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PROGRESS AND PROBLEMS OF PENNSYLVANIA LIBRARIES. A RE-SURVEY. APPENDIX, A STUDY OF DISTANCE AND TIME AS FACTORS INFLUENCING THE USE OF DISTRICT CENTER LIBRARIES.

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In attempting to reappraise the role of Pennsylvania district center libraries, this field study focused on: the actual use made of the libraries, the effects of distance on use, and the relationship between use and the socioeconomic characteristics of library users. Methodology involved the study of 10 representative district library centers, with data collected by questionnaires administered to users over a 2 week period and a small number of interviews. Results of the study, confirming some of the assumptions underlying the district center concept and modifying others, showed that: (1) a center has significant impact over 20 miles or 45 minutes driving time, (2) strong libraries should be designated as sub-centers, (3) it is important to develop collections with depth, diversity and breadth, (4) maintenance of size standards for collections is also important, (5) related access factors like parking are important, (6) special programs to reach lower socioeconomic groups are needed, (7) an intensive publicity campaign is indicated, calling for better communication between local and district levels, and (8) the data collected illustrate the successful use of district center libraries and confirm their importance. (JB)

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PROGRESS AND PROBLEMS OF PENNSYLVANIA LIBRARIES

A RE-SURVEY



APPENDIX



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by **THOMAS W. SHAUGHNESSY**
HARRISBURG, 1967

PROGRESS AND PROBLEMS OF PENNSYLVANIA LIBRARIES A RE-SURVEY

APPENDIX

A Study of Distance and Time as Factors Influencing the Use of District Center Libraries

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APPENDIX

The resurvey of public library development in Pennsylvania had as one of its basic objectives the evaluation of progress made by public libraries since they were last surveyed in 1958. Yet, at the same time, it presented an opportunity for more than a comparative analysis. It, in fact, created a context in which some of the assumptions underlying the 1958 plan could be tested.

Preliminary observation early in the resurvey indicated that one of the plan's basic assumptions, which centered on the idea that persons who require a higher level of library service will travel some distance in order to obtain it, required close study.

The 1958 plan attempted to make this type of more specialized service available by designating 27 (later increased to 30) strategically located libraries across the State as "district center libraries," with each library having two objectives:

1. to open high level resources to all readers in a large district; and
2. to coordinate all existing library units in the district into a cooperative system.

To achieve the first of these objectives, libraries so designated "would extend their service areas . . . beyond city boundaries, closing the gaps of availability of such high level service that now exist" (p. 95). Thus, the plan proposed that district center libraries be located within 20 to 25 miles, or about an hour's driving time of most residents. In other words, persons living within the service areas of these centers would be expected, in some instances, to travel up to 25 miles to secure this higher level of service.

However, geographers and market analysts have shown that even when a consumer (or library patron?) is highly motivated, certain "convenience costs" curtail or inhibit the consumer's acquisition of a needed product or service. Such convenience costs are typically those incurred by the distance he must travel and the time he thereby expends in satisfying his needs.

The housewife, for example, must deal with these convenience costs almost daily. She probably prefers to shop at a neighborhood store where there is less variety from which to choose rather than to go down-

town where there is a full range of merchandise and specialty shops. Why?—Because it is INCONVENIENT to go into the center city—time is lost, transportation costs are incurred.

On the other hand, she may feel that she must go into the city. In this latter case, she perceives that the goods or services to be derived from traveling a greater distance outweigh the convenience costs incurred by making the trip.

Obviously, there are innumerable convenience costs that we willingly or unwillingly put up with in the daily round of our lives. This study, then, focuses on one of these: the distance one must travel to secure district center library services and resources.

The specific effect which distance, whether it is measured chronologically or in miles, exercises on consumer behavior is a frictional effect. In other words, the relationship between the convenience costs of distance and time and the library user is a frictional or inhibiting one. And the greater this friction (the time and distance), the less chance there is of the user coming to the library.

This impeding effect of distance was clearly evident to the field surveyors and was even further complicated by the fact that, despite favorable driving conditions, the rugged terrain and lack of direct routes in many areas of the state tended to act as an additional inhibiting effect on travel. As a result of these impressions and observations, several questions were raised. For example, what effect, if any, has distance on library use? Does it actually curtail library use? Are the 20 to 25 mile standards proposed by the 1958 plan realistic? Obviously, the implications of these questions are most important, for if persons living at greater distances from the district center do not travel to obtain more specialized library services when they need them, the plan would require modification. Otherwise, such persons are, for all practical purposes, left without district center service.

In view of this possibility, a special supplemental grant was requested and subsequently approved for a study of these questions. Moreover, this study in attempting to reappraise the role of district center libraries with respect to use would thereby complement the resurvey.

Specifically, the study focuses on three points where the district center library and the library user "interact":

1. The actual use made of district center libraries;
2. The effects of distance traveled and time thereby expended on library use; and
3. The relationship between use of the district center and the socioeconomic characteristics of the library user.

Certainly we already possess several indicators of library use. Circulation records, tallies of reference questions and registration files constitute, to some extent, a measure of a library's use. Because of deficiencies associated with these measures, however, this study attempts to examine library use with greater precision. Traditional measures, for example, cannot evaluate the effects of distance and time on library use.

There are, furthermore, at least two other reasons for undertaking this study; first, the strategic role of district centers in the Pennsylvania library plan warrants a more detailed appraisal than traditional measures permit; and secondly, measurement of use on this scale has not been previously attempted in Pennsylvania.

I. METHODOLOGY

Ten district center libraries were selected to participate in the study. These were the Allentown Public Library, Altoona Public Library, Cambria County Public Library (Johnstown), Erie Public Library, Lancaster Public Library, Pottsville Public Library, Albright Memorial Library (Scranton), Warren Public Library, Osterhout Public Library (Wilkes-Barre) and Martin Memorial Library (York). Each was selected on a geographical basis with a view towards "covering" the state. At the same time, those district centers located close to the two large metropolitan areas of Pittsburgh and Philadelphia, as well as those academic libraries which serve as district centers, were excluded because of the possibility of atypical usage patterns in these libraries.

Data were collected by means of questionnaires administered to the users of each district library center at specific times on selected days over a period of two weeks. All data were gathered from all libraries during a six-week period, extending from November 7 to December 17, 1966. A typical sampling schedule was as follows:

First week:	<i>Monday</i>	<i>Wednesday</i>	<i>Friday</i>
	9:00-10:30 1:30- 3:00 6:00- 7:30	10:30-12:00 3:00- 4:30 7:30- 9:00	12:00-1:30 4:30-6:00
Second week:	<i>Tuesday</i>	<i>Thursday</i>	<i>Saturday</i>
	9:00-10:30 1:30- 3:00 6:00- 7:30	10:30-12:00 3:00- 4:30 7:30- 9:00	12:00-1:30 4:30-6:00

By scattering the time periods during which the questionnaire was administered, one full day of library use was covered each week. Consequently, the data compiled for each library is equivalent to two full days of personal use of that library. This scattering of sampling periods tends to give a clearer picture of a library's use, at the same time that it offsets, to an extent, the effects of inclement weather which might have occurred on a particular day during the sample period.

In addition, a small number of interviews were held to corroborate data gathered by the questionnaires. Since each questionnaire called for information which a younger person might not readily or accurately supply, children 14 years of age and younger were excluded from the study.

The study is based upon 5727 returned questionnaires. This represents approximately 85% of the total number of questionnaires distributed. The following (Table I) is a break-down of the number of responses per library:

TABLE I

<i>Library:</i>	<i>Number of Responses:</i>
A	262
B	310
C	677
D	263
E	606
F	569
G	363
H	1021
I	700
J	956

The substantial variation among these libraries is chiefly due to different rates of use. In most instances, the collection of data was closely controlled. However, in one case such control was not up to the standards otherwise maintained.

II. EFFECTS OF DISTANCE AND TIME ON LIBRARY USE

A. Resident Use

Of the total number of library users sampled, resident users composed almost two-thirds—66%. Undoubtedly, this is what one would expect because for resident users the district center library is not only a relatively strong resource library, but it serves as

their local library as well. Moreover, the average resident user of the library does not have to contend with the proportionately greater convenience costs of distance and time which the average non-resident user must assume. Generally speaking, the resident of the city in which the district center library is located has the advantage of "one-stop library service." That is, he can both select material of a more general nature and delve rather deeply into a subject on one and the same visit to the library.

On the other hand, a non-resident, and especially a non-resident holding a borrower's card, can utilize the same services as the resident, but often not as conveniently. Consequently, the non-resident usually fulfills his need for less specialized material at his local library (if he has one) because it is more convenient to do so. But for more specialized material, the non-resident user must generally either request interlibrary loan or travel into the city to the district center library.

The average figure of 66% of library users being residents obscures a considerable range in resident use from library to library, as Table II reveals. In fact, the percentages of such users span a scale ranging from a high of 86.6% to a low of less than half—45.5%.

TABLE II

Percentage of Resident Users: By Library

Library	Resident Users
A	86.6
B	82.9
C	77.5
D	72.6
E	70.8
F	60.4
G	55.6
H	50.8
I	50.8
J	45.5

This fluctuation can be explained, to some extent, by variations in local conditions. But, since the study is primarily focused on the use of district center libraries by non-residents, these differences will be discussed in the next section.

Concerning the effects of distance and time on library attendance by residents, there appears, not surprisingly, to be an inverse proportion between attendance and the travel time involved. The usually accepted standard of accessibility for local library service is library location within 15 to 20 minutes of local patrons—a standard definitely corroborated by this study. Of the resident users of district center libraries, 81% live within 20 minutes of the library, whereas 96% live within a half an hour's travel time. These percentages include all forms of transportation.

It should be noted that few residents live beyond 30 minutes' traveling time from the library. The low percentages of users traveling more than 30 minutes reflect this fact. Frequently, those users who do require more than 30 minutes to reach the library are senior citizens who choose to walk leisurely to the library.

Table III below illustrates the relationship between library attendance and travel time.

TABLE III

Effect of Travel Time on Library Attendance:

Resident Users	Percent of Resident Users
Minutes	
Less than 10	37.8
10 to 20	43.2
20 to 30	14.8
30 to 45	3.4
45 and over	0.8

Since time is certainly one measure of distance, and, in fact, is frequently a more functional measure than miles, the study did not attempt to gather data concerning the actual distances traveled to the library by resident users. The main reason for this decision was that, generally speaking, the libraries studied are not located in cities large in land area. Warren, for example, is smallest of these (3.4 square miles) and Scranton is largest with 25.3 square miles of land area.

Consequently, with respect to actual distances traveled by resident users, it will suffice to say that over 95% of these users live within five miles of the library. Thus, one might conclude that the relative proximity of the resident user to the library would affect his reasons for traveling to the library as well as his use of the library. In other words, one might assume that most residents use the district center library as a local library—that is, as a source of less specialized materials.

Such a conclusion, however, is not borne out by the data. Table IV indicates a marked proportion of very purposeful, subject-oriented use of these libraries.

Whereas 37.7% of the resident users indicate that one of their reasons for coming to the library is to pick out general reading, 41.2% come to get material on specific subjects, and 35.6% come for materials in connection with their jobs or businesses, social activities, or school work. These percentages do not total 100% since the questionnaire offered multiple choices. Of these choices, the respondent was permitted to check as many as were appropriate in describing his purposes.

TABLE IV

Reasons for Coming to the Library:

Resident Users Only

Reasons	Percentage of Users
1. To return books or other library materials ..	24.0
2. To browse and pick out general reading ..	37.7
3. To get materials on specific subjects	41.2
4. To get materials for specific purposes	35.6

It is interesting to note that a sizeable percentage (76.8%) of resident users seek materials on specific subjects or for specific purposes other than general reading. However, it should not be inferred from this analysis that general reading constitutes in any sense a less significant or less important activity than use directed towards specific subjects or for specific purposes. No such value judgment is intended or warranted by the data. Rather, the terms used in this analysis are only descriptive; they do not connote values.

It seems logical to assume that the purposes one has in coming to the library will affect his use of the library. In this case too, the respondents were permitted to indicate as many categories as were necessary to describe fully their use of the library. Table V indicates some of the usage patterns produced by this data.

TABLE V

Uses Made of District Center Libraries:

Resident Users

Use	Percentage of Users
1. Consulted materials in the library	73.3
2. Checked out materials	49.1
3. Used card catalog	36.7
4. Requested help from a librarian	15.4
5. Requested interlibrary loan service	0.6

(Note: Percentages do not total 100% since multiple answers were checked.)

Of the total number of resident users, 49.1% check out material for use outside the library, while 73.3% indicate that they make some on-site use of library materials--from reference books and microfilm, to phonograph records.

The high degree of on-site use of these libraries has several implications for library planning, programming and service. At a few periods during this study, the on-site use of some libraries was so heavy that a prospective user first had to locate a seat, and only after this accomplishment could he begin to locate needed material. Moreover, data gathered through interviews with a number of users indicates that the library often provides the user with an atmosphere not only conducive to, but necessary for study--a service which he might otherwise be denied.

These data, then, tend to underscore the fact that space for reader use is a key problem in many district center libraries. It is so large a problem that a separate building study of district center libraries would seem to be appropriate--with special attention being given to the provision of study carrels, listening rooms, microfilm readers, and other facilities, in addition to increased space for more seats and tables for reader use.

Finally, the data points to the fact that in terms of library resources and services, the residents of the city in which the district center is located have benefited considerably from improved district facilities.

B. Non-Resident Use

The number of non-resident users included in the study compose just over one-third (34%) of the total number of users sampled. The considerable variation in non-resident attendance from library to library can be deduced from Table II. This range of variation extends from a low of 13.4% to a high of 54.5%.

Certainly geographic factors influence the impact of a district center library over its area, and therefore might account for some of this variation. Some centers are located in very mountainous regions, and this type of rugged terrain undoubtedly exercises an inhibiting influence on attendance. One district center, furthermore, has its service area divided by a national forest.

In other instances, densely populated suburbs are adjacent to the city in which the district center library is located, and many of the residents of such suburbs are within five miles of the district center.

Similarly, suburbs exhibiting a higher average level of education and higher median income are sometimes quite near to the district center library. Since several earlier studies have shown that a significant relationship exists between higher education and library use, the proximity of such "higher education areas" to the library most certainly influences the amount and kind of use made of the district center by these non-residents.

Although figures indicating the library attendance of non-residents do not in themselves measure the total effectiveness of any one district center, they are significant from a comparative standpoint. Those libraries exhibiting little non-resident attendance are not having much impact in areas beyond their immediate municipal limits. In effect, they have not developed their roles as district centers to the extent that other, but similar, libraries have.

The effect of distance and time on resident library users has already been explained. The major percentage of these users live within 20 minutes of the library.

Not surprisingly, a relatively high percentage of non-resident library users also live within 20 minutes of district center libraries, as Table VI illustrates. A small percentage of non-residents, in fact, live within 10 minutes' travel time of the district center library.

TABLE VI

Effect of Travel Time on Library Attendance:

Non-Resident Users	
Minutes	Percent of Non-Resident Users
Less than 10	9.8
10 to 20	48.9
20 to 30	28.3
30 to 45	8.3
45 to 60	2.4
60 and over	2.2

It is interesting to note that between the distance categories of 10-20 minutes and 20-30 minutes there is a 20% decrease in the number of users, and between the categories of 20-30 minutes and 30-45 minutes there is another 20% decrease.

These data indicate that whereas over half (58.7%) of the non-resident users live within 20 minutes of the district center, 87.0% live within a half-hour's travel time and just over 95% live within 45 minutes of the center. Although there is a dramatic decline in attendance at 20 to 30 minutes, there is still sufficient reason to maintain that the district center has a somewhat significant impact up to 45 minutes' traveling time from the library. These figures are averages, of course, based on returns from all 10 district centers. Among these centers, however, there exist wide variations.

The number of miles between the user and the library also has a significant effect on library attendance. Here again, a sharp decline in attendance is evidenced when distance is increased, as Table VII illustrates.

TABLE VII

Effect of Distance on Library Attendance:

Non-Resident Users	
Miles	Percent of Non-Resident Users
Less than 5	49.6
5 to 10	31.0
10 to 15	8.7
15 to 20	5.0
20 to 25	1.7
25 and over	4.0

It is evident that these data support the figures illustrated in Table VI in that almost 95% of the non-resident users of the library live within 20 miles. But, by far the greatest percentage of users—about 80%—live within only 10 miles of the library.

In view of these data, one might be tempted to conclude—with considerable justification—that district center libraries are not effective agencies beyond 10 miles. However, a percentage of library users too large to be dismissed does travel from 10 to 20 miles distance.

Since distance and time exercise such a noticeable effect on library attendance, it seems logical to assume that these same factors would have an influence on the motives of the user and his subsequent use of the district center. Distance, however, does not seem to have a significant over-all effect on the user's reasons for coming to the library. For example, the reasons which prompt non-resident users to travel to the library hardly differ from those of resident users, as Table VIII illustrates.

TABLE VIII

Reasons for Coming to the Library:

Non-Resident Users	
Reasons	Percentage of Users
1. To return books or other library materials	24.0
2. To browse and pick out general reading	30.7
3. To get materials on specific subjects	43.6
4. To get materials for specific purposes	36.8

(Note: Percentages do not total 100% as multiple answers were checked.)

The similarity of these data with the data illustrated in Table IV should not be surprising because almost 50% of non-resident users live within five miles of a district center library. With such a large percentage of non-resident users in such proximity to the library, the reasons given by this group for coming to the library should not differ, and in fact do not differ significantly from those of resident users.

Furthermore, since non-residents generally have reasons for library use which are quite similar to those of residents, the usage patterns of the two groups should more or less coincide, and they do. The patterns of use of non-resident users are displayed in Table IX. These patterns tend to resemble those created by resident users, as a comparison of Table IX with Table V will show.

TABLE IX

Uses Made of District Center Libraries:
Non-Resident Users

Use	Percentage of Users
1. Consulted materials in the library	74.5
2. Checked out materials	48.3
3. Used card catalog	39.1
4. Requested help from a librarian	17.9
5. Requested interlibrary loan service	0.6

(Note: Percentages do not total 100% as multiple answers were checked.)

While division of users between residents and non-residents is one approach in attempting to define the effects of distance on library use, the heavy proportion of non-resident users within five miles of the center might partially obscure those effects which distance has on library use. Because of this possibility, data concerning the usage patterns of those non-resident users who live *five miles or more* from the library were tabulated. Table X indicates the reasons which prompt this group to travel to the library, and Table XI illustrates some of the library services which this group utilizes.

TABLE X

Reasons for Coming to the Library:

Non-Resident Users Living *Five Miles or More* from the Library.

Reasons	Percentage of Users
1. To return books or other library materials	22.5
2. To browse and pick out general reading ..	27.9
3. To get materials on specific subjects	45.4
4. To get materials for specific purposes ..	37.0

(Note: Percentages do not total 100% since multiple answers were permitted.)

TABLE XI

Use of the Library:

Non-Resident Users Living *Five Miles or More* from the Library.

Use	Percentage of Users
1. Consulted materials in the library	67.5
2. Checked out materials	43.7
3. Used card catalog	39.7
4. Requested help from a librarian	16.6

(Note: Percentages do not total 100% as multiple answers were permitted.)

A comparison of the data illustrated in these tables with those data illustrated in Tables IV and V, which chart usage patterns of resident users, does reveal more variation. For example, a somewhat significant difference seems to occur in the number of users coming to the library to browse and to select general reading. In this case, resident users coming to the library for general reading outnumber non-residents living at five miles or more from the library and coming for the same reason by approximately 10%.

Since distance obviously does not exercise a very significant influence on the kind of use of district center libraries, other possible factors were examined. Of these, the relative size of a district center's book collection seemed to be significant.

In the sample of ten district center libraries, three had collections of over 100,000 volumes. Data concerning distance and its effect on the usage patterns of these libraries were tabulated and compared with similar data for the remaining seven libraries, with startling results. Significant variations began to appear almost immediately, as Tables XII and XIII indicate.

TABLE XII

Reasons for Coming to the Library—Percentage of Non-Resident Users Living *Five Miles or More* from the Library:

By Size of Library.

Reasons	Library	
	Over 100,000 Vols.	Under 100,000 Vols.
1. To return books or other library materials	9.7	11.6
2. To browse and pick out general reading	23.7	32.0
3. To get materials on specific subjects	47.6	43.2
4. To get materials for specific purposes	42.3	31.8

(Note: Percentages do not total 100% since multiple answers were permitted.)

TABLE XIII

Use Made of Libraries—Percentage of Non-Resident Users Living *Five Miles or More* from the Library:

By Size of Library.

Use	Library	
	Over 100,000 Vols.	Under 100,000 Vols.
1. Consulted materials in the library	74.7	60.4
2. Checked out materials	39.5	47.9
3. Used card catalog	38.5	40.5
4. Requested help from a librarian	14.8	18.3

(Note: Percentages do not total 100% since multiple answers were permitted.)

The data indicate that users traveling a distance of five miles or more to a larger library (of over 100,000 volumes) tend to use such a library in fulfilling more specific and more purposeful information needs. In addition, these users make a significantly greater on-site use of the library than their counterparts using libraries with fewer volumes.

The volume size of district center collections, therefore, does seem to play a significant role not only in the impact of these libraries in their respective districts but also in the use made of these libraries.

At the same time, however, one must be careful not to over-emphasize the size factor, or to fall into a simplistic analysis. Size of collection is just one factor, as is distance, in a complex mosaic of several interacting forces which shape the usage pattern of a given library. It is too easy to say that use of a library is a function of its size, and leave it at that. While the data indicate that size is somewhat significant, they do not define this significance or measure its impact.

Moreover, a quantitative approach or analysis says nothing about quality. Certainly all district centers have made accessible to their respective publics a relatively larger library facility. Mere provision of larger quantities of materials is not the only function of the district center, however. The 1958 report, in describing the district center library, states:

"Here would be a collection of 75,000 volumes or more . . . here would be a professional staff including a specialist for children, another for teenagers, another for adults . . ." (p. 87).

Why such specialized staff positions? To develop service programs, to make these larger collections readily accessible, to give library service in the way we like to think it is usually given.

But few district centers meet these standards—standards which are now almost 10 years old. And without the development of specific service programs by professional staffs, how can district center libraries provide *quality service*?

It is not, then, the mere attainment of some magic number of volumes which will meet reader needs. More important is the planning and development of high-caliber service programs.

III. USER EVALUATION OF THE DISTRICT CENTER LIBRARY

The data already displayed indicate some of the usage patterns of district center libraries. One salient characteristic of these patterns is the high degree of "purposeful" and subject-oriented use both by non-residents as well as residents. Clearly, district center libraries are being utilized to fulfill rather specific user needs. Moreover, interviews with a small number of users lend further support to this conclusion in that these libraries are actually recognized as resource centers of some depth in a wide variety of subjects. However, the question of how successful the user is in consulting district center library resources and services has not been discussed.

The questionnaire contained only one question dealing with the users' evaluation of the library. The question, "Did you find what you were looking for?", offered only 2 possible answers: "on the whole, yes" or "on the whole, no."

Obviously much more information concerning user satisfaction is desirable. For example, precisely to what extent is the user satisfied? If, on the other hand, he is generally dissatisfied, what causes his dissatisfaction? Is the desired material already in use? Is it just not owned by the library? Is the library too crowded? These are only a few of the many questions that arise—so many in fact as to comprise a *separate* questionnaire. But since the chief objective of this study is not evaluation of use but use in relation to distance, these questions were not explored.

Of all users sampled, an average of 85.1% responded affirmatively when asked if they found what they were looking for. This percentage is for all practical purposes the same for resident as well as non-resident users. Among the libraries studied, however, there is a considerable range in the percentage of satisfied users, extending from a low of 73.7% to a high of 90.6%, as Table XIV indicates.

TABLE XIV

Evaluation of District Center Libraries:

Percentages of Users Indicating That They Are Able to Find Needed Material—by Library

Library	Satisfied Users
A	88.9%
B	73.7%
C	86.8%
D	90.6%
E	85.2%
F	85.0%
G	83.7%
H	89.4%
I	80.9%
J	86.3%

Taken aggregately, district center libraries perform rather satisfactorily in meeting user needs. However, in at least one center slightly more than one person in four is not satisfied. This percentage of dissatisfied users seems to be rather high when compared with other centers.

Once again, the data leave several questions unanswered. A basic one concerns the expectation with which the user approaches the library. Is he grateful and satisfied if he succeeds in finding only "something on the topic"? Or are users more discriminating and demanding? The data do not permit inferences, much less conclusions, on these points.

Generally, however, one can conclude that district center libraries are being utilized with relative success by a large percentage of their clientele.

IV. EFFECTS OF DISTANCE AND TIME ON OTHER ASPECTS OF LIBRARY USE

A. Frequency of Library Use

When considered as discrete sub-populations, little difference in usage patterns was discovered between resident and non-resident users. But considerable variation exists in the frequencies with which district centers are used by these two groups, as Table XV indicates.

TABLE XV
Frequency of Library Use

User Category	Weekly	Monthly	Less than monthly
1. Residents	43.4%	36.3%	20.2%
2. Non-residents	33.8%	27.3%	29.0%
3. Non-residents at five miles or more	29.4%	36.3%	34.2%

While 43.4% of the residents of the city, in which the district center library is located use the library at least weekly, 33.8% of all non-residents are weekly users. When non-resident users living five miles or more from the library are delineated, a still smaller percentage of these are found to be weekly users. Distance does seem to be a factor, therefore, which influences frequency of use, although not in all categories.

For example, it is interesting to note that the percentage of users using the library at least monthly remains rather constant. Distance, then, seems to have little effect on monthly use of the library. It has most influence in slightly weighting users towards the "less than monthly" category at the expense of "weekly" users

Perhaps a more significant fact to be derived from these data is that persons who use the library frequently, that is, at least monthly, constitute by far the largest percentage of a library's clientele. Among resident users, almost 80% of the users visit the library at least once or twice a month. Among all non-residents, this percentage is just over 70% of the users, and even among non-residents living five miles or more from the library, the percentage of monthly users is approximately 65%. These figures indicate that district center libraries are used often and with some regularity by their respective clienteles.

B. Other Reasons for Traveling into Center City

Closely allied to the frequency with which the district center libraries are used are other reasons which prompt persons to travel into the center city where the library is usually located. For example, a person may combine several errands with one trip into a

city's downtown area—a visit to the library being one of these errands. Other reasons might include shopping, or going to work or to school. Since distance does exercise such a frictional effect on district center attendance by non-residents, it seems likely that the library user who is required to travel a relatively greater distance to the library will combine several errands with his trip.

To a certain extent this study attempted to define some of these additional motivating factors, as Table XVI reveals. When the data were computed for non-residents living at five miles or more from a library, only minimal differences were discovered between these figures and those for non-residents as a group.

Approximately two out of every three library users sampled combine use of the library with another activity. One of the criteria employed by the Pennsylvania plan in designating district center libraries was that they be located in cities which broadly serve as commercial centers in their areas. The data illustrated by Table XVI validate this criteria.

TABLE XVI

Reasons for Traveling into Center City:

Reasons	Resident and Non-Resident Users.	
	Residents	Non-Residents
1. Only to visit the library ..	38.7	33.7
2. Shopping	21.6	26.7
3. Going to work or school ..	24.4	23.7
4. Other reasons	18.1	18.6

(Note: Percentages do not total 100% as multiple answers were permitted.)

C. The Borrower's Card

Another aspect of library use is the borrower's card. This would seem to hold some importance since more than 50% of all respondents indicated that they checked out material for use outside the library. An obvious explanation for this would be that perhaps only 50% have borrowers' cards. This is not the case, however.

Of all users sampled, 79.4% indicated that they do have borrowers' cards from the district center library which they were then using. Naturally, fewer non-residents hold cards, but a high percentage do have them (72.4%), versus 84.1% of resident users who are card holders.

While on the average 79.4% of all users sampled have cards, there is a considerable range in the percentage of card holders among the 10 district centers studied, as Table XVII indicates. This range extends from a low of 66.3% to a high of 90.6%. In other words, one user in three does not have a card in Library "I", whereas this proportion in Library "D" is one in ten.

TABLE XVII

Percentage of Users Holding Borrowers' Cards:

Library	By Library	Percentage of Users
A	71.8
B	83.7
C	79.6
D	90.6
E	79.0
F	81.3
G	80.4
H	86.7
I	66.3
J	85.3

It is evident that a borrower's card is not essential for productive use of a library. The user not having (or possibly not affording) a card, however, is definitely impeded in making full use of a library. In effect, he does not have the same opportunity as the card-holder, in as much as district library resources are not as readily accessible to him as they are to those who have cards.

Data were also tabulated for non-resident users who live five miles or more away from the district center library. Of these users, 67.4% do possess borrowers' cards. Table XVIII illustrates, to some extent, the effect of distance on card ownership.

TABLE XVIII

Borrower's Card Possession:

User Category	Percentages	
	With a Card	Without a Card
Residents	84.1	15.9
Non-Residents	72.4	27.6
Non-Residents at five miles or more from library	67.4	32.6

It should be noted that although the 1958 report proposed that district center libraries "would extend their service areas for free circulation and reference use beyond city boundaries" (p. 95), this has not been fully realized. All district centers have extended reference service and opened their doors for "on-site" use of their resources to non-residents, but few offer free or reciprocal borrowing privileges to non-residents.

This table indicates that almost one-third of the non-resident users living at five miles or more from the library are not able to derive a full measure of library service from the district center.

D. Transportation

Distance quite expectedly plays a significant role in the library user's choice of transportation. Among resident users of district center, 39.2% walk from their

residences to the library. Since the land areas of most of the cities whose libraries were studied are relatively small, even some non-resident users (4.8%) are able to walk from their residences to the library.

The automobile, however, is the choice of most users. Over 58% of resident users travel to the library by car, and over 87% of the non-resident users choose this means of transportation.

Public transportation, on the other hand, seems to hold a very minor role as far as access to district center libraries is concerned, since only about 10% of all users elect this means of travel.

Table XIX illustrates some of the modes of transportation employed by library users.

TABLE XIX

Types of Transportation Employed in Traveling to District Centers:

By User Category.

User Category	Types of Transportation		
	on foot	by car	by public transportation
Residents	39.2	58.4	10.8
Non-Residents	4.8	87.4	11.4
Non-Residents beyond five miles	1.1	90.0	9.0

(Note: Percentages do not total 100% as users were permitted multiple answers.)

The heavy reliance upon automobiles merely reflects a social characteristic which is endemic in this country. However, it has special implication and significance in relation to the use of district center libraries. Of the 10 district center libraries studied, only two provide even the slightest free parking facilities to the public. Undoubtedly the lack of parking space affects the access of both potential as well as actual users to the library. Moreover, if one is lucky enough to find on-the-street parking near these libraries, it is usually zoned or metered.

This lack of parking space seems to be a major complaint of the users of these libraries. Although the questionnaire employed in this study neither asked for nor left space for comments by respondents, several nevertheless complained about this situation in the margins of the questionnaires. This problem, then, seems to deserve much more attention than it has received thus far in district center planning and development.

V. CHARACTERISTICS OF THE USERS OF DISTRICT CENTER LIBRARIES

A. Occupation

The answer to the question "Who uses the district center library?" seems at first too easy to warrant even the asking. All district center librarians stated again and again that students compose the largest segment of their respective clientele.

The data compiled by this study only confirm what the librarians already know. Of the total number of users sampled, over half (56.7%) were students. And actually, this study does not capture the full impact of student use because students 14 years of age and younger were excluded from the sample. Consequently, the "true" percentage of students can be assumed to be higher than this figure.

The percentage cited above is the average of all libraries studied. But, once again, there is a considerable variation in the amount of student use among the various centers. This variation ranges from 38.1% of the users in one district center to 72.2% in another, a range displayed in Table XX below.

TABLE XX

Student Use of District Center Libraries:

Library	Percentage of Users	Student Use
A	65.3
B	41.2
C	60.4
D	38.1
E	60.3
F	60.3
G	71.2
H	72.2
I	41.1
J	46.3

It is difficult to explain satisfactorily this wide divergence in student use among these libraries. Naturally, the proximity of some centers to colleges, universities, and other schools would contribute to a greater proportion of student use. One district center, for example, is located directly across the street from a large high school, a situation which obviously contributes to a high percentage of such use.

Such explanations, however, are patently too simple. Students do not use district center libraries merely because they are convenient. Rather, in many cases, they are almost forced to use them since these centers represent sources of more specialized material and information which are equal to their needs. Frequently such libraries are the only accessible sources in their areas which have the necessary range and depth of materials. Interviews with a number of students, both

high school and college, support this conclusion. According to the high school students interviewed, their school libraries, despite the tremendous advances made in the past few years under state and federal impetus, are still unable to satisfy their needs for more specialized materials. These interviews revealed, furthermore, that they frequently form car pools in order to travel to district centers since these libraries are the only readily available resource centers with both diversified and in-depth collections. The fact that district centers hold back issues of periodicals was also often mentioned by these same students.

Interviews with college students, on the other hand, yielded similar information. Since every district center library studied is located in a city where there is at least one college or university, there is considerable use of these libraries by college students. In some instances, these are students from an extension campus of the state university or of some other large university. Because of the proximity of these institutions to district centers, one would expect these centers to attract at least moderate use by students of these colleges.

At a few centers, however, this use is more than moderate. Students using these centers reported that because their college libraries are drastically inadequate, they depend almost exclusively on district library service. This seems to be especially true of students of extension campuses since the libraries of these schools have not had sufficient time to develop.

Consequently, in these cases district center libraries are serving—at least from the students' point of view—as college libraries. This situation does not necessarily indicate a constant demand upon the resources of district center libraries, since students frequently study their own material in these centers. On the other hand, this does create a strain upon the seating capacities of the libraries involved.

Undoubtedly contributing to and accentuating a heavier and more intensive use of libraries by students are the recent changes in educational methods and curriculums which frequently emphasize individual research. As a result, students in all disciplines are literally forced to have recourse to materials beyond the text book or "required reading list," if they are to succeed.

On the average, high school students constitute the largest group of student users, outnumbering college students by almost two to one. Of the total number of student users sampled, 65.8% are in high schools or business and vocational schools, while 34.2% are at either the undergraduate or graduate college levels.

However, while high school students comprise the largest proportion of student users on the average, there is considerable variation in this proportion among the libraries studied, as Table XXI indicates.

TABLE XXI

Percentage of High School and College Students Using District Center Libraries: By Library

Library	Percentage of Students	
	High School	College
A	90.7	9.3
B	80.9	19.1
C	63.6	36.4
D	78.6	21.4
E	75.9	24.1
F	63.4	36.6
G	70.0	30.0
H	56.8	43.2
I	56.4	43.6
J	63.2	36.8

(Note: "High School" also includes business and vocational schools; "college" includes all levels—undergraduate and graduate.)

According to this table, one center (Library A) is not having any kind of impact on the college student. But on the other hand, two centers (Libraries H and I) show that college students account for over 40% of all student use.

Generally speaking, however, high school students form the heaviest group of users. Although this preponderance could obviously be explained by the fact that there are considerably more high school students than college students, there are yet other factors at work here. For example, the high school student does not have the alternatives which the college student has. He must frequently use the district library closest to him for several reasons:

1. The high school library in most cases is not open after school hours, and often does not have sufficient materials or depth;
2. The high school student's local public library frequently is not equipped with the types of materials he needs: sufficient numbers of course-related titles, back issues of periodicals, extensive reference sources;
3. The high school student does not have access to interlibrary loan services in many cases;
4. The high school student does not have the mobility with which to travel to more distant libraries to the extent that the college student does.

The college student, on the other hand, is typically not faced with the same barriers to access which often confront the high school student. He does have access to interlibrary loan service, either through his college library or through the district center. In a large num-

ber of cases, moreover, it is quite possible for the college student to travel to the regional resource libraries in the state, whereas the high school student usually does not have such wide-ranging mobility.

Among other possible factors affecting student use, distance was found to have little influence. Of all resident users sampled, 58.7% are students by comparison to 55.1% of non-resident users. At five miles or more from the library, students still comprise over 50% of the users.

Despite the intensive use made of district center libraries by students, few centers provide the specialized services of a young adult librarian. The 1958 report proposed that libraries designated as district centers provide a professional staff which would include a specialist for the teen-age user. Unfortunately, however, most centers are staffed by "jack of all trades" librarians who are unable to focus their skills and energies in developing programs and providing quality services to this large segment of their public.

Viewed from the perspective of the preponderance of students using district center libraries, other occupations do not appear to be well represented, as Table XXII reveals.

Students, it should be recalled, constitute 56.7% of all users. The next largest occupational category is that of "professional and technical workers" which composes 13.8% of all respondents. Surprisingly, housewives are not the heavy users of district center libraries that they are sometimes assumed to be. This group totaled only 11.6% of all users. As one goes down the occupational scale, from professional, to white collar, and to blue collar workers, the impact of the library on these persons rapidly diminishes. These data suggest rather strongly that district center libraries are not reaching all of their prospective audiences—either district-wide or local—but only a relatively small segment of the population.

TABLE XXII

Use of District Center Libraries:

By Occupational Group

Occupation	Percentage of Users
1. Students	56.7
2. Professional/technical workers	13.8
3. Housewives	11.6
4. Clerical and sales workers	7.7
5. Blue collar workers	6.9
6. Retired persons	3.8
7. Managers/officials/proprietors	3.1
8. Other workers	1.7

Division of users by residents and non-residents has little effect on library attendance by occupation category. Variations were minimal except in category

two, "professional and technical workers". Of the users in this occupational group, non-residents exceed residents by 3.5%.

B. Age

Closely related to student use is the age of the users of district center libraries. Considering all users sampled, almost half—49.4%—are between 15 and 19 years of age. Another 14.2% are between 20 and 24 years. Table XXIII illustrates use of the library by age groups of users.

TABLE XXIII

Use of District Center Libraries:
By Age Groups

Age	Percentage of Users
15-19 years	49.4%
20-24 years	14.2
25-34 years	9.4
35-44 years	10.6
45-54 years	7.8
55 years and over	8.4

Users who are under 25 years of age outnumber those 25 and over by almost two to one. Here, too, the large percentage of student use has an obvious effect, in that most students are concentrated in the 15 to 19 years of age category.

Another possible explanation, however, for the decline in library use after age 25 suggests itself. Previous studies have shown a strong relationship between educational level and library use. The higher a person's educational level, the more he is likely to be a library user. According to the 1960 Census, the median number of school years completed by persons 25 years of age and over in Pennsylvania was 10.2 years. It is quite conceivable, therefore, that traditional library services, including those presently offered by district center libraries, are not appropriate to the needs of this large segment of the population. A key problem, of course, is that we do not know what their needs are. Studies of the non user would be required to solve this problem.

C. Education

A characteristic somewhat related to the age of the library user is his educational level. Of all respondents, 42.5% indicate that they have at least some college education, a rather high percentage in comparison with the state's median education level mentioned above.

Among those patrons sampled, non-resident users have a higher level of education than do resident users. This variation may be due to higher educational levels which often characterize some suburban

areas, or to the more selective use of district centers from a distance, or both.

TABLE XXIV

Use of District Center Libraries:
By Educational Level and User Groups.

Educational Level	Residents	Non-Residents
1. Less than high school graduation	37.2%	27.5%
2. High school or business and vocational school graduation	22.6%	21.3%
3. Some college but no degree ..	23.2%	29.5%
4. College graduation	6.6%	9.0%
5. Some graduate school	2.9%	4.8%
6. Graduate or professional degree	5.2%	6.6%

The high percentages in categories one and three, of course, are due to the high proportion of student use which was discussed earlier. Inclusion of the student population in this table, however, prevents a clear picture of the educational level of those adult users not engaged in formal classwork. To delineate the educational achievement of this group, data were tabulated for users exclusive of students. Table XXV reveals these groupings and levels.

TABLE XXV

Educational Levels of Users *Exclusive* of Students

Educational Level	Percentage of Users
Eighth grade or less	3.3
Some high school	10.3
High school or vocational school graduate ..	34.3
One or more years of college	52.0

Evidently these data tend to substantiate the hypothesis that use of libraries is directly related to the formal educational level of the user.

D. Sex

Sex as a social characteristic seems to have little influence on library attendance. Users of district center libraries are almost evenly divided between men and women. Of the users sampled 48.7% are men. Distance traveled to reach the library has some effect on this proportion, however, in so far as men comprise a proportionally larger percentage of users as distance increases.

In summary, use of district center libraries does tend to be related to several social characteristics of the users. Among these are educational achievement, occupational category, and age. Because of the strong correlation between use of the library and certain of these characteristics, the libraries studied seem to be having very limited impact on other large segments of the population.

VI. AWARENESS OF DISTRICT CENTER SERVICES

The personal use of district center libraries by non-residents of the cities in which these libraries are located is undoubtedly contingent, to a large extent, upon their awareness of these centers and their right to use them. In an attempt to determine what percentage of non-residents are cognizant of such centers, a total of eight local libraries were visited in two districts. These local libraries were located at various distances from their respective district centers. Consequently, the relative distance from the center was allowed to exercise any effect it might have.

During each visit, the users of these local libraries were interviewed for the purpose of ascertaining whether or not they were aware of district center services. Taken aggregately, a total of 407 persons were interviewed.

In District I, 172 persons were interviewed at four local libraries within this district. Of this number, 50.6% stated that they either have personally used the district center library or are aware of their right to use it. In District II, on the other hand, four local libraries were also visited and a total of 235 persons were interviewed. Of these, 62.1% responded that they either have personally used the district center or are aware of their right to do so.

Table XXVI illustrates the results of these interviews.

TABLE XXVI

Awareness and Use of District Center Libraries:

By Local Library Users

Local Library Users	Percentage of Users	
	District I	District II
1. Users who have used or are aware of district services	50.6	62.1
2. Users not using the district center and unaware of their right to use it	49.4	37.9
3. Users who have personally used the district center within the past year	18.0	28.0
4. Users who have not used the district center but are aware of their right to do so	22.0	18.7
5. Users who have received inter-library loaned material through their local libraries	5.8	8.0

While over 50% of all respondents stated that they are aware of the district library, not even 25% indicated that they visited the center within the preceding year.

Distance from the district center does seem to have an effect on the local library patron's awareness of district services. Patrons interviewed who were using libraries located at greater distances from the center

are significantly less aware of such services than are patrons of local libraries which are nearer to the center.

In addition to determining the percentage of local library patrons who are aware of district services, other information, such as the means by which such persons became aware of these services, was also obtained. Table XXVII, below, illustrates some of the sources through which local patrons became cognizant of the district center.

TABLE XXVII

Sources of Knowledge of District Center Services:

By Percentage of Respondents

Source	Respondents	
	District I	District II
1. School	26.2%	19.3%
2. Friends	21.4%	30.3%
3. Advertising	3.6%	2.0%
4. Local librarian	2.4%	3.4%
5. Other	33.3%	32.4%
6. No answer	13.1%	12.6%

With reference to the large percentage of respondents in category five ("other sources"), many of the respondents within this group stated that they knew about district center services, but simply could not remember where or how they acquired this knowledge.

The percentage of users learning of district center services through their local librarians is most disappointing. In fact, such a small percentage would tempt one to conclude, perhaps, that local librarians are themselves unaware of such services.

Almost equally disappointing is the fact that the advertising medias seem to play such a negligible role in publicizing the role of district center libraries in the Pennsylvania plan.

Obviously, a well planned, vigorous publicity campaign would seem to be called for by these data. This recommendation is further strengthened by the fact that between one-half and one-third of the users of local libraries are completely unaware of district center services.

Moreover, those respondents who are aware of such services do not seem to be fully knowledgeable concerning the variety of services available to them. For example, less than 10% indicated that they have EVER used interlibrary loan service. These data, then, only corroborate the need for wide-ranging, skillfully developed publicity programs.

VII. SUMMARY AND SIGNIFICANCE OF RESULTS

A detailed field study of the use and users of selected district center libraries confirmed in part the role and presumed nature of use of these centers. But, at the same time, the data served to question or modify some of the assumptions underlying the district center concept.

Some of the results produced by the study, and modifications suggested by these findings are

1. The estimate of 25 miles or an hour's driving time which some library users were expected to travel for district service seems to be somewhat overly optimistic. The data indicates that 20 miles or 45 minutes' driving time is a more realistic estimate of the range over which a center has a significant impact.

2. In order to fill in gaps created by the realignment and shrinking of district boundaries, relatively strong libraries could be designated as sub-centers, thereby making a somewhat higher level of service accessible to residents of these unserved areas.

3. The relative balance and similarity between the usage patterns of resident and non-resident users seems to have several implications for service programs and policies of district center libraries. For example, while all centers are charged with the responsibility of developing collections with relative subject depth, data concerning the use of these libraries also confirms the importance of developing collections characterized by range, diversity, and breadth.

4. On the other hand, variations in usage patterns which are due, in part, to larger collections underscore the need for district centers to reach and maintain standards relative to collection size.

5. High priority should be given related access factors, such as parking facilities and free or reciprocal borrowing privileges, for all residents.

6. The failure of district library services to contact or "reach out" to some audiences, notably those at the lower part of the socioeconomic scale, suggests the development of specific programs which would focus on these groups.

7. The lack of awareness on the part of local library patrons concerning district center services and resources indicates first, that an intensive publicity campaign is needed, and secondly, that new or improved channels of communication between local librarians and district center librarians need development. Moreover, responsibility for publicity programs or public relations seems to require clear definition at both local and district levels.

8. Finally, the data produced by this study obviously confirm the importance of district center libraries in providing the public with a higher level of service. Not only are these libraries recognized by their users as centers which provide a wide range of library services, they are also utilized accordingly and with considerable success. In a very real sense, therefore, the district center library seems to be the primary, and sometimes singular source of high-quality library service for many, if not most, Pennsylvanians.