809	60	29	0.48	1.6	17.88
HV888–907	109	44	0.40	2.9	14.94
LB1027.5–1028	107	35	0.33	2.9	12.10
LB1620.5	6	1	0.17	0.2	6.17
LB2343	105	10	0.10	2.8	3.52
LC3950–3990	184	71	0.39	5.0	14.28
LC4001–5158	973	391	0.40	26.3	14.87
RC346–429	777	250	0.32	21.0	11.90
RC569.5.C	42	8	0.19	1.1	7.05
RJ496–507	838	330	0.39	22.6	14.57
Totals	4567	1641	0.36	123.4	13.29

The CACD also provides statistical and bibliographic data for comparing the degree to which an evaluator's collection overlaps or gaps with the collections of a peer group. Additionally, the CACD can be used to examine the degree to which an evaluator's collection contains unique titles not found elsewhere in the peer group. The data presented in Table 2 portray the findings of these comparisons for the William Paterson College and its peer group.

With respect to measures of title overlap, gap, and uniqueness between the College and the peer group, the data in Table 2 indicate that the peer group holds 4,567 titles (Column A) and that the College holds 1,590 titles (Column B) that overlap with those of the peer group. When these overlap titles are compared to all the titles held by the College (as shown in Table 1, Column B), it can be seen that they represent 97% of all the titles held by the College. Conversely, the gap title measures indicate that the peer group holds 2,926 titles (Column D) not owned by the College. Moreover, only 51 (Column F), or 3%, of the local collection represents unique titles not held by any member of the peer group.

Before proceeding to a discussion and analysis of the data presented in Tables 1 and 2, it is necessary to point out that, due to the interdisciplinary nature of special education and counseling, these data were *derived* from the preprogrammed reports contained in the CACD by means of a workaround developed for this purpose. Because the CACD is preprogrammed according to the Library of Congress Class divisions for its Collection Metrics and according to the National Shelf List ranges for its Subcollection Metrics, none of the available, ready-

TABLE 2
NUMBER OF OVERLAP, GAP, AND UNIQUE TITLES:
WPC AND PEER GROUP

	A	B	C	D	E	F
LC class	Number of Titles Held by Peer Group	Number of WPC Overlap Titles	Percent of WPC Overlap to Peer Group	Number of WPC Gap Titles	Percent of WPC Gap to Peer Group	Number of WPC Unique Titles
BF176	65	20	30.8%	45	69.2%	0
BF637.C6	181	38	21.0%	141	77.9%	2
BF698	270	70	25.9%	196	72.6%	4
BF721-723	570	249	43.7%	316	55.4%	5
GV183	35	11	31.4%	24	68.6%	0
GV445	58	14	24.1%	44	75.9%	0
HQ10	67	8	11.9%	57	85.1%	2
HQ773-774	120	47	39.2%	71	59.2%	2
HQ809	60	29	48.3%	31	51.7%	0
HV888-907	109	43	39.4%	65	59.6%	1
LB1027.5-1028	107	35	32.7%	72	67.3%	0
LB1620.5	6	1	16.7%	5	83.3%	0
LB2343	105	10	9.5%	95	90.5%	0
LC3950-3990	184	70	38.0%	113	61.4%	1
LC4001-5158	973	383	39.4%	582	59.8%	8
RC346-429	777	232	29.9%	527	67.8%	18
RC569.5.C	42	8	19.0%	34	81.0%	0
RJ496-507	838	322	38.4%	508	60.6%	8
Totals	4567	1590		2926		51

made CACD reports provide the specificity needed for an examination of the 18 Library of Congress classes and ranges shown in Tables 1 and 2 which constitute the discipline under study.

To obtain the detailed level of subject specificity needed for this study, the CACD workaround developed used raw data taken from the CACD's Bibliographic Lists. These data were then transferred to a separate spreadsheet program. The data in Table 1, columns A and B and the data in Table 2, columns A, B, D, and F were captured in this manner. The remaining data, presented in columns C, D, and E of Table 1 and in columns C and E of Table 2, are simple arithmetic ratios derived from the data.

The workaround captured this data from five of CACD's Bibliographic List reports: the Peer Group List, the Evaluator List, the Overlap List, the Gap List, the Unique Evaluator List. The sixth Bibliographic List report, the Unique Peer Group List, was determined to be less relevant for this project and thus was not used. Each of these CACD lists provides bibliographic entries arranged in Library of Congress Classification order accessible by Library of Congress class. Although a summary statistic indicating the number of entries or titles contained within a particular class range is provided at the end of each class range, not all of the Library of Congress classifications identified for this project include full class ranges. For example, in the second row of Tables 1 and 2, it is only BF637.C6, not all of BF637, that is

F
Number of WPC Unique Titles
0
2
4
5
0
0
2
2
0
1
0
0
0
1
8
18
0
8
51

pertinent to special education and counseling. Therefore, the data presented in Tables 1 and 2 were captured using the Bibliographic List summary statistics when full class ranges were searched or by counting titles listed within the range when only partial ranges were sought.

The workaround, therefore, consisted of searching the five Bibliographic Lists for each of the 18 Library of Congress classifications and entering the number of titles contained in that class or partial class on the spreadsheet. Thus, the Peer Group List indicated that the peer group libraries hold 65 titles in the Library of Congress classification BF 176 as shown in Table 1, Column A. Similarly, the Evaluator List indicated that William Paterson holds 20 titles in the BF 176 class range, as displayed in Table 1, Column B. This process was repeated, for each class number representing the field of study, in the Overlap List to provide data for Table 2, Column B; in the Gap List for data in Table 2, Column D; and in the Unique Evaluator List for data in Table 2, Column F.

THE OCLC/AMIGOS CACD: WHAT THE DATA SHOW

Although the derivation of the data in Tables 1 and 2 is relatively straightforward, their analysis and interpretation are more difficult. A first review of these figures might suggest that, with more than one-third (.36) as many titles as held by the aggregate peer group, William Paterson fares well in comparison to its peer group. After all, the College holds more than one-third of all titles held by 37 other libraries. And, we know from Table 1, Column E, that the College holds more than 13 times as many titles in this discipline as are held by an average peer group member. However, if the peer group holdings are viewed as representing the "universe" of appropriately selected academic titles pertinent to special education and counseling, the same one-third proportion may not seem as favorable. Consider, for example, that if those 4,567 titles held by the peer group were "perfect selections" or were titles listed in a bibliography of recommended titles, a holdings rate of only one-third might be considered inferior.

The high degree of collection overlap indicated by the data in Table 2 suggests that overall the William Paterson collection is very similar to those of its peers. A subsequent analysis would analyze the 2,926 titles from the Gap Bibliographic Lists for purposes of retrospective collection development. This analysis could be enhanced by sorting the gap titles according to the frequency with which each is held by members of the peer group, since the number of peer libraries holding each title is included in the Gap Bibliographic Lists. In this way the titles most frequently held by members of the peer group but *not* held by the evaluator could be examined for potential purchase. Alternatively, the evaluator could set a default parameter at the beginning of each Gap Bibliographic search to limit the search to only those titles held by a certain percentage of the peer group. For example, the evaluator might be interested in examining only the gap titles held by 50% to 100% of the peer group libraries.

In summary, use of the CACD provided William Paterson College with certain facts about that portion of its special education and counseling collection published between 1979 and 1989. For example, the evaluators learned that the collection is large relative to the holdings of its peer group, although within the subject area, the relative strength of the collection varies considerably. It was also discovered that 97% of the collection overlaps with holdings of other members of the peer group and thus it is not a unique collection. Further examination and review of the actual bibliographic lists will lead to important acquisition suggestions.

EXTRAPOLATING QUALITY FROM QUANTITY?

The interpretation of these findings and the conclusions drawn herein about the "quality" of the special education and counseling collection at William Paterson must be carefully considered. The complexity of such interpretations relates to both the philosophical basis for statistical comparisons and to certain limitations of OCLC/AMIGOS system itself. Although the collection-centered technique involving statistical comparisons of various library characteristics is commonly used, one problem of interpretation is that numeric descriptions themselves denote only quantity or proportion. They do not provide information relevant to "quality," such as content, physical condition, age, or interest level. The CACD attempts to overcome some of the limitations inherent in strictly quantitative measures by providing access to data beyond mere title counts. The holdings distribution reports, as well as counts of title overlap, title gap, and title uniqueness help contribute to an understanding of the basic title counts. However, users are still left with the job of interpretation. Is a holdings rate of .36 appropriate for our special education and counseling collection? Are 1,641 titles sufficient? Are the 2,926 gap titles items that should be acquired?

While the CACD does not provide users with all of the answers to these questions, it does enable them to examine lists of actual titles held by the peer group and the evaluator, as well as the overlap, gap, and unique titles. This ability to review the actual titles contained within these categories enhances the evaluator's understanding and interpretation of the numeric and statistical information provided by the CACD.

A second problem associated with the use of statistical comparison as a collection evaluation tool stems from the difficulty in determining an appropriately comparable standard. On what basis should another library be considered a peer? Which similarities or differences among libraries or parent institutions should be examined to determine if a library qualifies as a peer for purposes of collection comparison? The CACD is available to subscribers with 14 predefined peer groups of OCLC member academic libraries categorized by collection size. For an additional expense, the CACD can be purchased with up to four user-defined peer groups of academic library OCLC members. The selection of an appropriate peer group depends upon the purpose and scope of the comparison to be made. For example, a CACD assessment of a special education and counseling collection will provide more meaningful comparative data if the peer group libraries also support undergraduate and graduate studies in the field. The problem is that the CACD peer groups must be established at the time the system is ordered; hence they cannot be tailored for different assessment projects. And, once purchased, it is indeed tempting to use the CACD data for a variety of purposes whether the existing peer group is appropriate or not.

Another consideration and potential dilemma for subscribers that also pertains to peer group selection is a decision about whether the peers should be similar to one's own institution or whether they should be institutions with rankings or reputations at a level toward which the local institution aspires. This decision will most certainly influence interpretation of the data. For example, a holdings rate of .36 against a group of Association of Research Libraries might be considered stronger than a similar rate derived from comparison to a group of state colleges.

With respect to this special education and counseling collection assessment, the peer group selected was chosen to represent a group of institutions similar to William Paterson College. Thus, all 37 institutions are publicly funded, four-year colleges. An analysis of their programs indicates that 68% offer either bachelor's or master's degree programs in special education or counseling. At the bachelor's level 65% of the colleges offer degree programs, while at the

master's level 51% offer degree programs. William Paterson College offers both bachelor's and master's degrees, as do 43% of its peer group institutions. This analysis suggests that, at least with respect to special education and counseling programs and degrees, the peer group provides a reasonable basis for comparisons of collections.

THE CACD: ON THE MINUS SIDE . . .

In addition to the methodological concerns related to the use of statistical comparisons as an evaluation method, interpretation of OCLC/AMIGOS CACD findings must also take into account the limitations of the database. As marketed, the CACD database includes only items published within a given 11-year period and, at the same time, excludes several important categories of library resources such as serials, government publications, and theses. Depending upon the type of investigation and the age of the collection, these database limitations might result in significantly skewed results. Other database problems occur when duplicate or near-duplicate records are used, as when English and American editions of the same title are represented by different OCLC records and the near-duplicate is counted as a gap.

Other limitations of the CACD pertain to its use of the construct "average peer group member" (as shown in Table 1, Column D), which is calculated as the arithmetic mean of the titles owned by all peer group members. It is easy to understand why the CACD designers wanted to provide a simple arithmetic concept that enables one library to compare itself to one library of an aggregate peer group. However, CACD users must interpret such findings cautiously. There is, for example, no actual peer group library with 0.9 titles in the Library of Congress call number range GV 183. Moreover, arithmetic means tend to distort the central tendency of a group of numbers in which the ranges are great. Joy suggests that a better measure might be the median holdings of the peer group rather than the mean holdings, although this is not currently available from the CACD [16].

Another problem typically encountered in using the CACD relates to difficulties associated with using the CACD for narrow Library of Congress classifications and for interdisciplinary fields such as women's studies or special education. While this study showed how these limitations can be partially overcome by a workaround using data from the Bibliographic List reports, the technique is labor-intensive and ultimately unsatisfactory. In this study, the workaround data were obtained by a librarian over a period of two to three hours, although a trained clerk could perform the work as well. It is hoped that future editions of the CACD will address this problem. Until that time, however, the product does provide quick, easily manipulated data that will correspond to many assessment needs.

A final limitation, identified by Joy, is that the CACD appears to be "easy to use, but difficult to understand" [17]. Although not every CACD user will have difficulty interpreting the measures, it does appear that a certain proficiency in and understanding of statistics will make interpretation of the measures easier. It also suggests that future documentation that provides more explanation, examples, and interpretation would be welcomed.

THE CACD: ON THE PLUS SIDE . . .

Perhaps the most fundamental and important value of the CACD is that for the first time collection development librarians and others can manipulate, view, print, and download massive amounts of statistical and bibliographic data about their own and other libraries' hold-

ings with relative ease, low cost, and high speed. Using this unique tool, librarians can, from their own desks, examine large subsets of their collections for a wide variety of purposes. Despite the fact that many libraries have had their holdings records in electronic form for years, easy and inexpensive access to such information has not been widely available to the nonsystems, nonmanagement librarian. The availability of such data in the CACD, coupled with similar data about peer institutions, provides librarians with truly unique collection and data analysis opportunities.

SUMMARY

The purpose of this article was to describe a four-phase project begun at William Paterson College designed to lead to the development of a collection evaluation model that would both complement and support the broader academic assessment requirements of the College. Although only phases one and two have been completed, the article sets forth the concepts, ideas, and methodological considerations that have guided the project as it has evolved over 18 months. The article also focuses on the uses, benefits, and limitations of the OCLC/ AMIGOS Collection Analysis CD (CACD) as a tool for conducting statistical comparisons of library collections, a standard collection-centered evaluation technique.

The OCLC/AMIGOS CACD, a relatively new and unique microcomputer-based system, was employed as a tool to provide statistical and bibliographic comparisons of one library's holdings to those of another. Not only did the CACD generate data that were interesting and useful, but it provided a perspective on the collection that would not otherwise have been available. Although there are several limitations inherent in the CACD, the system is easily operated and relatively inexpensive to purchase. (In 1991, the CACD system with one user-defined peer group cost $3250). Other advantages include the fact that preprogrammed calculations and statistical manipulations permit some flexibility of output, large data sets are efficiently analyzed, and standardized reports are easily generated. Although the CACD provides data about library collections not available from any other source, it is perhaps best used as one of several evaluation tools. It is within the context of several discrete measures that the CACD data can contribute most meaningfully to collection evaluation and analysis.

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