A systematic search is necessary in order to pull together a complete bibliography on dyslexia because the literature is divided among several quite different disciplines, notably medicine, education, and psychology. If the results of this search are shared, time will be saved and the general quality of research efforts will improve. The Reading Clinic of the University of Pennsylvania has produced an annotated bibliography which will be published in 1968. The bibliography will contain some 500 articles through 1965 from the entire spectrum of professions dealing with dyslexia and severe reading disabilities and will include articles from domestic and foreign language publications. Most articles have been abstracted and indexed, and a few have been copied and placed in Reading Clinic files. (Author/BS)
A dyslexia information center has been slowly evolving over the years at the Reading Clinic of the University of Pennsylvania. This statement may cause you to imagine a staff prepared to disseminate research findings on dyslexia, perhaps maintaining a repository of teaching materials or lists of diagnostic and remedial centers, and so on. We have long recognized these information functions, and many more, as immediately necessary, even though we have not been able to perform them all due to lack of funds.

There is much unused information related to dyslexia which now lies scattered. Two recent meetings of experts have endorsed an information-gathering function as the first step in mounting an assault on dyslexia: the Interdisciplinary Committee on Reading Problems, New York City, September 1966, and the Research Conference on the Problems of Dyslexia and Related Disorders in the Public Schools of the United States, San Marcos, Texas, May 1967 (OEG-7-078270-2684), in which the writer participated as chairman of the working group on research.

This paper will discuss the experiences of a project which began years ago at the Reading Clinic and which stemmed from the staff's desire to share information about dyslexia among themselves and with students. They began informally to build a bibliography about reading disabilities. Four years ago the systematic collection of such citations became the writer's responsibility.

* Paper presented at Thirteenth Annual Convention, International Reading Association, Boston, Massachusetts, April 26, 1968.
The Clinic will share its information through the citations it contributes to the ERIC Clearinghouse on Reading for inclusion in a citations bibliography on dyslexia soon to be issued. Our abstracts will be appended to a State of the Art monograph on dyslexia research in 1963-64-65 written by Dr. Morton Botel (Associate Professor of Education, University of Pennsylvania), to be published by the International Reading Association.

The Changing Tools of Information

A general problem for professional people today is the rapid proliferation of articles and new journals. Everyone must learn to master mountains of printed information, or surrender attempts to keep currently informed. Those who bypass reading the literature in favor of some plan of action risk repeating what others have already done, and certainly they miss the stimulation of encountering others' views on related problems, while those who are determined to master the literature before undertaking action may find this preliminary task is really burdensome. At the very least, the latter group are duplicating each other's library efforts, whereas a sharing of some aspects of this task would free them for creative endeavors, to the benefit of everyone. Actually, a common information service may not only save effort and prevent duplicated experiments and library work, but it may also excel in its familiarity with the sources and resources for gathering information.

A new profession is at work -- the information processors. New reference tools are being created so fast that even the reference librarians in a university library may not encounter them immediately. The bibliographer must keep ever alert to such new resources as ERIC, MEDLARS, SCI, SIC, Research in Education, Perceptual and Cognitive Development, Language and Language
Behavior Abstracts, and others. How difficult it is to keep track of the content of one's own field and at the same time to keep abreast of additions to reference tools! Unfortunately, most of the new services have represented just one more overlapping source to check, rather than giving real economies of time in gathering citations.

Characteristics of Dyslexia Literature

In addition to the problem of abundance encountered in most literature, dyslexia has the special problem of falling into the province of several different disciplines, principally medicine, education, and psychology, and even to several subfields. Articles have been written by neurologists, ophthalmologists, pediatricians, psychiatrists, and general practitioners, by clinical and experimental psychologists, optometrists, language therapists, reading specialists, and others, not even to mention the popular press articles of the past two years. The writer has traced almost 200 different professional journals which carried articles about dyslexia in 1963 through 1965. More than half of the journals were in medical libraries, one-quarter in education libraries, and the remainder in the general library.

Although some work has been done by interdisciplinary teams, there do tend to be chasms in understanding across disciplines, especially between education and the clinical sciences. It seems that the educator who reads medical journals and the doctor who reads about education are both extraordinary. We need more of them. The subject area of dyslexia calls imperatively for the training of specialists across diverse disciplinary fields. Conscious purpose is required to scan sources far outside one's own discipline and often found in different libraries.
It is a fact that no more than a few cities in the United States have library resources for an inclusive bibliography on dyslexia, because special medical libraries -- beyond even a university medical school library -- are needed. In Philadelphia we have the College of Physicians library, which ranks among the top half dozen in the country with 200,000 accession volumes plus 300,000 reports, pamphlets, etc. It currently receives 3100 journals. (Index Medicus indexes 2200 journals, but there are thousands of world medical journals which are not indexed.)

Another chasm in dyslexia literature is caused by language barriers. It has been said that the incidence of dyslexia is related to the spelling of English, it has even been claimed that dyslexia does not exist in certain countries, but articles on dyslexia do appear in Germanic, Romance, and Slavic languages. Articles in Hebrew and Japanese, where the direction of reading is not left to right, might cast light on some old controversies. It is unfortunate that excellent studies reported in non-English journals are often not known in this country. The writer found citations of some 70 articles in 14 languages for 1963-64-65 which she scanned if they were in the more familiar languages or had English summaries, but many still await translation. A repository of translated documents representative of the best in world literature on dyslexia is a goal of the Reading Clinic which will require financial support for its achievement.

Inclusiveness of the Bibliography

A technical obstacle in searching for dyslexia articles is knowing which headings to look under. Of course, each source index has its own vocabulary
and organization, but dyslexia itself has had many synonyms used by various authors. This difficulty can be solved by taking great care in searching out too many citations and weeding out the irrelevant ones later. Up to 40% of the citations originally taken for the dyslexia bibliography were rejected after scanning the articles.

Many policy questions arose, such as at what boundaries to cut off the bibliography. Should it include all articles on reading disability, or only those on severe retardation? How about certain studies of reading abilities? Should the bibliography have key articles on commonly used tests or treatments even if those particular articles don’t bring new light to bear on dyslexia? And so on. The criterion by which these decisions ought to be made is the needs of users, and a continuing bibliography can adjust itself, over a period of time, to feedback from users. At its inception, however, policy decisions must be made arbitrarily, and of course the application of policy guidelines at different times or by different people to particular articles will always result in minor inconsistencies in the coverage of a bibliography. Bibliography is a personal process like choosing words for an essay: both products take their coloration from the authors.

Our choice was to make the core of the bibliography highly inclusive, in the sense that all types of articles were accepted, whether they were superficial overviews or new observations, as long as their topic was dyslexia. No evaluation was made as to the quality of contribution for an article to merit inclusion in the bibliography, if it concerned dyslexia. The users will have to screen out those entries which they think are trivial.

It was impossible to predefine policy on including articles on reading
disability not labeled "dyslexia" because there is no accepted definition for differentiating between dyslexia and more ordinary reading disabilities. Even when reading the articles it was often very hard to determine just what kind of reading disabilities the author was discussing, because he did not make any distinction or did not specify his population. So some articles on reading disabilities not called "dyslexia" were included, and others were not, and this is symptomatic of unresolved questions in dyslexia research itself.

Another boundary was chosen for the bibliography to prevent wandering into the domains of certain disciplines such as neurology or psychology too far beyond their focus on dyslexia, but exceptions were made to include a few basic articles explaining tests commonly used in the diagnosis of dyslexia or otherwise throwing light on aspects of dyslexia research.

As explained earlier, the bibliography is incomplete in coverage of foreign languages, because not all foreign journals are indexed, and many citations which were found need translation.

Abstracts and Index

It would have been desirable to photostat every article and thereby create a central repository of dyslexia literature for the convenience of scholars, but funds were lacking. Only a few of the articles were copied and placed in Reading Clinic files. Most articles were abstracted. Since abstracts are only a screening device, they cannot report the entire contents of an article. Abstracting is highly individual; two people's abstracts are seldom alike. The fact that we were interested in dyslexia gave its own emphasis to the abstracts. The writer's first year's output was chatty in tone, because
at the time it was written for staff information, while later abstracts become more formal after the thought of sharing them outside the Reading Clinic occurred.

Another activity which evolved during this stage of the bibliography was indexing. The latest abstracts are on marginally punched keysort cards with deep indexing of their contents, whereas earlier abstracts were on ordinary 5 x 8 cards with marginal notations only as to the focus and methodology of the article and the profession of the author, while the earliest cards were not indexed. When we tried to sort the earlier abstracts into logical groups, we found that the content of most articles was too complex. The abstracts had been intended to simplify the problem of reading and understanding the literature, but without indexing it was almost as hard to manipulate the abstracts. The keysort cards, which are fairly satisfactory for small collections like this, make it possible to rely on marginal punches rather than repeated re-readings of content to sort and group the abstracts, serving as an aid to comprehension and memory.

Conclusion

A systematic search is necessary to pull together a complete bibliography on dyslexia, because the literature is divided among several quite different disciplines. If the results of this search are shared, a general saving in time available and probably an enhancement of the general quality of research efforts will result.

The Reading Clinic of the University of Pennsylvania has produced an annotated bibliography of some 500 articles through 1965 from the entire spectrum of professions dealing with dyslexia and severe reading disabilities.
The bibliography will be published in two stages this year.

The complexity of the subject matter led to creation of an index which permits manipulation of the information in ways not previously possible.

The urgency of the need for information gathering on dyslexia has been generally recognized. The Reading Clinic staff have long been aware of the need and have begun to meet it.

As of July 1967 there were 331 programs in progress on dyslexia and related reading disabilities supported by $32,372,720 from the Department of Health, Education, and Welfare: 172 ($8,346,957) in research; 75 ($14,425,824) in training; and 84 ($9,599,939) in diagnosis and/or treatment.* Not one program suggested by its title that assembling and processing the literature would be one of its functions.

It seems to me that collection of the existing literature and organization and analysis of the knowledge that has already been developed ought to be the first steps in mounting new programs.