Picking the Flowers in the "Fair Garden": The Circulation, Non-Circulation, and Disappearance of Young Adult Nonfiction Materials

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Research and practitioner publications offer indications of the importance of nonfiction materials to young adult information needs. The present study attempts to discern patterns of adolescent information seeking by analyzing reports of unused and underused materials in the young adult collections of an individual library system. Such an approach contributes to a fuller picture of adolescent information seeking behaviors by complementing existing survey or interview-based research. The analysis shows high use of materials in areas that are nonetheless flagged by computer analysis as non-circulating. Collection analysis indicates that there is evidence that high-use items disappear from the collection at significant rates, that these items have monetary value, and that they cover topics ranging from sex and drugs to rock stars.

Introduction

The Fair Garden and the Swarm of Beasts: The Library and the Young Adult (Edwards, 1969) argued the need to offer a full range of materials to young adult library users, and today, accounts of young adult collections indicate that the seeds sown by Edwards have taken root. Services and materials for young adults in the United States are growing, and many libraries now offer younger readers a garden of their own. The question emerges, then, of what use young adults make of these offerings.

To address this question, this analysis examines the results of an in-house assessment of young adult nonfiction in a large metropolitan library on the East coast of the US. Library service is provided to a county of approximately 200,000 residents. The most recently available census data indicate that the county’s residents, nearly 30% of whom were born outside the US, have diverse cultural and ethnic origins. The county’s population is still largely white (just under 70%), with significant representations of Hispanics and Latinos (together totaling almost 20%) and African Americans and Asian Americans (each nearing 10% of the total county population). The county’s young adults among the approximately 16,500 residents are between the ages of 5 and 17. In 1999, approximately 9% of the young people in this county lived in families whose earnings were below the poverty level; it
should be noted, though, that the proportion of students qualifying for free or reduced-cost lunches in county schools is significantly higher. This community, then, represents both racial and ethnic, as well as economic, diversity.

Although a developing body of literature addresses cognitive and communicative aspects of young adults' information seeking behaviors (Kulthau, 1993; Ross, 1999; Julien, 1999), less is known about broader patterns of information use as reflected by use or apparent failure to make use of materials in a library's collection. This is the case despite Lukenbill's (1979) observation nearly 25 years ago that "we are beginning to collect data on the information needs and the information seeking habits of young adults in relation to topics such as sex, drugs, and career-information" (p. 194). There are a number of reasons for gaps in our understanding of this aspect of information use. Latrobe and Havener (1997) observe the tendency of library research on young adults to focus on information seeking behaviors over information needs, which inherently directs attention away from resources needed or used. Further, some work in this area is exclusively bibliographic and does not account for whether users even encounter the material (Gross, 1997). There is the added complication that some valuable work on particular areas of information needs, such as health-related concerns, is done by non-LIS researchers and does not ask questions about librarians as intermediaries or libraries as information sources (Alan Guttmacher Institute, 2003).

Studies have focused attention on library use and non-use for specific types of information needs. In this category is the work of Julien (1999) on adolescent information needs for career-related decisions, which found that many of the youth surveyed were unable to identify appropriate sources of information and perceived traditional information sources, including libraries, as unhelpful. Similarly, Poston-Anderson and Edwards (1993) report that their interviews with adolescent girls revealed perceptions that libraries lack information resources appropriate to their concerns, as well as their difficulty in connecting library terminology with the objects of their searches. The present study attempts to discern patterns of information seeking by analyzing reports of unused and underused materials in the young adult collections of an individual library system.

The Literature on Young Adults' Use of Library Collections for Information Seeking

Research and practitioner publications offer some indications about what young adults want in young adult collections, including the value of nonfiction materials. A survey of the literature in this area leads Loertscher and Woolls (2002) to conclude that "Teens want and need a wide variety of materials; they want to read" (p. 36). Carter and Abrahamson (1991, 1994) reference multiple studies indicating strong young adult interest in nonfiction. Callison (2000) also develops the idea that all kinds of nonfiction play
significant roles in library use by younger readers. Jones (1998) states that nonfiction materials for young adults are essential to serving teens' diverse interests and categorizes nonfiction for young adult readers as for recreational, informational, educational, or reference use. Others (Vaillancourt, 2000; Ritchie, 1998) simply divide nonfiction information needs into two broad categories: curricular and noncurricular resources. Thus there are a number of indications of the importance of nonfiction materials to young adult information needs.

Despite these findings, Winston and Lione (2001) describe a relative lack of information regarding young adult information needs and library efforts to provide services to this constituency. Loertscher and Woolls (2002) suggest that "More systematic surveys and discussion groups would help enormously in building collections and reading interests" (p. 36).

It is possible to survey not only young adults, but also the collection itself. Roy (1992) discusses the value of this research approach and describes potential projects: "local data on holdings and use can evolve into research projects when data are collected over time, compared with figures from other institutions, and/or compared with data collected through other means such as direct examination of books" (p. 298). Doll and Barron (2002) also indicate the importance of systematic assessment of collections serving the information needs of younger library users.

Rationales for assessing use through a collection-based assessment rather than through a survey of young adult users themselves have been outlined in the literature. Chelton (1989) suggests that the need to obtain parental consent to survey minors may be a deterrent to research on young adult library use. Byczek and Vallaincourt (1998) further indicate the existence of some divergence between what young adults say about their own library use and what they actually do with collection materials:

When Renee conducted a survey of over 500 junior high and high school students in her community, they indicated that they liked hardcover books better than paperbacks (therefore she does purchase hardcover books for her YA collection as well). But her circulation statistics tell a different story, with paperback titles circulating four times as much as hardcovers, on the average! (p. 106)

Although recognizing the importance of hearing youth voices about their information needs and use strategies, this study adopts methods associated with historical work, that is, in the words of Lukenbill (1979), "the rigorous examination of documents and other sources which might give evidence as to patterns, sources, biases, and conceptual systems which emerge from the data" in order to produce "interpretation and synthesis of data and its logical application to continuing problems or phenomena" (p. 193). Although it would be challenging, if not impossible, to speak with all users of the particular collection under study, it is more nearly possible to represent the lasting impressions of their use and non-use through assessments of circulating, non-circulating, and disappearing nonfiction items. Doing so offers a
holistic impression of use or of non-use, in contrast to the individual or particular uses that derive from focus groups and interviews. Such an approach contributes to a fuller picture of adolescent information seeking behaviors by complementing existing survey or interview-based research.

Methods
By examining records of the circulation and availability of materials in the young adult collection of a large metropolitan library in the US, it is possible to discern patterns and make informed judgments about these trends. In turn, this provides insight into young adults’ uses of information as represented by this young adult collection. The methods for this study depend on, first, an understanding of the in-house procedures for assessing the library’s young adult collections. Next, the analysis of the records that resulted from these procedures is described.

Collection Assessment Project (CAP)
This library recently completed a computer-based assessment of materials in its nonfiction collection for young adults. The library maintains young adult collections at each of its seven locations; these collections are in physical spaces separate from both adult and children’s materials and feature signage that identifies the collections as young adult or teen areas. Assessment results were available from five of the seven sites.

The in-house assessment begins with computer-generated records identifying nonfiction materials that are have not circulated in the previous 18 months. In this study, the term non-circulating refers to items that have not been circulated to users according to the library’s circulation records. In other words, there is no official borrowing record for them. Materials that have not circulated before this time are also included. These nonfiction materials include all areas of the young adult collection organized by Dewey Decimal Classification number as well as separately filed biographies and literary classics.

Records for these materials are then distributed to each young adult librarian, who uses them in conjunction with department-wide procedures and weeding target figures. Librarians decide whether apparently unused materials should be withdrawn from the collection based on factors beyond the computer-indicated status; these other indications of use might include the physical condition of the materials and the librarian’s own knowledge of local needs, such as school assignments that will result in a recurring if intermittent need for material in a subject area. The librarians then mark lists to indicate that materials are either (a) not on shelf, (b) to be withdrawn, or (c) to be retained.

Process for Analysis of CAP Records
Data gathered from these reports for this analysis include the following items: branch location, call number, item publication date, item status as
determined by the librarian, price, last circulation date, and the total number of circulations. In addition, variables were created to collect materials into broad subject areas according to their Dewey call numbers (e.g., 100s, 200s, and so on), with additional categories being created for biographies and classics that are shelved topically rather than in Dewey-designated sections. The librarians’ notes regarding decisions about each item’s status were also encoded as a variable.

This information was transcribed to create a dataset for analysis. Using SPSS for Windows, descriptive and limited inferential statistics were developed for the dataset. Manual review of selected items was also done to contribute to analysis of these data.

Research Questions
The data were analyzed to address the following questions.
1. What percentages of books were not on shelf, withdrawn, and retained?
2. What is the distribution of materials according to Dewey decimal subject areas? Which areas represent the highest areas of apparent non-use?
3. What percentage of materials are not on shelf rather than missing or withdrawn? What conclusions can be drawn regarding materials not on shelf?
4. What is the average cost of materials determined to be not on shelf and therefore missing from the collection? Are these materials more expensive than other items in the collection?
5. What are the relationships between an item’s status in the collection (i.e., whether it is missing, withdrawn, or kept) and its circulation history?

Limitations
It should be noted that an additional objective of the in-house assessment was to check for phantom records (i.e., those for which records persisted in the catalog even though the items were no longer held) associated with a previous system migration. Data from the two years in question were examined for the incidence of items on shelf (indicated by librarians’ decisions to withdraw or to retain the items) versus not on the shelf (and therefore likely to be part of the suspected phantom records set). Because 83 items were from the potentially problematic dates and approximately 50% of these items were still physically present in the collection, it was decided that potential phantom records were a relatively small (and unidentifiable) part of the dataset. Hence all items were retained as part of the dataset.

Further, it must be acknowledged that this research does not offer a full perspective on young adult use of the collection for at least two reasons. First, this study involves the use of circulation figures. Lancaster (1993) indicates that circulation does not fully account for use and that use may actually be six times higher than circulation figures would suggest. Although there are
difficulties in determining use through circulation figures, these measures still have value as a snapshot of use of the collection. In addition, it is generally understood that young adults use adult collections as well as collections designated for their use. This study does not venture to make assessments about use of library collections as a whole. Also, because this is a collection-based study, it is impossible to verify the causes for items' disappearances from the collection. Stories abound among librarians of library users who feel that sensitive content about topics like sexuality and controlled substances should not be made available to youth and express these beliefs by stealing resources to keep them out of other users' hands. Yet because the subject matters represented by the largest amounts of materials determined to be not on shelf were for the most part outside the parameters of what is reportedly stolen by would-be censors, it seems reasonable to assume that the absence of the materials has to do with use rather than censorship efforts.

Finally, this analysis relies on data from one library system. Although this library system serves a diverse public, there are necessarily limitations on the ability to generalize based on information derived from one geographic location. Further study is required to determine if these usage patterns hold true for other young adult collections.

Results
An overview of the materials flagged as not in use was developed. This offers the so-called big picture of materials not being used by young adults to meet their information needs. It was determined that in the five branches for which information was available, 367 items were flagged for review. Of these items, only four were skipped during the CAP and were therefore omitted from this analysis. Librarians' review indicated that of materials identified as not circulating, nearly half (47.9%) were no longer available to potential young adult users because they were not on shelf, having disappeared from the collection.

Given procedures for the Collection Assessment Project (CAP) that direct that the collection be checked more than once before an item is declared to be not on the shelf (and indeed, librarians' handwritten notes on the CAP records sometimes indicate that a book originally missing has turned up later), these items should be regarded as genuinely unavailable. This condition means that many items determined by a circulation-based assessment as unused are in fact simply missing from the collection of items that could be used.

It is even possible to argue that these items demonstrate a particular kind of use. Librarians' handwritten notes on some CAP forms describe items as "claims returned" or still checked out to a patron with a due date that passed nearly two years ago. In other words, although some items may be missing as the result of library handling such as branch transfers or reflect erroneous
holdings records, it is also highly likely that a number of these volumes have been either stolen or lost by their users. It could be said, then, that one person’s use of the material has been such that others’ use is precluded.

As shown in Table 2, materials evaluated as part of the CAP were not evenly distributed among the subject areas of the young adult collection. Materials in the 700s—an area labeled “The Arts” by Dewey that contains diverse content including cartoons and anime, sports, and rock and roll—overwhelmingly represented the highest number of non-circulating volumes.

Areas that also appear to have a higher rate of non-circulation are biographies and the 300s, the social science content of which includes works dealing with sexuality and illegal drug use. Specific titles from these young

### Table 1

<table>
<thead>
<tr>
<th>Item Status</th>
<th>Number of Items</th>
<th>Percentage of Items Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not on Shelf</td>
<td>174</td>
<td>47.7</td>
</tr>
<tr>
<td>Withdrawn</td>
<td>155</td>
<td>42.2</td>
</tr>
<tr>
<td>Kept</td>
<td>34</td>
<td>9.3</td>
</tr>
<tr>
<td>Missing</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>367</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>Dewey Range/Subject Area</th>
<th>Number of Items</th>
<th>Percentage of Items Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>000s/Generalities</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>100s/Philosophy &amp; Psychology</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>200s/Religion</td>
<td>11</td>
<td>3.0</td>
</tr>
<tr>
<td>300s/Social Sciences</td>
<td>47</td>
<td>12.8</td>
</tr>
<tr>
<td>400s/Language</td>
<td>1</td>
<td>.3</td>
</tr>
<tr>
<td>500s/Natural Sciences &amp; Math</td>
<td>14</td>
<td>3.8</td>
</tr>
<tr>
<td>600s/Technology</td>
<td>29</td>
<td>7.9</td>
</tr>
<tr>
<td>700s/The Arts</td>
<td>145</td>
<td>39.5</td>
</tr>
<tr>
<td>800s/Literature &amp; Rhetoric</td>
<td>15</td>
<td>4.1</td>
</tr>
<tr>
<td>900s/Geography &amp; History</td>
<td>14</td>
<td>3.8</td>
</tr>
<tr>
<td>Biographies</td>
<td>67</td>
<td>18.3</td>
</tr>
<tr>
<td>Classics</td>
<td>5</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>366</strong></td>
<td><strong>99.9</strong></td>
</tr>
</tbody>
</table>
adult collections that indicate the presence of materials about sex and drugs include titles like *Teenage and Pregnant, GirIlalk: All the Stuff Your Sister Never Told You* and *Hallucinogens*. Similarly, the fourth highest area of materials flagged as not in use is the Technology and Applied Science area of the 600s, which includes narrower topics such as anatomy, disease prevention, and gynecology.

Examination of items in these area further reveals that they represent not only the highest areas of items flagged for not circulating. They include correspondingly high proportions of materials not on shelf. On the 700s, 45.2% of materials were found to be not on shelf; this is equal to approximately 18% of the entire dataset. Biographies similarly had a high proportion of not-on-shelf items, with 15.9% equal to a little more than 6% of the data. In addition, it is worth noting that biography titles not on shelf were more often about popular contemporary figures such as Britney Spears and Leonardo DiCaprio rather than literary or historical persons like Anne Frank or Richard Wright. The 300s’ 13.5% of items not on shelf represent almost 5.5% of the data, whereas the 600s’ 7.9% is just over 3% of the data. In comparative terms, items not on shelf in these subject areas tend to be within a percentage point of those withdrawn from the collection. The only area where there is not a similar percentage is the biographies; in this subject area, the percentage withdrawn from the collection (23.2%) is somewhat higher than the percentage that users effectively removed from the collection (15.9%).

Following confirmation of the predominance of materials in the 700s, a post hoc analysis was performed to compare the patterns emerging in this subject area with those in the rest of the collection. A chi-square analysis yielded a significant result ($\chi^2(2, N = 363) = 20.20, p<.000$), indicating that whether a book belongs to the 700s or not is strongly associated with the status of the book. A closer look at the data revealed that the proportions of materials not on shelf in the 700s were greater than those of materials in the rest of the collection, indicating that materials in this area were more likely than other young adult materials to have been removed by users because of the materials’ content or interest.

Table 3
Materials’ Status for Selected Subject Areas

<table>
<thead>
<tr>
<th>Dewey Range/Subject Area</th>
<th>Items NOS (Percentage of CAP Items)</th>
<th>Items Withdrawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>300s/Social Sciences</td>
<td>17 (13.5%)</td>
<td>17</td>
</tr>
<tr>
<td>700s/The Arts</td>
<td>57 (45.2%)</td>
<td>61</td>
</tr>
<tr>
<td>Biographies</td>
<td>20 (15.9%)</td>
<td>36</td>
</tr>
<tr>
<td>600s/Technology</td>
<td>10 (7.9%)</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>104 (82.5%)</td>
<td>121</td>
</tr>
</tbody>
</table>
An additional issue was the value of materials that were not on shelf versus those that librarians could choose to withdraw or retain. The mean cost of a book not on shelf was $11.27, in contrast to those withdrawn (mean cost of $9.88) and those retained in the collection (mean cost of $11.41). Thus although books that librarians retained had, on average, the highest monetary value of items in the collection, the average cost of a missing item was higher than for a withdrawn item. An analysis of variance was conducted and showed significant differences in the value of materials among the three levels of book status ($F(2,360)=3.373, p<.05$). The Tukey HSD procedure yielded that the pairwise difference between books that were not on shelf and those withdrawn was significant, $p<.05$.

Although materials were selected by the computer for review because of their apparent failure to circulate, their circulation patterns before that time offer further insight into prior use. Again, items not on shelf are distinctive and statistically significant ($F(2,360)=9.08, p<.000$). The average number of circulations for items not on shelf was 6.56, contrasted with averages of 3.9 and 2.41 for items withdrawn and kept respectively.

**Discussion**

This analysis operates from the assumption that examination of non-circulating items in a young adult collection can offer information about young adult use of these information resources. This contention is borne out by results that indicate that certain items, demonstrably those classified in the 700s, are more likely to be intentionally removed by users, as well as results that indicate higher average circulation figures before their disappearance from the collection. The results suggest that subject areas of apparent non-use may in fact reflect a sort of use, through users' failure to return (or perhaps even to check out) material in certain subject areas.

It is similarly worth noting that practitioner literature that identifies current areas of young adult interest overlaps with some areas with the highest percentages of materials not on shelf from this study. This suggests that popular materials may not always be characterized by high, or at least higher, circulation figures. This is another indication that circulation figures alone cannot serve as measures of use.

The following observations regarding use and non-use of the collection are warranted by these data.

1. Observations in contemporary, non-research-based practitioner literature (Vaillancourt, 2002) about popular areas of youth interest in the young adult collection such as comics and music are borne out here. Areas of high use topics are also extended by empirical analysis of the collection to include works on sexuality and controlled substances. The patterns observed here conflict with reports that teens do not see libraries as sources of material on drug use or intimate relationships, but
are consistent with other publications that indicate less use of materials
designed to assist with career-related decisions.

2. The data support articles published earlier that conclude that youth
read nonfiction for pleasure or at least for non-school related concerns.
This is illustrated in this case by strong indicators of use for material in
subject areas outside the traditional school curriculum.

3. Non-circulation does not inherently translate to non-interest or non-use.
The reverse appears to be the case in the data available here. That nearly
half the materials flagged as non-circulating were in fact no longer
available for use because of loss or theft further complicates efforts to
connect circulation with use.

4. Theft and/or loss are a significant factor in creating apparent non-use of
library materials. It could be argued that theft represents a particular
kind of use, which by the indications available with regard to these data
takes place with some regularity. Given this finding, more frequent
assessment of key non-fiction areas of the collection may be desirable in
order to assist with collection maintenance and availability of
high-demand items.

5. Items disappearing from the collection, on average, cost more than
items withdrawn from the collection. This would suggest that materials
used in the young adult collection are those with the highest economic
value.

These findings further suggest that young adults’ use of nonfiction infor-
mation sources truly are diverse. Information resources seeing high
use/non-use measures in this study ranged from books that would allow
young adults to learn about their changing bodies and their developing
sexual interests to cartoons featuring Garfield, Tin-tin, and Calvin and
Hobbs: content most often associated with self-determined queries. Overall,
these data support contentions that nonfiction materials play a significant
role in young adults’ noncurricular information needs, while at the same
time indicating that some uses of materials are likely to appear as non-use
from a library system perspective.

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