A study was made to determine the effectiveness and acceptability of cassette books for blind and physically handicapped readers. Commissioned by the Ohio State Library, an interview survey was conducted to 300 diversified users from the Cleveland and Cincinnati-Hamilton County Regional Libraries for the Blind and Physically Handicapped. The following conclusions and recommendations resulted: (1) The great majority of handicapped people prefer books recorded on cassette; (2) there are still technical problems to be solved; (3) the Library of Congress should continue to work with tape manufacturers to design a sturdier, more trouble-free cassette; (4) the Library of Congress should reconsider its decision to supply only the audiotape players; (5) immediate steps should be taken to broaden the range of materials available in cassette form; (6) a pilot series of adult education courses on cassette tape might be undertaken; (7) if the use of cassette tapes becomes more widespread, the regional libraries must be prepared to invest time and staff in more rigorous inspection; (8) fund sources should be sought to provide additional staff support for the Regional Libraries for the Blind and Physically Handicapped. (WCM)
THE OHIO CASSETTE BOOK PROJECT
AN INVESTIGATION OF USER SATISFACTION

by

Genevieve M. Casey
Associate Professor, Library Science,
Wayne State University

Columbus, Ohio
1973
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>iii</td>
</tr>
<tr>
<td>PREFACE</td>
<td>1</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I.  SCOPE AND PURPOSE OF STUDY</td>
<td>3</td>
</tr>
<tr>
<td>II. THE USERS</td>
<td>11</td>
</tr>
<tr>
<td>III. OPINIONS OF USERS</td>
<td>20</td>
</tr>
<tr>
<td>IV. RANGE OF MATERIALS</td>
<td>27</td>
</tr>
<tr>
<td>V. ADVANTAGES AND DISADVANTAGES OF CASSETTE BOOKS</td>
<td>39</td>
</tr>
<tr>
<td>VI. CONCLUSION AND RECOMMENDATIONS</td>
<td>47</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>51</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AGE OF RESPONDENTS.</td>
<td>12</td>
</tr>
<tr>
<td>2.</td>
<td>OCCUPATIONS OF RESPONDENTS 19-65 YEARS OF AGE.</td>
<td>14</td>
</tr>
<tr>
<td>3.</td>
<td>DURATION OF HANDICAP.</td>
<td>16</td>
</tr>
<tr>
<td>4.</td>
<td>VOLUME OF READING.</td>
<td>17</td>
</tr>
<tr>
<td>5.</td>
<td>EDUCATIONAL LEVEL OF ADULTS DISSATISFIED WITH MATERIAL AVAILABLE ON CASSETTE.</td>
<td>31</td>
</tr>
<tr>
<td>6.</td>
<td>LENGTH OF EXPERIENCE WITH TALKING BOOKS FOR USERS DISSATISFIED WITH CASSETTE</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>MATERIAL.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>VOLUME OF READING BY USERS DISSATISFIED WITH CASSETTE MATERIAL.</td>
<td>33</td>
</tr>
<tr>
<td>8.</td>
<td>BOOKS SOUGHT BY CASSETTE READERS.</td>
<td>35</td>
</tr>
</tbody>
</table>
PREFACE

To mention by name the hundreds of people who contributed to this project would not be feasible. There are the handicapped people themselves who generously shared their ideas and experience, the many telephone volunteers without whom the study would have been impossible, and the staff members of the two regional libraries who spent uncounted hours organizing materials for the experiment.

Special acknowledgement must be made however to Richard Cheski, Assistant State Librarian and Joseph Shubert, State Librarian of Ohio who conceived and guided this study, to Elizabeth Stroup of the Library of Congress Division for the Blind and Physically Handicapped, to Katherine Prescott and Blanche Rich of the Cleveland Public Library and Frances Rose of Cincinnati-Hamilton County Library, to Charles Selkow of the Bell Telephone Laboratory in Columbus, to Frederick J. Nash, Bell System Customer Training, who coordinated the telephone volunteer effort in Cincinnati, and to W. R. White, Plant Manager, Ohio Bell
Northern-Main Division, who coordinated the telephone volunteers in Cleveland and to Rev. Charles Kovari, Director of Alvernia Rest Home in Parma, Ohio who contributed valuable advice on how the cassette equipment could be improved. Appreciation is also due to Linda Mielke, a graduate student of library science at Wayne State University who conducted a literature search and tabulated returns on the interview questionnaire.
CHAPTER I

SCOPE AND PURPOSE OF STUDY

Since 1958, the Library of Congress has been supplying a limited number of books and players to the Regional Libraries for the Blind and Physically Handicapped as a supplement to talking books recorded on microgroove disc. Although officials at the Division for the Blind and Physically Handicapped believe that the talking book is not only less expensive than the cassette book, but also is superior to it in many decisive ways, nevertheless the acceptance of cassette has been so positive that the program has steadily grown. The cassettes and the players are now technically better than they were 5 years ago, and the collection has grown from 150 to 700 titles.

Congress, one located at the Cleveland Public Library, the other at Cincinnati-Hamilton County Public Library. Both are subsidized by the State of Ohio with grants administered by the State Library. Both receive most of their materials through the Library of Congress, and both are experiencing a growing demand for books and periodicals on cassette from handicapped readers throughout Ohio.

In order to "produce information to aid Ohio's two Regional Libraries for the Blind and Physically Handicapped, and the Library of Congress, the Ohio State Library commissioned this study on "the effectiveness and acceptability" of cassette books distributed to Ohio readers. It was hoped that the study would answer such questions as: How effective are books on cassette tapes in the opinion of the blind and/or physically handicapped user? How do they compare with talking books as regards ease of use, quality of recording, range of materials, durability of equipment, both player and tapes? Information was also sought on how feasible cassette books are in the opinion of the library personnel who work with them, whether cassettes create excessive inspection and repair problems for the libraries.

The Library of Congress Division for the Blind and Physically Handicapped also needs guidance on book selection
for the cassette program. Are cassette books especially appealing to some particular category of user--to the aged, or to children, or to young adults, for example? Should concentration be on textbooks and other materials for students at high school or college level or on specialized material for the business or professional person or on books intended for the same general audience as these for whom talking books on discs are selected? Do cassettes lend themselves to use by some particular kind of handicapped person--the blind, or people with muscular or neurological disabilities? Since most of the users of libraries for the Blind and Physically Handicapped are blind or visually handicapped, it is important to learn whether cassette books pose serious problems for blind people and how they compare in ease of use with books recorded on discs or on reel-to-reel tape.

In 1969, the Library of Congress Division for the Blind and Visually Handicapped conducted an "informal, 5 months study" of the use of portable cassette players.\(^1\) Players were provided to 1000 readers across the country and 150 books were recorded on tape for these readers. In

---

selecting the books from those already recorded on disc, emphasis was placed on titles thought to have appeal to the mobile individual who might wish to carry his reading matter with him. Each cassette tape held an amount of recorded time equal to a 10 inch disc recorded at 16-2/3 rpm (about 40 minutes of playing time on each side). The titles selected were short books, 5 of which would fit into one standard container. Thus, although the bulk of the container, in which the cassettes were packaged and mailed was not reduced, its weight was. A questionnaire was developed to coordinate results and to determine reader likes and dislikes. This pilot study revealed such enthusiasm for the cassette book that the Library of Congress continued to expand the program.

Now that additional experience has been gained, the equipment improved and the range of titles extended, it seems important to update the 1969 study and to evaluate again the success of cassette books in one representative state.

All these considerations led to this investigation into how Ohio readers felt about books on cassette tape.

To test the effectiveness and acceptability of books recorded on cassette tape in themselves, and in comparison
with books recorded on reel-to-reel tape and on disc, three hundred users of the Cleveland and Cincinnati-Hamilton County Regional Libraries for the Blind and Physically Handicapped were invited to participate in the study. The participants were selected by the 2 libraries and included users of various ages, of both sexes, users who work and those who do not, students, and adults of various educational level; people whose handicaps were recent, and those who have been handicapped for long periods, people living at home and those in institutions, new readers, people accustomed only to talking books, and readers accustomed to using books on reel-to-reel and/or cassette. Approximately 180 readers were selected by the Cleveland Public Library, 120 by Cincinnati-Hamilton County, a ratio based upon the relative number of patrons of each library. Although both libraries serve blind and handicapped readers throughout the State, it was decided that a workable and reliable sample could be obtained by limiting this study to readers living within the two metropolitan areas.

The Library of Congress supplied each regional library with additional cassette machines (play-back only, unlike older types which also had recording equipment). Some of these machines were already in use at the time the study
began, usually by students or veterans, but most were delivered to the cooperating users for the first time in January, 1972. The Library of Congress also contributed a generous supply of books on cassette tapes and copies of the 1971 Cassette Book Catalog, the first comprehensive listing of the 700 titles issued between 1968 and the spring of 1971. Library of Congress reproduced 300 copies of a cassette describing the study which went to all participating users, and a cassette of directions.

Before the project got underway, a special ad hoc planning committee met in November, 1971 at the Ohio State Library with the principal investigator. Serving on the committee were representatives of the two regional libraries, and of the Ohio State Library, Elizabeth Stroup of the Library of Congress Division for the Blind and Physically Handicapped, and representatives of the Bell Telephone Company. (See Appendix for names of committee.) This planning committee offered invaluable advice about the content and structure of the interview and about the overall mechanics of the project.

Volunteers from the Ohio Bell Telephone Company, under the general direction of Charles Selkow, Bell Telephone Laboratory, Columbus, Ohio, of W. R. White, Plant Manager,
Northern-Main Division in Cleveland and of Frederick J. Nash, Bell System Customer Training in Cincinnati agreed to deliver the cassettes, the players, a kit of information about library service to the blind and physically handicapped and a copy of the catalog to the users, to demonstrate the machines, and to explain the objectives of the study, and to return after three months to conduct an individual interview with each user according to an outline developed with the aid of the Ad Hoc Advisory Committee. Orientation sessions were held in December, 1971 in both Cleveland and Cincinnati to acquaint the telephone volunteers with the services of the Regional Libraries for the Blind and Physically Handicapped, the equipment to be demonstrated, and the objectives and methods of the study. The volunteers delivered the materials in January, 1972, and conducted interviews in April. Without the contribution of the telephone volunteers, this study would not have been possible.

Also crucial to the success of the project was the cooperation, above and beyond the call of duty by the two regional libraries. Under the direction of Katherine Prescott and Blanche Rich at the Cleveland Public Library for the Blind and Physically Handicapped and Frances Rose of
Cintinnati-Hamilton County Library, the personnel in both libraries donated uncounted hours to organizing the materials, selecting the users, guiding the Bell Telephone volunteers and providing continuing service and advice to the experimental group most of whom were cassette users for the first time. The Cleveland Library also did a careful analysis of the extra time spent in the survey which provides additional documentation of the generosity of the two libraries.
CHAPTER II

THE USERS

The participants in the study were, as indicated in Chapter I, 300 users of Ohio's two regional libraries for the blind and physically handicapped.

A few of the people originally selected died, became very ill, or moved away. Others were unwilling and/or unable to use the equipment, or not available at the times the volunteers were able to call. Several patients in institutions who had had no previous experience with library materials for the blind and physically handicapped, found the experience overwhelmingly confusing and were unable to give meaningful responses to the interview questions. For all these reasons, the final number of participants narrowed to 167. Because there was no indication of a different pattern of response between residents of the Cleveland and of the Cincinnati areas, place distinctions were discarded at this time.
Who were the 167 users, and what did we learn about them?

Ninety-five or 56% were women although of the 49 persons over 65 years old, 60% were women, and of the 38 over 70 years old, 63% were women.

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE OF RESPONDENTS</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Number of Respondents</td>
</tr>
<tr>
<td>Percentage of Total 167 Respondents</td>
</tr>
</tbody>
</table>

The group ranged in age from 5 to 91 years, with a median age of 77. The largest group in the breakdown used in Table 1 were those over 65, who accounted for 28% of the total. According to the 1970 census, 9.9% of the total population in the United States is over 65, a striking confirmation that a disproportionate number of aged people are blind and physically handicapped. If one considers the participants in 3 categories, those under 18, those over 65 and those adults between the ages of 19 and 64, 20% or 34
were under 18, 28% or 49 were over 65, and 52% or 79 were adults of working age. This assumes that the 5 participants who did not choose to reveal their ages were scattered over the spectrum of age range.

What was the educational level of the 133 adults over the age of 18? Twenty-nine or 21% are college graduates, and 10 of these have post-baccalaureate degrees. Thirty-six or 26% are high school graduates and an additional 17 had some post-high school education, short of four years of college. The post-high school people had attended community college, business school, or some other form of vocational training. Twenty-five or 18% had completed only eighth grade or less, and 37 or 27% were not high school graduates.

An analysis of the occupations of the adults between the ages of 19 and 65 reveals a wide range of occupation from college professor, business executive, social worker to mechanic, snack bar operator and broom maker. Only 8 of the 14 adult women in the study worked outside their homes; the remainder listed themselves as housewives. Twenty-two or 27% of the adults were unemployed; of these 10 described themselves as shut-in. Table 2 is a list of the occupations of adults arranged in order of those most prevalent.
TABLE 2

OCCUPATIONS OF RESPONDENTS 19-65 YEARS OF AGE

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>36</td>
</tr>
<tr>
<td>Housewife</td>
<td>36</td>
</tr>
<tr>
<td>Teacher</td>
<td>8</td>
</tr>
<tr>
<td>Mechanic</td>
<td>5</td>
</tr>
<tr>
<td>Coffee Shop-Snack Bar Operator</td>
<td>5</td>
</tr>
<tr>
<td>Stenographer-Clerk</td>
<td>4</td>
</tr>
<tr>
<td>Social Worker-Vocational Counselor</td>
<td>3</td>
</tr>
<tr>
<td>Film Processor</td>
<td></td>
</tr>
<tr>
<td>Tool and Die Maker</td>
<td></td>
</tr>
<tr>
<td>Auto Dealer</td>
<td></td>
</tr>
<tr>
<td>Plumber</td>
<td></td>
</tr>
<tr>
<td>Personnel Manager</td>
<td></td>
</tr>
<tr>
<td>Public Information Officer</td>
<td></td>
</tr>
<tr>
<td>Building Maintenance</td>
<td></td>
</tr>
<tr>
<td>PBX Operator</td>
<td></td>
</tr>
<tr>
<td>Hospital Orderly</td>
<td></td>
</tr>
<tr>
<td>Sales Representative</td>
<td></td>
</tr>
<tr>
<td>City Clerk</td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td></td>
</tr>
</tbody>
</table>
The majority of the participants (88%) live in the community, either with their families (129) or alone (18). Fifteen of the people living in the community considered themselves totally shut-in, another 6 occasionally shut-in. Twenty, or 12%, of the participants lived in institutions.

In what way were the users handicapped? 87 or 52% are blind and an additional 40 or 23% are visually handicapped. Thus over 75% of the group suffers sight impairment serious enough to prevent their using conventional printed material. The remaining one-fourth of the users are quadrplegics (6), people who suffer with multiple sclerosis (5), cerebral palsy (4), strokes (2), arthritis (2) and a variety of muscular and neurological disabilities. Twelve participants failed to identify the nature of their handicap.

Forty-three people had been handicapped from birth, and of these 24 or 55% are young people 18 or under. Thus 70% of all users under 18 had been severely handicapped from birth. Thirty-three people or 19% had been handicapped for 20 years or more, one of them as long as 77 years. One-third of the respondents, or 56 persons had been handicapped for at least 10 years.
TABLE 3
DURATION OF HANDICAP

<table>
<thead>
<tr>
<th>Duration</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handicapped 5 years or less</td>
<td>49</td>
</tr>
<tr>
<td>Handicapped 6-10 years</td>
<td>20</td>
</tr>
<tr>
<td>Handicapped 11-15 years</td>
<td>12</td>
</tr>
<tr>
<td>Handicapped 15-20 years</td>
<td>11</td>
</tr>
<tr>
<td>Handicapped 20 years and more</td>
<td>33</td>
</tr>
<tr>
<td>(Information not supplied)</td>
<td>15</td>
</tr>
</tbody>
</table>

One hundred fifty-eight of the 167 participants were well qualified to compare books recorded on cassette tape with talking books (on disc), since the majority of them had been using talking books for many years. Twenty-one or 13% had over 16 years of experience. The range of experience with talking books was from less than one year to 39 years. Sixty-six or 41% had used talking books for more than 5 years. Thirty had one year or less experience, five began to use talking books at the same time as they were introduced to cassette books in January, 1972.

Forty-nine of the 167 or 29% own their own reel-to-reel equipment, and thus were able to compare books on reel-to-reel tape with those on cassette.
Most of the respondents (117 or 70%) were introduced to books on cassette when the project began in January, 1972 and thus were basing their opinions on just 3 months of experience. Eight persons, however, had used cassette for a year or less, 33 between a year and 2 years, and 9 3 or more years, almost from the time when the Library of Congress began to make books on cassette available in 1968.

Many of the participants are remarkably well read. The range of books they read per month is from one to 32. One-fourth of the users read more than 6 books per month, about three-fourths read between 1 and 6 books per month, a record many people without handicap could envy.

TABLE 4
VOLUME OF READING

<table>
<thead>
<tr>
<th>Total Responding to Question: 125</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 or 39% read between 1-3 books per month</td>
</tr>
<tr>
<td>44 or 35% read between 4-6 books per month</td>
</tr>
<tr>
<td>93 or 74+% read between 1-6 books per month</td>
</tr>
<tr>
<td>32 or 25% read more than 6 books per month</td>
</tr>
</tbody>
</table>

Range: 1-32 books per month
The study indicates that a substantial number of handicapped people have acquired their own tape players and recorders. Forty-six or 27% of the project group own cassette equipment, and 49 or 29% own reel-to-reel equipment. They use their equipment for recording and listening to music, lectures, sermons and speeches and for correspondence. Four respondents indicated use of cassettes for business purposes, two are writing books, one finds it useful in memorizing play parts. Since the handicapped readers use recording equipment for a wide variety of communication purposes, the Library of Congress may wish to reconsider its present policy of providing only players. On the other hand, it may be that most of the users who wish to use recording equipment manage to own their own. This would be hard to document and would indeed require another, different study.

In summary, the only thing the participants had in common was that they are handicapped. They range in age from 5 to 91 although there are a disproportionate number of older people in the group. Their educational level varies from below 6th grade to Ph.D. The occupation of the adults reaches from college professor to broom maker, with most of the women not working outside their home. The
majority of the group are blind or visually handicapped. Most of the group live in the community, with their families or alone. Only a small percentage are partially or totally shut-in and/or live in institutions. Most of the group read at least one book a month and one-fourth of them read over 6 books per month. Although the majority of the group did not have previous experience with cassette books, they were quite familiar with talking books. More than one-fourth own their own cassette and/or reel-to-reel equipment.
CHAPTER III

OPINIONS OF USERS

What did these handicapped people think about cassette books, what do they like and dislike about them, how do they rate them in comparison with talking books and books on reel-to-reel tape in ease of use, sound fidelity, and durability, how adequate for their needs and tastes is the range of material presently available on cassette, how important to them is the portability and compactness of the cassette? What do they consider the major advantages and disadvantages of cassettes, and finally, in what recorded medium would they prefer to read--cassette, reel-to-reel or disc?

Ease of Use

The first set of questions investigated the clarity of the instruction tape which accompanies each cassette player from the Library of Congress.
More than 90% of the respondents found the instruction tape clear. The 18 users who found it confusing gave such reasons as "Couldn't follow because of blindness," "not thorough enough--machine does not always operate," "sound of tape was garbled," "no instruction on how to clean head," "no replay instructions," and "no instructions on what to do when the tape jams."

There were 10 women and 8 men in the 18 who found the instructions unclear, approximately in the same percentage as they appeared in the total group—evidence that the stereotype of male superiority with machines was not operative.

Five of the 18 were in institutions (27%, compared to 12% in the total group). Ten of the 18 (55%) were shut-in, compared to 13% shut-in in the total group. Fourteen of the 18 were visually handicapped, a slightly higher percentage than in the total group. The 2 stroke victims in the survey both found the directions confusing. Although the age range of the 18 was from 49 to 91, 13 or 72% of the group were over 65, in comparison with 23% in the whole group, and of the 13 over 65, 11 or 84% were over 70, in comparison with 79% of those in the whole over-65 group.
Education level seemed insignificant in understanding the instruction tape, since the range among the 18 was from 6th grade to 4 years in college.

In summary, the 10%+ of the participants for whom the instruction tape was not clear, tended to be older, more handicapped people, more likely to be shut-in and living in institutions. When instruction tapes are produced again, however, it would be worth considering to add instructions on how to clean the head of the machine, and what to do—or not to do—when the tape twists, breaks or jams.

One hundred forty-two of the 167 respondents or 86% found the cassette easy to use, 17 or 9%+ found it somewhat difficult, 8 or 4% found it hard to use. The users who found the equipment less than easy to use cited problems with rewind and with tape which looped or broke. A quadraplegic found the controls difficult to press and would have preferred them on top of the player like typewriter keys. There was also a request for an automatic shut-off or at least a signal at the end of the tape. An analysis of the 8 persons who found the cassette tapes hard to use reveals that although their ages ranged from 11 to 86, 75% of them were over 65, compared to 23% in the whole group. The two stroke victims appeared again in this group. Six of
the 8 were talking book users and found the cassette more awkward than phonograph and records.

One hundred and thirty-two users were willing to compare the cassette equipment with talking books. The majority, 91 or 87% found cassettes easier to use than talking books, 28 or 21% found them about the same. Thus 90% of the users found cassettes easier to use, or about the same as books on disc. An analysis of the 13 persons who found the cassettes more awkward to use than talking books revealed that 69% of them were over 65, compared with 23% in the total group, that they had used talking books for periods ranging from 3 months to 30 years. One of the group had used cassettes for 4 years, 2 of them for 2 years, 3 for 1. The rest were using cassettes for the first time.

Eleven of the 13 who found talking books easier to use were women, although it would be hard to verify that this preponderance was anything more significant than coincidence.

Sixty-six users compared the cassette with reel-to-reel in ease of use. Fifty-two of these (78%) found cassettes easier to use, 12 found them about the same, and only 2 persons believed cassettes were more awkward to use than reel-to-reel.
In summary, the great majority of the users, of every handicap, every age, and every educational level found the instruction tape clear, and cassettes easy to use, and preferable to any other form of recorded book. The minority who found cassettes awkward tended to be very old, more severely handicapped people. One could theorize that this group would find any equipment difficult.

**Sound Fidelity**

With the exception of 2 users, all respondents found the sound fidelity of their cassette tapes adequate or excellent. Seventy percent of them found the sound quality excellent, although 1 respondent restricted his judgment to new tapes only. Since the Library of Congress did supply many new cassettes to the cooperating libraries, the question of how long the tapes can preserve their sound fidelity could not be answered within this study.

In comparison with the sound fidelity of talking books, 144 of 157 or 91% of the users found cassettes as good or better than talking books. There were frequent references to the fact that talking book records are often scratched or warped, a commentary on the fact that most Regional Libraries for the Blind and Physically Handicapped do not
have the staff for regular inspection of records. In analyzing the positive user reaction to sound fidelity, one must remember that most of the tapes were new, and many of the records are old, and also that whereas it may be possible to listen to a scratched record, it is not possible to play a broken tape. With cassette tapes, inspection is a necessity; with books on disc it may be a luxury, or at least a service which can be given lower priority.

**Durability of Cassette Tapes and Players**

Robert Bray, Chief of the Library of Congress Division for the Blind and Physically Handicapped has described the cassette as "a book with moving parts."¹ This fact alone creates increased potential for breakdown, in the book as well as in the player.

One hundred and twenty-three of the users or 73% reported no trouble with the equipment or the tapes. Forty-four users (over one-fourth) reported from 1 to 12 breakdowns during the 3 month period of the study. Although 26 of the 44 reported only one breakdown, the median was 5 times. Ninety percent of those having problems reported

---

trouble with the tape unwinding, twisting, jamming and 34% reported trouble with the player, usually the battery.

One hundred and twenty-eight of the 167 users compared the durability of cassettes with talking books. Of these, 50 or 39% judged talking books sturdier, 44 or 34% found talking books about the same and 34 or 28% felt that talking books were more subject to breakdown. One apprehensive but honest user commented that he felt "his cassette equipment was more likely to break down but it didn't."

Sixty-one of the 167 users were able to compare the durability of cassette with reel-to-reel tape. Of these, 30 users or 49% felt that reel-to-reel equipment was sturdier, 18 or 29% felt that the 2 were about the same, and 13 or 21% felt that the reel-to-reel equipment was more likely to break down.

In general, as will be detailed in a subsequent chapter on "What people like least about cassettes" major maintenance problems lie in the cassette rather than in the player. Because a jammed or unwound tape is unusable especially for a blind or visually handicapped person, it is certain to create a higher level of user frustration than a scratched or damaged record. Improving the durability of the cassette must be a major goal in the cassette program.
CHAPTER IV

RANGE OF MATERIALS

The cassette book program was not initiated by the Library of Congress until 1968 and as yet only about 700 titles are available. According to Robert Bray, titles have been selected "especially for the busy handicapped person with wide reading interests who is likely to be very much on the go."\(^1\) The needs of college students, veterans, children and the elderly were later given special consideration.

A complete catalog, published for the first time in 1971, lists 15 mystery titles, 7 western stories, 9 science fiction. The 75 titles in general fiction are notably lacking in light romance and historical fiction. In fact it is difficult to discern what the principle of selection might have been for the fiction titles. A few are classics:

Anna Karenina, Finnegan's Wake, The Grapes of Wrath, Light in August, Mutiny on the Bounty, My Antonia, The Portrait of a Lady, Prince and the Pauper, Return of the Native. Others are the best sellers of yesteryear: Lee's To Kill a Mockingbird, Beach's Run Silent, Run Deep, Kaufman's Up the Down Staircase, Mailer's Naked and the Dead, Waugh's Loved One. It is obscure why, in a list of 75 fiction titles, such books were selected as Nausea, Jean Paul Sartre's first novel, or Justine, an abridged version of DeSade's "erotic, perverted and sadistic novel," or The Defense, an early novel by Vladimir Nabokov about a "chess prodigy whose addiction to the game leads to complete disassociation with real life," or The Great Auk by Allan Eckert, a story about "non-flying birds which inhabited the rugged Newfoundland coast and become extinct in 1844."

Among the non-fiction, 16 titles reflecting the black experience are included. In philosophy, there are 6 titles, 1 by Plato, 2 by or about Aristotle. Reason and Common Sense by Santayana is the only title later than the 19th century. Five titles are available in psychology, 2 of them for parents on how to care for children.

The 11 titles in religion include no edition of the Bible, although there are 2 titles with commentary and
dramatization of portions of the Old Testament, 2 on the Epistles of Paul and 1 on the life of Christ. Oriental religion is limited to 1 book on Zen. There are only 8 titles in science and 10 in applied science, including 8 in popular medicine.

Of the 91 children's books, all but three are for little children in grades K-3.

There are 24 travel titles, 22 of them audio-tours of the historical sights, night life, shopping, and recreation spots of various American and foreign cities.

The list includes 17 historical titles, 5 of them collections of great American speeches, 11 of them American history. Sixteen biographies and autobiographies are included.

Respondents were asked to rate the adequacy for their need and interests of the materials available on cassette, as excellent, adequate, less than satisfactory or totally inadequate. One hundred and sixty-one persons answered this question.

Twenty-eight or 17% found the range excellent, 76 or 47% found the choices adequate. Several of the readers who found themselves satisfied, qualified their approval by observing that cassettes do not offer nearly the variety of
disc, that selection is improving, and that they hope that it will continue to do so. It must also be remembered that most of the readers had only begun to use cassettes, and therefore had had insufficient time to exhaust the range of titles available to them.

Fifty-seven of the respondents, or 35%, found the cassette material less than satisfactory. Four of these rated the selection "totally inadequate."

Who were the 57 people who found themselves dissatisfied with the choice of material offered? In age they ranged from 9 to 89, in about the same proportion as their ages were represented in the total group. Fifty-nine percent of the dissatisfied users were women, compared with 56% in the total group—a not significant variation.

What difference did educational level make in degree of user satisfaction? Table 5 details the educational level of the 49 adults over 18 who were dissatisfied:
TABLE 5

EDUCATIONAL LEVEL OF ADULTS DISSATISFIED WITH MATERIAL AVAILABLE ON CASSETTE

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Percentage</th>
<th>(compared with total group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Baccalaureate</td>
<td>4 or .8%</td>
<td>(.7% in total group)</td>
</tr>
<tr>
<td>4 Years College</td>
<td>9 or 18%</td>
<td>(14% in total group)</td>
</tr>
<tr>
<td>Some Post-High School</td>
<td>23 or 46%</td>
<td>(42% in total group)</td>
</tr>
<tr>
<td>High School</td>
<td>10 or 20%</td>
<td>(42% in total group)</td>
</tr>
<tr>
<td>Less than 12 Years</td>
<td>14 or 28%</td>
<td>(27% in total group)</td>
</tr>
</tbody>
</table>

* * * * *

Of 10 (in total group) with Post Baccalaureate, 4 were dissatisfied (40%)

Of 19 with 4 years college, 9 were dissatisfied (47%)

Of 17 with some post-high school (short of B.A.), 10 were dissatisfied (58%)

Of 56 with some post-high school, 23 were dissatisfied (41%)

Of 36 high school graduates, 10 were dissatisfied (27%)

Of 37 with less than 12 years, 14 were dissatisfied (37%)

Of 34 students (under 18), 8 were dissatisfied (23%)

It would appear from these figures that dissatisfaction with the range of titles on cassette was spread fairly evenly.
over people with all levels of education, although those with higher education tended to be less satisfied.

The majority or 83% of the people who were dissatisfied with the range were blind or visually handicapped, a slightly higher ratio than appeared in the total group, but there seemed to be no significant relation between the type of handicap and the adequacy of range for the individual. Fifty of the 57 dissatisfied users were talking book users. The following table, comparing the length of time these users had read talking books with the experience of the whole group shows a few interesting variations:

TABLE 6

LENGTH OF EXPERIENCE WITH TALKING BOOKS FOR USERS DISSATISFIED WITH CASSETTE MATERIAL

<table>
<thead>
<tr>
<th>Duration</th>
<th>Percentage</th>
<th>Whole Group Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year or less</td>
<td>18%</td>
<td>22%</td>
</tr>
<tr>
<td>2-3 years</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>4-5 years</td>
<td>24%</td>
<td>20%</td>
</tr>
<tr>
<td>6-10 years</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>11-15 years</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>16+ years</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>Over 5 years</td>
<td>46%</td>
<td>41%</td>
</tr>
</tbody>
</table>
One could conclude from this evidence that people dissatisfied with the variety of material available on cassette tended to have used talking books for a longer period and thus would tend to be better read, and more discriminatory in their literary choices.

There was also slight evidence that the dissatisfied group tended to be somewhat more voluminous readers. In the dissatisfied group were people who read from 1 to 32 books per month. The following table details the difference between the dissatisfied users and the whole group in volume of reading:

<table>
<thead>
<tr>
<th>Number Books Read Per Month</th>
<th>Dissatisfied Group</th>
<th>Percentage in Total Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>21 or 39%</td>
<td>39%</td>
</tr>
<tr>
<td>4-6</td>
<td>17 or 32%</td>
<td>35%</td>
</tr>
<tr>
<td>7-15</td>
<td>15 or 28%</td>
<td>25%</td>
</tr>
<tr>
<td>16+</td>
<td>6 or 11%</td>
<td>13%</td>
</tr>
</tbody>
</table>

TABLE 7
VOLUME OF READING BY USERS DISSATISFIED WITH CASSETTE MATERIAL
The majority of the dissatisfied readers or 77% had had no previous experience with the cassette collection, and thus could not be assumed to have exhausted the collection of 700 available titles.

In conclusion, one would have to say that more than 35% of the users find the range of material offered now on cassette tape inadequate to their needs, and that this 35% includes people of all ages, all educational levels, all handicaps.

Respondents were also asked what kind of material they would like to find available on cassette. In answer, more than one-third of the 167 expressed desire for books of best-selling fiction, current periodicals, mystery stories, history, biography, and travel; more than one-fourth of the 167 expressed desire for light romance, religion, nature; more than one-fifth of the 167 expressed desire for science, and psychology. Table 8 details the kinds of books which cassette users would like to read, arranged in order of the number of readers who expressed preference for them.
<table>
<thead>
<tr>
<th>Type of Book</th>
<th>Number Requesting</th>
<th>Type of Book</th>
<th>Number Requesting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best selling fiction</td>
<td>94</td>
<td>Science (cont.)</td>
<td></td>
</tr>
<tr>
<td>Current periodicals</td>
<td>77</td>
<td>auto mechanics</td>
<td>(1)</td>
</tr>
<tr>
<td>Mystery Stories</td>
<td>71</td>
<td>zoology</td>
<td>(1)</td>
</tr>
<tr>
<td>History</td>
<td>61</td>
<td>weather rockets</td>
<td>(1)</td>
</tr>
<tr>
<td>Travel</td>
<td>57</td>
<td>Westerns</td>
<td>32</td>
</tr>
<tr>
<td>Biography</td>
<td>56</td>
<td>Philosophy</td>
<td>30</td>
</tr>
<tr>
<td>Nature</td>
<td>47</td>
<td>Foreign Languages</td>
<td>29</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bible--commentary, history, text</td>
<td>(12)</td>
<td>Science (cont.)</td>
<td></td>
</tr>
<tr>
<td>Judeo-Christian</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baptist</td>
<td>(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presbyterian</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sermons</td>
<td>(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspirational</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All faiths</td>
<td>(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Romance</td>
<td>45</td>
<td>Children's Books</td>
<td>24</td>
</tr>
<tr>
<td>Psychology</td>
<td>37</td>
<td>Business</td>
<td>23</td>
</tr>
<tr>
<td>Science</td>
<td>33</td>
<td>Cook Books</td>
<td>19</td>
</tr>
<tr>
<td>Science (cont.)</td>
<td></td>
<td>Textbooks</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High School</td>
<td>(11)</td>
</tr>
<tr>
<td>For Layman--general</td>
<td>(6)</td>
<td>College</td>
<td>(8)</td>
</tr>
<tr>
<td>Science fiction</td>
<td>(9)</td>
<td>Special Subjects: Religion, parent teaching guides for handicapped child, black history, business, technical courses, home management, rehabilitation material</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>(4)</td>
<td>Law</td>
<td>15</td>
</tr>
<tr>
<td>Space</td>
<td>(3)</td>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td>(8)</td>
<td>Humor</td>
<td>3</td>
</tr>
<tr>
<td>Physiology</td>
<td>(2)</td>
<td>Animal stories</td>
<td>2</td>
</tr>
<tr>
<td>social science</td>
<td>(1)</td>
<td>Short stories</td>
<td>2</td>
</tr>
<tr>
<td>earth</td>
<td>(1)</td>
<td>Sports</td>
<td>5</td>
</tr>
<tr>
<td>oceanography</td>
<td>(1)</td>
<td>Current events</td>
<td>2</td>
</tr>
<tr>
<td>astronomy</td>
<td>(1)</td>
<td>Historical fiction</td>
<td>4</td>
</tr>
<tr>
<td>anthropology</td>
<td>(1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 8--Continued

<table>
<thead>
<tr>
<th>Type of Book</th>
<th>Number Requesting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other: (Cont.)</td>
<td></td>
</tr>
<tr>
<td>Electronics, engineering, technical courses</td>
<td>(3)</td>
</tr>
<tr>
<td>Vocabulary teaching</td>
<td>(1)</td>
</tr>
<tr>
<td>Classics</td>
<td>(2)</td>
</tr>
<tr>
<td>Music (classic, religious, opera)</td>
<td>(6)</td>
</tr>
<tr>
<td>Grooming</td>
<td>(2)</td>
</tr>
<tr>
<td>Detective, adventure, spy.</td>
<td>(3)</td>
</tr>
<tr>
<td>How to books, hobbies</td>
<td>(2)</td>
</tr>
<tr>
<td>Astrology</td>
<td>(1)</td>
</tr>
<tr>
<td>Drugs, Organized Crime</td>
<td>(2)</td>
</tr>
<tr>
<td>Newspaper</td>
<td>(2)</td>
</tr>
<tr>
<td>Plays</td>
<td>(1)</td>
</tr>
<tr>
<td>Rhymes</td>
<td>(1)</td>
</tr>
<tr>
<td>White House Conference on Aged</td>
<td>(1)</td>
</tr>
<tr>
<td>Brownie Handbook</td>
<td>(1)</td>
</tr>
<tr>
<td>Dog Breeding</td>
<td>(1)</td>
</tr>
<tr>
<td>&quot;Tapes describing and comparing different articles in detail&quot;</td>
<td>(1)</td>
</tr>
</tbody>
</table>

Current periodicals were requested by 77 of the 167 respondents. Respondents were asked to list the 5 periodicals they most wished to see regularly. The answers ranged
over 92 periodicals, some very specialized. Among the types of magazines most frequently requested were news magazines, women's or home magazines, nature and sports magazines, children's magazines and the true romance-true story genre.

Table 9 lists those periodicals requested by 5 or more of the 167 readers. It is arranged in order of the number of people requesting the periodical.

TABLE 9
CURRENT PERIODICALS REQUESTED BY FIVE OR MORE CASSETTE READERS

<table>
<thead>
<tr>
<th>Title</th>
<th>Number Requesting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readers Digest</td>
<td>60</td>
</tr>
<tr>
<td>Newsweek</td>
<td>34</td>
</tr>
<tr>
<td>Time</td>
<td>25</td>
</tr>
<tr>
<td>Life</td>
<td>19</td>
</tr>
<tr>
<td>Changing Times</td>
<td>13</td>
</tr>
<tr>
<td>Good Housekeeping</td>
<td>12</td>
</tr>
<tr>
<td>Ladies Home Journal</td>
<td>12</td>
</tr>
<tr>
<td>National Geographic</td>
<td>12</td>
</tr>
<tr>
<td>Sports Illustrated</td>
<td>12</td>
</tr>
<tr>
<td>U.S. News and World Report</td>
<td>11</td>
</tr>
<tr>
<td>True</td>
<td>8</td>
</tr>
<tr>
<td>Ellery Queen</td>
<td>7</td>
</tr>
<tr>
<td>Playboy</td>
<td>7</td>
</tr>
<tr>
<td>Better Homes and Gardens</td>
<td>6</td>
</tr>
<tr>
<td>Ebony</td>
<td>6</td>
</tr>
<tr>
<td>Look</td>
<td>6</td>
</tr>
<tr>
<td>Cosmopolitan</td>
<td>5</td>
</tr>
<tr>
<td>Natural History</td>
<td>5</td>
</tr>
<tr>
<td>Seventeen</td>
<td>5</td>
</tr>
</tbody>
</table>
In summary, the evidence on range of material suggests that:

1) The range of material presently recorded on cassette tape is inadequate for a significant number of potential users;

2) The audience for additional materials is not specialized, but ranges over the same wide spectrum as the talking book audience.

3) There is need for heavy duplication of some materials, and that these are the same kinds of materials as need to be duplicated in any popular, public library collection.

4) There is need for a large, very diversified collection to meet a wide variety of specialized demands.
CHAPTER V

ADVANTAGES AND DISADVANTAGES
OF CASSETTE BOOKS

Respondents were asked specifically how much they valued the compactness of the cassette in comparison with the bulkier reel-to-reel or talking book equipment. One-hundred and fifty-eight persons responded to the question, and of these:

78 or 49% found compactness very important;
30 or 18% found it important
32 or 20% found it of minor importance
18 or 11% found it of no significance

In summary, more than two-thirds of the users held the compactness of the cassette equipment to be important.

The participants were asked two open-ended questions at the end of the interview: "What do you like best about books on cassette tape?" and "What do you like least?"
Advantages

The major advantages seen by the users were the cassette's ease of operation and its compactness and portability. Such comments were made as "It is easy to change from tape to tape," "I like not having to change records," "I can resume reading easily after a break," "It is easier to find your place," "The rapid rewind is great," "It does not skip," "It can be speeded up," "Cassettes are easier to mail than records," "It is easier to rewind and re-listen," "The player has foolproof design."

Several readers appreciated the lighter weight of the cassettes and player and indicated that its portability led to more reading for them. They commented on the convenience of the battery which enabled them to read outdoors, in the car or bus and in bed. One institutionalized reader remarked that the cassettes were "better for the limited space in her nursing home." "I can carry the cassettes the same as a person carries a book," said another user.

There was also significant satisfaction with the earphones, which one reader said enabled him "to be more private," while another confided, "Now I can listen while the family sleeps."
Nineteen users indicated that they most appreciated the sound fidelity of the cassettes—"not scratchy or squeaky." And one euphoric reader responded: "I like everything about cassettes."

Disadvantages

Users expressed numerous complaints, the majority of them about the tapes rather than the player, and about the inadequacy of the hooks available to them, as detailed in Chapter IV.

They complained that the tapes tend to break, spin off, come out of the cartridge, twist, come loose at one end, that they are difficult to rewind. Several users observed that the tape frequently comes off the reel at the end and that an automatic shut-off might help to resolve this problem. There were numerous complaints about the leaders on the tapes, which many users found to be of variable length and too long. There were many statements indicating the need for more thorough inspection at the library. Readers said "tapes arrived damaged," "I received one broken tape," "Tapes need to be edited before releasing—they are often mixed up," "I received a tape with one side erased." As one reader concluded, "If the tape is damaged there is no way I can repair it."
There were also some requests for better labeling of the tapes, such as titles in braille on the cassettes, and a short introduction at the beginning of the tape giving information about the book and its author. If one side of the tape is blank, users would like this stated at the beginning of the tape. It was also remarked that the containers are not sufficiently labeled, that the placing of the cassettes in the container is sometimes difficult and that the containers themselves are unduly bulky.

About the player, a few people expressed difficulty in inserting or removing the tapes. Several users criticized the controls—they found the switches too hard to activate and the position of the controls on the side of the machine (rather than on the top) to be awkward. There were numerous requests for an automatic reverse mechanism. Two users considered the cord flimsy and 1 reader complained that the batteries ran down too often. A few readers would have appreciated a recording unit on the machine.

Father Charles Kovari, Director of Alvernia Rest Home in Parma, Ohio volunteered a detailed analysis of how the cassettes and player might be improved. These suggestions are so practical and so comprehensive, that with his permission, they are now quoted in their entirety:
SUGGESTIONS FOR IMPROVING CASSETTE PLAYER

(GENERAL ELECTRIC)

by

Rev. Charles Kovari, S. J.
Director of Alvernia Rest Home
Parma, Ohio

Case:

1. **Color-code** keys for people who can see or for their "operators." **Suggestion:** Play: green, Eject: red, Stop: blue. Mark with colored arrows both on top and on side Forward and Rewind keys. Leave Pause White. Or **eliminate Pause** entirely. It confuses some people.

2. **Braille or signal code** top of keys for blind people. All the keys.

3. **Use gray or tan case** instead of black. (Dust does not show on these colors, and thus people will not be tempted to wipe the case with damp cloth, and get water inside the machine.

4. Reduce opening angle of the cassette eject-slot (well) because now cassette can be fed under the slot into the machine. (I have seen people to do it repeatedly. Not blind people, but seeing ones.)

5. **Mark with large letters and with braille:** the inputs, the left side (near to speaker) of the well: "**Full reel this side.**" This helps seeing people to put in the cassette the right way.

5. **Leave out battery-door.** If the battery is good for the lifetime of the machine, why have a door for it? This eliminates danger of operating the set without the battery, or using the battery for other purposes. In case it has to be changed, the service man can change it by opening the case.
7. **Build in adaptor**, and leave a storage well for the AC cord, permanently attached to the set. Use stronger cord with plug. This eliminates complicated instructions for the use of it, and unnecessary plugging.

8. **Store ear-phone** in the Microphone container and mark it accordingly both with braille and text.

9. **Close hole on the right side of the adaptor compartment.** Dirt can get into the mechanism through it. If adaptor is built in, you do not need that space for seizing the adaptor. (Probably that is its purpose now, though there is plenty of unused space at the corner of the machine.)

**Mechanism:**

1. **Provide a remote control switch** at least for those, who ask for it. I built a special head-operated remote control switch for paralyzed people, which may be copied.

2. **Build in automatic stop** (shutoff) which switches off current and releases capstan at the end of cassette, like portable REALISTIC Model CTR-12 or Pana-Sonic RQ-290DAS. This will prolong both motor and cassette life and save battery if user goes to sleep while playing the cassette, or cannot move to switch it off.

3. **Provide cleaning tape cassette** for each machine. This model cannot be cleaned with tips.

4. **Increase friction on take-up spindle.** This eliminates spilling the tape in case cartridge is operating with more friction than usual. When tape spills, either cartridge is faulty, or friction is not enough at this spindle. This model stops tape movement when any of the keys are pressed down halfway, before other operation starts, therefore instruction to "go through stop key all the time" is not needed.

5. **Adjust ejection mechanism** to operate with Scotch blue cassettes. There is a plastic hinge on the bottom of these tape cassettes, and it protrudes a little. In many cases these cassettes are not ejected, but remain in the well, until this protrusion is filed off.
6. Some cassette players ejected the cassettes so vehemently, that they fell out from the well, to the floor. Cassette players should be checked in this respect.

Cassettes:

1. **Use three different tone signals** (chime, gong, continuous, or other) for beginning of tape, end of first side, end of second side. (Xavier Society for the Blind uses at least two different tones on some of its cassettes.)

2. **Record all tapes with 15/16" speed**, but leave machine for two-speed operation. This saves money for cassettes and also enables other cassettes to be used.

3. **Use the best type of cassettes** as far as the winding and friction-reducing mechanism is concerned, because almost all of the trouble is due to uneven winding that increases friction, until the take up reel stops turning, and the tape spills into the recorder. This fault can be balanced somewhat if the friction on the disc of the take up spindle is increased, so it can pull through the tape even if friction in the cassette is increased. If there is an automatic stop at the end of tape, there is no danger in increasing the pull of the take up reel. Concerning sound quality the present tape is adequate, therefore there is no need to use better tape, only better cassette mechanism.

4. **Use cassettes which are put together with screws, not with glue**, so that they can be more easily repaired. Some of the users will open it, it is true, but some users also open the glued.

5. **Mark with half circles and arrows the direction of the tape winding** and write on the label: "if the tape spills, wind in the direction of the arrows." Many times even seeing and intelligent people wind the tape in the wrong direction, increasing the problem, and ruining the tape entirely. These arrows and instructions could be printed on the label, or molded into the cassette on both sides.
Cassette Containers (6 Pack Tray)

1. Discontinue using those cassette trays with a wall all around the cassettes. Or print or mold an instruction on them, that the cassettes can be lifted up easier, if you press down one side.

2. Use those cassette trays where there is an opening on the two sides of the cassettes. It is easier to handle.

3. If you use individual containers, there is one which I found most practical. It is a flexible transparent plastic box just big enough to fit the cassette. The lid comes off entirely. The bottom has "stoppers" positioned in such a way that the cassette can be put in in any direction. (Some similar boxes have one directional "stoppers," which makes them impractical, especially for blind people.)

Recorded Catalogs:

If you record tape catalogs, at the beginning of the books mention the title only, but at the end mention both the title and the number, and repeat it. This way the user need not wind the tape back to get the number again.

All these are minor difficulties, and can be corrected easily. Otherwise I found the General Electric Cassette Player a very practical and well built machine. I especially like the low speed feature, and copy the books on tapes using double play cassettes, getting 2 hours each side. I highly advise to use low speed for all recording on long play cassettes, getting 1-1/2 hours each side.
CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

After being asked in detail about all their experience with the cassettes, and how cassette books compared in many ways with talking books and reel-to-reel tapes, and what they liked and disliked about them, the readers were finally asked in which form they would prefer to read, if the range of material were equal.

One hundred and fifty-one users responded to this question. Of these 125 or 83% rated cassette books first, 23 or 15% rated talking books first and 3 preferred reel-to-reel tape. Eighteen rated the cassette second and 3 found it the least acceptable form. Four respondents indicated that they would consider using only talking books; 19 indicated that their only choice was cassette.

The following conclusions and recommendations seem to follow from all the evidence collected.

1) The great majority of handicapped people of all ages, physical handicap, educational level and living situa-
tion would prefer books recorded on cassette because of their ease in use, compactness, portability and sound fidelity.

2) There are technical problems still to be solved, especially in the durability of the cassette. Some of these problems may be resolved by simple adjustments such as an automatic shut-off at the end of each tape, and by a more vigorous program of inspection at the regional libraries.

3) The Library of Congress should continue to work with tape manufacturers to design a sturdier, more trouble-free cassette, within which the tape is less prone to come loose, tangle and break.

4) Because handicapped people who do own tape recorder-players use them for a variety of communication activities (correspondence, recording speeches, sermons etc., creative writing, recording of lectures and textbooks) it might be advisable for the Library of Congress to reconsider its decision to supply only players, since this channel of communication should be available to all handicapped people whether or not they can afford to buy it themselves.
Since user satisfaction with the cassette books is so high, the Library of Congress should take immediate steps to broaden the range of materials available in this form. This study indicates that the book selection policy should be substantially the same as it would be for a medium sized public library. Best-selling fiction, mystery and western stories, science fiction, light romance, nature, religion, biography, history, science and travel should be given priority. More books for older children should be included, as well as a wide selection of current periodicals.

A series of adult education courses on cassette tape, with mechanism built in for the user to respond, ask questions, test himself and apply his learning would be a useful pilot project. This might be undertaken in cooperation with a university extension service and evaluated with the help of the regional libraries for the blind and physically handicapped.

If the use of cassette tapes becomes more widespread, as seems likely, the regional libraries must be prepared (at least in the present state of technology) to invest time and staff in more rigorous inspection. This cost
must be weighed along with the additional cost of recording and duplicating the cassettes.

8) Fund sources should be sought to provide additional staff support for the Regional Libraries for the Blind and Physically Handicapped.
APPENDICES

1. Interview Outline

2. Ad Hoc Planning Committee, Cassette Tape Project, Ohio State Library

3. Cleveland Public Library--Braille and Talking Book Department: Fact Sheet for Telephone Volunteers

4. Introduction to the Ohio Cassette Tape Project--Sample Script--Cleveland Users

5. Introduction to the Ohio Tape Project--Sample Script--Cincinnati Users

6. Glossary of Cassette Terms


8. Problems Encountered by Cleveland Patrons in Using Cassette Books

9. Summary of Time Spent by Cleveland Public Library in Organizing the Ohio Cassette Book Project
Library Used (circle): Cleveland  Cincinnati

Name of User:________________________________________________________

Address of User:____________________________________________________
               Street     City     Zip Code

Telephone Number:____________________________________________________

Age:____________      Sex:__________________________________________

Education (circle highest grade completed):

   8th   12th   Community College    4-year College

Graduate      Other (specify)__________________________________________

Occupation:_________________________________________________________

Handicap:___________________________________________________________

Length of Time Handicapped:_________________________________________

Do you live at home?_______________________________________________

   Alone or with family?____   Are you shut-in?________________________

Do you live in an institution?_______________________________________

How long have you used a Regional Library for the Blind and Physically
   Handicapped?_____________________________________________________

Have you also used Talking Books?____________________________________

   How long?____________________

Do you also use books in Braille?________    How long?_______________

Do you also use books in large print?_______ How long?_______________

When did you begin to use books on cassette tape?______________________
How many books do you usually read each month?

Do you own a tape recorder?

If yes:

Does it play back, tape on reels_______ on cassette_______

Both_______

Do you use your tape recorder primarily for:

Recording class lectures_________

Recording music_________

Other (specify)_________

Do you use your cassette player:

Only for material borrowed from the Regional Library for the Blind and Physically Handicapped_________

For music_________

For other non-musical material (specify)_________

Did you find the instruction cassette:

Clear, easy to follow_________

Somewhat useful_________

Confusing (specify)_________

In sound fidelity, do you find your cassette tape books:

Excellent_________

Adequate_________

Poor_________
How would you rate tape cassette books in comparison with "talking books" (on records) in terms of sound fidelity or "listen ability"?

- About the same
- Not as good
- Better

How adequate do you find the range of materials now available on cassette for your needs?

- Excellent and adequate range
- Adequate range
- Less than satisfactory
- Totally inadequate

What types of material would you like to see emphasized on cassette tape?

- Textbooks (specify subject and level, i.e. high school, college, etc.)
- Best selling fiction
- Children's books
- Philosophy
- Psychology
- History
- Current periodicals
- Mystery stories
- Western stories
- Science (specify)
- Biography
- Languages (specify)
Religion (specify) ____________________________
Travel books ____________________________
Cook books ____________________________
Light romance ____________________________
Nature ____________________________
Business ____________________________
Law ____________________________
Other ____________________________

Would you like to read in a foreign language? ____________________________

Specify ____________________________

List the five magazines you would most like to see regularly:

____________________________________
____________________________________
____________________________________
____________________________________
____________________________________

Do you find cassette tapes:

Easy to use ____________________________
Somewhat difficult ____________________________
Hard to use ____________________________

If you use recorded (talking) books, do you find cassette tapes in comparison:

Easier to use ____________________________
More awkward to use ____________________________
About the same ____________________________
If you use books on reel tapes, do you find cassette tapes, in comparison:

Easier to use

More awkward to use

About the same

In the last three months, how many times has your cassette equipment broken down?

Has the difficulty been in the cassette?

In the play-back equipment?

If you have also used books on reel tape, do you find cassette tapes in comparison:

Sturdier - less likely to break down

About the same

More subject to break down

If you use recorded books, do you find cassette tapes in comparison:

Sturdier - less likely to break down

About the same

More subject to break down

Cassette tapes are more compact than "talking books." How important is this to you?

Very important

Important

Of minor significance

Insignificant
If the range of material were equal, in which form would you prefer to "read." Please rate on scale of 1-3, using 1 as most preferred:

Cassette tapes

Reel tapes

Talking books (on records)

What do you like best about books on cassette tape?

What do you like least about books on cassette tape?

Name of Bell Telephone Volunteer

Address

Telephone Number

Date of Interview

Please return form to:

Genevieve Casey
574 Goldengate West
Detroit, Michigan 48203
APPENDIX 2

AD HOC PLANNING COMMITTEE,
CASSETTE TAPE PROJECT,
OHIO STATE LIBRARY

R. J. Weitzel
American Telephone and
   Telegraph Company
Cincinnati, Ohio 45202

Frederick J. Nash
American Telephone and
   Telegraph Company
Kilgour Pioneer Chapter
Cincinnati, Ohio 45202

Frances Rose, Director,
   Homebound and Institutions
   Department
Public Library of Cincinnati-
       Hamilton County
Cincinnati, Ohio

Elizabeth Stroup
Library of Congress,
   Division for the Blind and
       Physically Handicapped
Washington, D.C.

Blanche Rich
Cleveland Public Library
Cleveland, Ohio

Katherine Prescott
Regional Librarian for the
   Blind and Physically
   Handicapped
Cleveland Public Library
Cleveland, Ohio

Charles Selkow
Bell Telephone Laboratory
Columbus, Ohio

George Karadin
Ohio Bell Telephone
Kingsbury Pioneer Chapter
Akron, Ohio

Robert White
Ohio Bell Telephone
Kingsbury Pioneer Chapter
Akron, Ohio

Carl Schuster
Western Electric Company
Kingsbury Pioneer Chapter
Solon, Ohio

Richard Cheski
Assistant State Librarian
Ohio State Library
Columbus, Ohio
Fact Sheet: How the Library Service Operates

1. Eligibility for the Service - Anyone who cannot use ordinary print.
   Because of: Impaired Vision (Until 1966 limited to the Blind).
   Physical Handicap - Cannot hold a book or turn a page
   Learning disability or brain damage

2. Wide variety of books recorded on cassettes and mailed in fiberboard containers
   Books not available elsewhere, supplied by the Library of Congress
   New service - not the same number of books as recorded for talking books
   New catalog - some of these still in production, available soon
   Adult non-fiction, fiction p. 25. Children's books p. 39-48
   Compressed speech, p. 25. Foreign Languages p. 38-39.
   Books for every taste. Books should be carefully selected by readers.
   When listing requests, include CB number.

   Reverse the reader's address label for the library's return address
   Tie a string on the strap of the container for any problem; missing,
   damaged or mixed up cassettes.
   Books are sent out when a reader mails back a book. Loan period - 2 weeks.
   Round trip of book a week to ten days. If have 2 books, return first
   one as soon as finished reading it, don't wait for the second one.
   Readers may telephone the Library with requests or ask that a book be sent
   immediately if they are out of reading. Telephone: 241-6647.

4. Interview cards.
   Project number: on interview card, CB machine and bag, as well as
   questionnaire.
   Reader's number - Library number to right of name on address label
   Handicap: Blind (B), Vision impaired (V), Physical disability (P)
   Media: Talking Book (TB) Braille (BR) Open Reel Tape (MT) Cassettes (CB)
   Large Type (LT) - Those he is registered to receive are circled.
   CB Machine to deliver? if marked Yes ( ). Serial number listed should
   match the serial number on the cassette player. These are new CB
   readers unless they have a commercial cassette recorder of their own.

5. The people you will meet.
   Over half have already used cassettes and are familiar with service.
   Many others get talking books and know mailing procedures. About 25%
   or so are new to cassettes and also to the library service. Some have
   had large type from the Service to Shut-ins.
   New readers are mostly in nursing homes, hospitals and schools. You will
   make your appointment with the help of a librarian, social worker or
   teacher who will assist you, but each individual should be considered
   separately and will be served individually and respond to his own
   questionnaire.
   Some of them are severly handicapped, but do not be concerned about this,
   but rather that you are bringing them a new source of pleasure and
   information.
After the project, they may continue the service if they wish. They are also eligible for talking books if they are not already getting them.

Study the catalogs and other material in the reader's bag. Play the instruction cassettes and practice first on a member of your family. Refer any problems or questions you cannot answer to the Library.
APPENDIX 4
Cassette Tape Project
Ohio State Library

Sample Script - Cleveland Users

Hello, I'm Genevieve Casey at Wayne State University in Detroit. The Ohio State Library in Columbus, in cooperation with your Regional Library for the Blind and Physically Handicapped at the Cleveland Public Library, and the Library of Congress, is interested in finding out how satisfactory users find books recorded on cassette tapes. For this, we need your help.

A volunteer from the Bell Telephone Pioneers has delivered to you a cassette player, along with a couple of books, and a catalog of cassette books available through your regional library. We've also included a set of instructions on how to use the equipment, recorded on a cassette tape. We would like you to try this equipment for about three months and then let us know how you like it.

The materials delivered to you come from the Cleveland Public Library and are a part of their regular collection for blind and handicapped readers. Normally, cassettes are mailed by parcel post and should be returned in the same way. There is no postage charge. Either side of the address label on the container has the library's address.

Cassette books are in great demand and should be mailed back to the library within two weeks if at all possible. Please mail each cassette book as soon as you have finished it, in the container provided, and within a week or ten days, depending on the mail service, you will receive another from the Cleveland Public Library.

The volunteer is leaving you a catalog of the books available on cassette tape. To help the library select the right books for you, please make a list
of at least 25 titles from the catalog which you would like to read, identified
with their catalog book numbers. Mail this list to the Cleveland Public Library,
Braille and Talking Book Service, 325 Superior Street, Cleveland, Ohio 44114.
Because the cassette books are in great demand, the librarians may need to
make substitutions, even with a list of 25 titles. If for any reason, you do
not wish substitutes, please indicate this on the list you send. If you would
like to talk to a librarian about your reading interests, please telephone the
Cleveland library's cassette service at 241-6647.

Before you begin to read the first books delivered to you, please listen
to the tape of instructions on how to use the equipment. In order to prevent
damage to cassettes, always depress the STOP button before you use the FAST
FORWARD or REWIND buttons. When you have finished with a reel, please wind it
to the end of the second tract, or rewind it to the beginning of the first, so
that it is ready for the next reader. If you should receive damaged cassettes
from the library, please tie a string on the strap of the mailing container to
alert the library. A note inside describing the problem would also be most
helpful. Periodically, you should clean the heads of your cassette tape
player with a cassette cleaning tape or a Q-Tip and alcohol to remove the
build up of oxide which may effect the sound of your player. Cleaning supplies
may be purchased at any tape supply store. If you have difficulty with your
equipment, the Bell Telephone Pioneer Volunteer will be happy to help you and
will let you know how he can be reached.

During the three months of the study, would you keep a record of the
"listen ability" or sound fidelity of each cassette tape as you use it, and
any troubles you have with the machine itself or with the tapes. We will be
interested to know how you think cassette tape compare in durability and ease
of operation with reel tape or "talking books" on record. We'd also like to
know how the library equipment compares with commercial equipment you might have used, and whether you found the recorded instructions clear and adequate.

For the guidance of the people at the Library of Congress who select materials for recording in various forms - cassette, reel, and records, we would like to know how satisfied you are with the choice of cassette materials available to you (as printed in the catalog). We will be asking what kinds of books and magazines you would like to see on cassette tape.

The volunteer will be asking you some questions about yourself - your age, education, background, handicap, and reading preferences. This is to help us decide what kinds of people prefer books on cassette, and what kinds of material should be emphasized. The information you give us will help the Cleveland Public Library, and the Library of Congress, to better serve the thousands of blind and handicapped readers in Ohio and the nation. We appreciate your time, and hope you will enjoy the equipment and books delivered to you. The Bell Telephone Pioneer volunteer will call on you again after about three months to get your ideas on the service. In the meantime, enjoy your reading. If you want more books, mail a list of your preferences from the Cassette Book Catalog to the Cleveland Regional Library for the Blind and Physically Handicapped, 325 Superior Street, Cleveland, Ohio 44114. The library's telephone number is 241-6647. Call them if you have problems with the machine or tape, or wish to discuss your reading. The Bell Telephone Volunteer who delivered the equipment will also let you know how you can reach him if you need more help in operating the machine.
Hello, I'm Genevieve Casey at Wayne State University in Detroit. The Ohio State Library in Columbus, in cooperation with the Cincinnati-Hamilton County Public Library and the Library of Congress, is interested in finding out how satisfactory users find books recorded on cassette tapes. For this, we need your help.

A volunteer from the Bell Telephone Pioneers has delivered to you a cassette player, along with a couple of books, and a catalog of cassette books available through your regional library. We've also included a set of instructions on how to use the equipment, recorded on a cassette tape. We would like you to try this equipment for about three months and then let us know how you like it.

The materials delivered to you come from the Public Library of Cincinnati and Hamilton County and are part of their regular collection for blind and handicapped readers. Usually, cassettes are mailed to users, and you should mail your cassettes back to the library, using the container in which they come. Either side of the address label on the container has the library's address. There is no postage charge.

Cassette books are in great demand, and should be mailed back to the library within 18 days if at all possible. You can arrange to renew a book for another 18 days by telephoning the library at 241-2636, extension 75-76. Please mail each cassette book as soon as you have finished it, in the container provided, and within a week or 10 days, depending on the mail service, you will receive another from the Cincinnati-Hamilton County Public Library.
The Bell Telephone volunteer is leaving you a catalog of books available on cassette tape. To help the library select the right books for you, please make a list of at least 25 books from the catalog which interest you, identified with their catalog book numbers. Mail this list to the Public Library of Cincinnati and Hamilton County, Library for the Blind and Physically Handicapped, 444 West Third Street, Cincinnati, Ohio 45202. Be sure to include your own name and address on the list. Because the cassette books are in great demand, the librarians may need to make substitutions, even with a list of 25 titles. If for any reason, you do not wish substitute, please indicate this on the list you send. If you would like to talk to a librarian about your reading interests, please telephone the Cincinnati Library for the Blind and Physically Handicapped at 241-2636, extension 75-76.

Before you begin to read the first books delivered to you, please listen to the tape of instructions on how to use the equipment. In order to prevent damage to cassettes, always depress the STOP button before you use the FAST FORWARD or REWIND buttons. When you have finished with a reel, please wind it to the end of the second tract, or rewind it to the beginning of the first, so that it is ready for the next reader. If you should receive damaged cassettes from the library, please tie a string on the strap of the mailing container to alert the library. A note inside describing the problem would also be most helpful. Periodically, you should clean the heads of your cassette tape player with a cassette cleaning tape or a Q-Tip and alcohol to remove the build up of oxide which may effect the sound of your player. Cleaning supplies may be purchased at any tape supply store. If you have difficulty with your equipment, the Bell Telephone Pioneer volunteer will be happy to help you and will let you know how he can be reached.
During the three months of the study, would you keep a record of the "listen ability" or sound fidelity of each cassette tape as you use it, and any troubles you have with the machine itself or with the tapes. We will be interested to know how you think cassette tape compare in durability and ease of operation with reel tape or "talking books" on record. We'd also like to know how the library equipment compares with commercial equipment you might have used, and whether you found the recorded instructions clear and adequate.

For the guidance of the people at the Library of Congress who select materials for recording in various forms - cassette, reel, and records, we would like to know how satisfied you are with the choice of cassette materials available to you (as printed in the catalog). We will be asking what kinds of books and magazines you would like to see on cassette tape.

The volunteer will be asking you some questions about yourself - your age, education, background, handicap, and reading preferences. This is to help us decide what kinds of people prefer books on cassette, and what kinds of material should be emphasized. The information you give us will help the Cincinnati-Hamilton County Public Library and the Library of Congress, to better serve the thousands of blind and handicapped readers in Ohio and the nation. We appreciate your time, and hope you will enjoy the equipment and books delivered to you. The Bell Telephone volunteer will call on you again after about three months to get your ideas on the service. In the meantime, enjoy your reading. If you want more books, mail a list of your preferences from the Cassette Book Catalog to the Cincinnati and Hamilton County Public Library, Library for the Blind and Physically Handicapped, 444 West Third Street, Cincinnati, Ohio 45202. The library's telephone number is 241-2636, extension 75-76. Call them if you have problems with the machine or tape, or
wish to discuss your reading. The Bell Telephone volunteer who delivered the equipment will also let you know how you can reach him if you need more help in operating the machine.
APPENDIX 6

GLOSSARY OF TERMS

**Cartridge** 4" x 6" plastic container with an endless coil of 1/4" wide tape. Slipped in a slot, the tape unwinds from the inner hub of the reel, passes over the playback heads, twists and winds back on to the outside of the reel. Moves at 3 3/4 ips; tape plays up to 80 minutes then automatically repeats itself.

**Cassette** 2" x 3 1/2" plastic case enclosing 2 tiny reels with a length of tape running from one reel to the other. When the tape is fully wound on one reel, the cassette is removed, flipped over, replaced and the tape plays back to the other reel. The tape is 1/8" wide and moves at 1 7/8 ips, play varies from 1 to 2 hours. Recording at home is possible with a cassette, costly and difficult with a cartridge.

**Hz** Hertz, the abbreviation commonly used instead of cps, which stands for cycles per second. The higher the Hz, the better the recording and fidelity. 20,000 Hz is a very good recording.

**ips** inches per second, the speed the tape moves through the machine.

**Reel-to-reel** original system of taped sound. Tape is threaded from one large reel, through recorder's heads, on to another reel.

**Track** the band of music laid in magnetic impulses along the length of tape.

**Two Track** parallel bands of music, permitting twice the sound to be recorded on the same length of tape; or the same amount of sound recorded in stereo, with each band feeding its music through separate speakers on the left and right. Tape
also comes with four tracks and eight tracks doubling and quadrupling the playing time.

wow and **flutter** terms used to describe distortion in a tape recording.
APPENDIX 7

CASSETTES: PRESENT PROBLEMS AND POTENTIAL
1967-1972

A Bibliography Prepared by

Linda Mielke, Library Science Student
Wayne State University


- History of the development of cassettes from invention to current marketing trends, internationally. Cites the reason for popularity being that one can record their own cassettes, and play pre-recorded material. The question of tapes versus records is discussed. Costs of records are lower than tapes. Mass production of records is also cheaper, however, the gap between is closing. Records sound much better than cassettes (1969). Records are not seen as falling down in sales unless a major breakthrough in fidelity of cassettes is accomplished. Article includes a Buyer's Guide to cassette equipment with information on: brand and model, price, mono, stereo, power source, format, mikes, speakers, deck function, push-button controls, radio. A description of the cassette and how it works is included. A chart on tape recorders--sales in units is included.


- Discussion of cassette sales, and their popularity in the marketplace. The cassette is seen as the paperback of the record business because of its lower price. A comprehensive chart of the tape equipment market is included. A glossary and notes included is helpful. Price, brand name, special features, model number are incorporated into the
chart. All types of cassettes, reel-to-reel and cartridge players are included.


Evaluation of the Sony 100 Easy-Matic Cassette Corder used to record sounds and speech and music. Includes brief history of the development of cassettes and brief description of the Sony 100 and how it works; easy operation and location window are stressed. Author stresses cassettes are most effective when used for sound and speech rather than music. Automatic level control when recording is an important aspect. Erasure of the tape by accident is eliminated by removing a tab after recording from the cassette. Refinements on the Sony 100 are stressed here, they are listed.


Technical report on tape speeds and listenability. Quality of recordings is related to tape speed measured in inches per second (ips). However, cassettes have a slow ips, but have been refined to deliver good audibility. Improved tapes and recording systems will increase audibility if they are developed. Using cassettes the noise from the cassette itself (hiss) distortion, flutter (a rapid gargling fluctuation is the speed of the tape) all added to listener fatigue. The advantage in convenience in loading, however, is unsurpassed in reel-to-reel. Also impossibility of accidental erasure is an advantage. Author is hopeful that in the future cassettes will be refined and improved to overcome all disadvantages.


Some cartridge or cassettes are more convenient than reel-to-reel tapes, the article begins with this premise and discusses which is better. The cartridge system (4 track) consists of two stereo pairs of tracks. The first half is track one and three; the second track two and four. Switching
between the halves occurs automatically or manually. Eight-track cartridges are similar. Each track is identical in length. Therefore, track shifting may not be at convenient intervals. There is also no fast forward or rewind mechanism. One must start where he left off, or change tracks. Cassettes tracks run in two different directions like reel-to-reel. The listener must flip the cassette over to hear the other track. Recording is on adjacent tracks instead of on alternating tracks on cartridge or reel-to-reel, therefore, the recording head can scan both stereo tracks at once, similar to a stereo record player. Advantages of cassettes over cartridges are discussed in terms of mechanics, fidelity, compactness.


New cassette changers automatically put each consecutive cassette in the player for continuous listenability . . . all in 10 seconds. Brand names of various cassette changers are given.


A discussion of the cassettes for library use complete with test data and a report on 8 individual cassette tape recorders is included. Less expensive cassettes can be used for voice only recordings. Simplicity and ease of operation, rugged construction, and a detailed description of technical aspects of cassettes is discussed. Each part and its function is described. Definite conclusions, advantages and disadvantages, a summary and illustrations of each unit tested is included. A comprehensive chart ranks the 8 units on a series of headings from 1 (good) to 8 (poor). Conclusions on each of the 8 units is included.


Cassettes were mailed to blind and particularly the elderly blind which contained local weekly news. The cassettes are mailed free, returned and re-
recorded. Response by the blind were numerous. The readers were delighted. Points out new ways to use tapes.


Directors of talking book machine lending agencies and Regional Libraries for the Blind and Physically Handicapped from 48 states met to discuss expansion of their service. One-year to five-year goals were written.


Cassettes and players have improved technically and will continue to improve. They offer great potential as instructional tools.


Along with other advantages of easy loading, compactness and versatility and a drawback of low fidelity and lack of flexibility in editing, the author concentrates on the advantage of portability and pop in/pop out loading in 10 seconds. Author demonstrates the portability/loading advantage through a series of slide presentations given to different audiences.


The following questions are answered in this article: Just how good is the sound? What advantages do cassettes offer in comparison with records or reel tape? And why do cassettes now reach high-fidelity performance standards when they couldn't before? The Dolby circuit, better recording heads,
improved tape all add to better fidelity. The article warns about purchasing poor equipment. A discussion of the new Crolyn (chromium dioxide tape) is included, and its superior frequency resonance, quieter background, and wider range levels are discussed. The Dolby circuit and its inventor, Ray Dolby, is discussed and the improvements it offers for the cassette. A purchase procedure is outlined to judge quality of a cassette.


Legislative background on talking books. A standardized equipment is necessary to serve blind, physically handicapped and the aged. An outline of the distribution procedure by the Library of Congress is given.


At the Consumer Electronic Show in Chicago, the new technological developments were seen in cassettes: (1) new circuitry that reduces background noise, (2) superior tapes. Cassettes are projected to outsell phonograph players this year. Fidelity predictions are seen to surpass records. (see Hi Fi 20: 73-7 Nov. 1970 for explanation of improvements).


A 6-month study of the use of portable cassettes for the blind and handicapped (1000 readers across the country). Titles were selected from talking books. Good response from readers facilitated compilation of a questionnaire now being developed.


Report of a questionnaire on the utilization of cassette recorders in education regarding the student-teacher relationship., i.e., speaking to the student on tape rather than writing comments in the margin of homework assignments. Other cassette applications are discussed.

Describes the latest, most flexible talking-book machine available (AE-5). Library of Congress puts 9 magazines on to tape at this time.


Stresses simplicity of cassettes over reel-to-reel tape by containing a continuous loop of tape that doesn’t need to be inserted into a slot like reel-to-reel. Since the cassette tape moves more slowly, some fidelity is lost.


Background and results of cassette collection experiment. Describes systems of recordings, reel-to-reel, eight-track cartridge and cassettes describing pros and cons of each. Discussion of general uses in a library and recommends switching from records to cassettes.


Analysis of all tape systems. Each system is defined, illustrated, and broken down technically. A graphic illustration of the magnetic heads used to record tapes and how magnetic recording works is included. A brief explanation of ips regarding speed and fidelity is given.


The answer is overwhelmingly, yes. Cassettes have not yet reached their full potential. Technical improvements in Hz, wow and flutter, noise specs and distortion are discussed at length. The gap between cassettes and record discs is narrowing. Three major improvements in cassettes are in the works now, they are: a new tape of advanced quality, a noise-reduction system, and a four-channel sound system. The faster the tape the higher the Hz. Since cassette tapes move at only 1 7/8 ips the tape
must be improved within that speed. Chromium dioxide magnetic coating is now being used instead of the standard ferric trioxide to manufacture some tapes. This new tape produces 20,000 Hz which is very high quality. Four cassette machines now have built in noise reduction circuits. (The Dolby Circuit). Four channel sound presents a definite problem. The physical width of the cassette tape may make this impractical. Controversy is also present on the need of four channel sound. A graphic chart is included which explains the four- (quadriphonic) sound system.
APPENDIX 8

PROBLEMS ENCOUNTERED BY CLEVELAND PATRONS IN USING CASSETTE BOOKS: AN ANALYSIS

Submitted by

Katherine Prescott,
Regional Librarian for the Blind and Physically Handicapped
Cleveland Public Library

In order to analyze the problems readers had in using cassette books, the method used was to save the address labels of books returned by the participants in the Ohio Cassette Book Project. This documented the number of books each individual read for the project and returned. It showed which titles since the cassette book number is written on the edge of this label. Notes of damage were also recorded on the label by the inspectors when the cassette book was revised. The purpose was to discover how many people had trouble in using the cassettes, and whether or not some people had trouble consistently. The time spent inspecting returned cassettes is a serious cost factor in the cassette service, and if troubleprone readers can be spotted, a system could be devised to flag them and let the books of the others go through without inspection.
Of the 136 participating, 48 reported that they had problems in the use of cassette books.

- Tapes needing rewinding ..... 29
- Broken tapes ..... 24
- Miscellaneous (ranging from ..... 9
  - wrong tape
  - sent or
  - omitted to
  - garbled
  - tape)

Of the 24 readers reporting broken tapes, 13 encountered no other problem. Of the 48 reporting problems, 14 had had similar problems prior to the project. Multiple problems were reported by 14 participants, and of these, 6 had again experienced similar problems prior to the project.

The 13 reporting only broken tapes and 2 wrong tapes sent probably had the most valid complaints. With the loose ends, rewinding, and twisted tapes, one wonders if this happened at the time of arrival. Did some of the readers have manual problems in handling the tapes? Did they sometimes become so over-anxious that they lost control of them? In some instances were the tapes handled by an over-worked or disinterested relative or nursing home aide who was careless?
Participating Readers

Of 179 readers who agreed to participate, 136 returned their books. Thirty-seven or 21% of the group did not return their books. Five readers chose to withdraw and another was withdrawn because of a stroke. The 136 participating read a total of 788 books, or an average of 5+ between 1-15-72 and 4-19-72.
APPENDIX 9

SUMMARY OF TIME SPENT BY CLEVELAND LIBRARY STAFF IN ORGANIZING THE OHIO CASSETTE BOOK PROJECT

Submitted by

Katherine Prescott,
Regional Librarian for the Blind and Physically Handicapped
Cleveland Public Library

Time Element Involved for the Library in Setting up the Project

8 hours ... 1 day spent by one worker on a planning meeting at State Library in Columbus

8 hours ... Planning and Organization

16 hours ... 1 day spent by 2 workers on a planning meeting in Columbus

4 hours ... 2 meetings with 3 telephone Pioneers and 2 staff workers

35 hours ... Selecting readers for the project - (checking through the files, one staff person) - Typing of project cards for organizational purposes, 2 workers and 1 Manpower Secretary

6 hours ... Telephone calls to schools and nursing homes
3 hours ... Telephone calls involved in arranging 4 meetings

4 hours ... Going through cassette files for list of additional copies of books needed for the project

18 hours ... Issuing 80 Cassette Players and making inventory records, registering new readers recruited for the Project (2 days each by 3 staff members)

12 hours ... Set up file for readers in the project and marked their files with special identification so these could be kept separate throughout the project.

16 hours ... Selection of cassette books to be delivered together with the cassette machines and the catalogues by the Pioneer volunteers.

40 hours ... Stuffing the envelopes containing catalogues, questionnaires, etc. Filling the bags with the books, catalogues, and envelopes, matching up the bags with the machines and tagging them with labels -- involved about 10 workers
54 hours ... 2 meetings with telephone Pioneers --
(involved about 60 men and women) --
moving furniture, preparing refreshments,
distributing material, attending the 2
meetings -- involved about 10 people

228 hours ... Total time involved in preparation for the
project.

Follow up call from volunteers and participants to
clarify confusion and uncertainties about the project in-
volved an additional 16 hours. In addition to staff time,
2 volunteers invested considerable time in typing up cards,
and in helping with general detail work for the project.