

1970

A Study of Considerations for Choice and Use of Copying Machines in the School Library

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Recommended Citation

Thoms, Robert D., "A Study of Considerations for Choice and Use of Copying Machines in the School Library" (1970). *Graduate Research Papers*. 4059.

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A Study of Considerations for Choice and Use of Copying Machines in the School Library

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Abstract

Shall serious consideration be given to obtaining a copier for use in the school library setting? How shall the librarian arrive at the best possible judgement as to which machine is best? Once a choice has been made, what is the best way to finance continuing use of the machine? What is proper use, in the light of present laws? What copyright changes are contemplated, and what is the best way for the librarian to adjust to them? These are all questions involved in the fundamental problem of having a masterless copying machine.

This problem will be dealt with forthrightly. It is hoped that insight into it and resolution of the various facets of it may be the result of our study.

A STUDY OF CONSIDERATIONS FOR CHOICE AND
USE OF COPYING MACHINES IN THE SCHOOL LIBRARY

A Research Paper

Presented to

the Department of Library Science

University of Northern Iowa

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Accepted 5-6-70 -
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Science

by

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April 1970

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Chapter 1

INTRODUCTION AND STATEMENT OF THE PROBLEM

Observation of public and college libraries indicates that commercial copying machines are being used to an ever greater extent. It would seem good to pay special notice to this happening and to examine some of the implications of obtaining and utilizing copying devices also on the level of school libraries.

With recent technological advances in the field of copying, it is of importance that librarians try to keep abreast of developments which will aid in the dissemination of knowledge and making greater use of media center collections. Every useful tool which serves this end should be examined and assessed to see if it can be adapted to the needs of the library patrons.

It is hoped copying machines may be placed in proper perspective. Since their practicality and usefulness is of comparatively recent origin, it needs to be determined how this phenomena can best serve the educational needs of children. There is no doubt that wider use is being made, but evaluation of this use should be made to determine if it is also wise use.

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machine? What is proper use, in the light of present laws? What copyright changes are contemplated, and what is the best way for the librarian to adjust to them? These are all questions involved in the fundamental problem of having a masterless copying machine.

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Chapter 2

ASSESSING THE NEEDS

One of the considerations to be made when thinking about the usefulness of a copying machine in the school library is whether it will be economical to have it. In a small school with a very small library, it might not be used very much initially. On the other hand, if it were brought to the attention of library patrons that this was a useful adjunct to the educational process, it might have a great deal of use.

In every library there are problems relative to theft, mutilation and overdues. There have been many proposed solutions, but none has been so fool-proof as to be said to be a complete answer. But one thing that could cut down this problem area so that it seems no longer so insurmountable is to make use of photocopying.

To cite an example, many librarians complain that they cannot seem to keep books on car repairing on the shelves. If they are allowed to be checked out, they are soon lost, and if not lost seem to be perpetually overdue. If a copying machine was part of the library equipment, the pages which pertain to the patron's problem could be copied inexpensively and the library would still retain the original book. The same could be done in regard to magazines of the same subject. Rather than resulting in loss, duplication in this way would put the needed information in the hands of many more patrons and thus

increase the usefulness of the material.¹ This way the student gets the information in concrete form and the library still retains the material.

There are those writers though, who feel strongly that the photocopying machine which steps into this need gap must be placed in the library in a location which will preclude tampering and general mishandling. It would be best if it were placed reasonably close to the service desk so that proper guidance and supervision could be exercised.

There are ways in which teachers can also make greater use of photocopying. Modern teaching methods are becoming progressively less textbook oriented. Consequently supplementary course readings are often duplicated by means of a convenient copying machine and the copy is then distributed to every member of the class. The expense of this could either be borne by each member of the class for a few cents each time, or the school could stand the expense.

It would be helpful if the librarian is considering making a request for a copying machine, to ask other faculty members on the staff just what factors they thought should be considered if a unit was obtained. This would help to obtain a balanced viewpoint with better perspective than from the librarian alone. Since the copier could serve as a strong aid in production of classroom materials, teachers ought to have many worthwhile opinions and suggestions about

¹William R. Hawken, Photocopying from Bound Volumes (Supplement #1), (Chicago: American Library Association, 1963), p. 13.

services they would expect from a versatile machine.

In essence the continuing concern of librarians is to get the information needed and wanted in a usable form into the hands of the patron. The copying machine is an excellent device to serve that end. Concern is not especially with the type of machine, whether it be wet or dry process, or a special concern with brand names. Copying is an increasingly competitive field, with almost daily claims and counter-claims amongst the giants in the field.²

Minnesota Mining and Manufacturing Company makes an especially strong appeal to the education market. They ask:

"How can the value of teachers be expanded? How can they be made more effective in the classroom?"

And answer:

"Fact is, we're helping now with copying and audio-visual systems, information services and electronic sensing devices that relieve teachers and educators from many time-consuming administrative details... and give them more time to spend constructively with students or lesson plans."³

In outlining their copier applications for education, many library and library-related uses are listed in their literature:

Education:

Administration personnel find 3M copiers provide a fast, economical and error-proof way to forward transcripts of students to other schools. 3M Copiers also reproduce such things as:

.Library loan cards .Newspaper clippings .Magazine
articles

²Des Moines Register, April 22, 1970, Sec. II, p. 16, col. 2.

³Minnesota Mining and Manufacturing Company Business Equipment, All Products Catalog, 1970 Edition, Duplicating Products Division, 3M Center, Saint Paul, Minnesota, 2.

In many schools, office personnel make 3M copies of report cards and mail them to parents, while keeping the original card in school files. 3M Copiers may also be used to reproduce:

.Manuscripts .Laminating book covers .Articles
.Music scores .Invoices .Applications .Assignment
sheets .Personal histories .Library books
.Sports plays .Maps⁴

⁴Ibid., p. 22.

Chapter 3

MAKING A PROPER CHOICE

In making a choice of copiers there are many considerations, but inevitably one which comes up is cost. Copying machines are available under two basic plans,- rental or purchase outright.

A very interesting plan which might fit the needs of the small school might be one which has been worked out by the Minnesota Mining and Manufacturing Company of Saint Paul, Minnesota. Using physically handicapped people, this corporation trains them and sets up a center for its products by selling them to a local rehabilitation agency. The "equipment package" usually consists of a 3M Photo-Copier, Thermo-Fax Copier, overhead projector and other basic items. This plan concentrates on small businesses (and schools) that lack their own equipment and would like to rent on a short-term basis. As of December, 1967, this corporation projected over 1,000 of these centers, and they are available in Iowa.⁵

A review of current periodicals and advertising matter serves only to confuse most prospective customers for copying machine services. In effect it seems that the more ads and claims one reads the more confused the issue becomes. Talking with those who have copying machines in use in their libraries may only serve to compound the confusion,

⁵"3M's Self-help Plan", Business Week, (December 3, 1966), 62.

and the person in charge may become quite discouraged when he realizes the many factors that are involved which merit consideration.

Fortunately there are firms which do test copying machines which may be of interest to those in the library. One such company which may serve to bring relief from reliance on confusing manufacturer's specification sheets or salesmen's persuasion efforts is International Evaluations, Incorporated,⁶ 1324 Motor Parkway, Hauppauge, New York 11787. On an alternate month basis, a complete sixty-four page volume of International Evaluations is issued, containing comparison reports, plus a twelve to sixteen page "Trendletter" reporting on new models, modifications, price changes and related developments. A computer evaluation of the school's specific needs for copying machine requirements could also be obtained.

Using the services of International Evaluations, their side-by-side test reports compare these items: cost per copy, time per copy, monthly output capability, relative noise levels, copy distortion, suitability for specific applications and reproduction quality. Their findings are reportedly objective, and visual comparisons of the quality of reproduction of each machine tested is relatively analyzed. Since it is estimated that firms and institutions in the United States purchase nearly fifteen billion dollars worth of equipment each year, it would be well worth it to spend a small amount for getting some objective answers for local school use in coming to a decision on obtaining office equipment of this kind. This company makes no analysis

⁶"Buyers Aware", Financial World, 132 (November 26, 1969), 8.

as to what machine is "good" or "bad", but rather comes to a conclusion as to whether or not it may be a suitable piece of equipment for the work which may be required of it in the library.

Just what are some functions desired of a copier? It should be clear that even though one may envision its use in the library and for work which is related to this field, there will be uses which had not been thought of at first. Minnesota Mining and Manufacturing Company, in advertising its "Liberator" model 209, claims that this machine will copy ballpoint pen signatures, full color pages in bound books and magazines, memos, "spirit copies, blueprints, photographs and anything put on paper". To date this is the only manufacturer who has color copying in a commercially marketed machine. Initial cost when this first came out was quite high so it might not for the present be practical for the school situation.⁷

⁷"A Copier that Copies in Color", Business Week, (November 2, 1968), 117-118. Xerox also has a color copier, but it has not yet placed this on the market, preferring further testing.

Chapter 4

PAYING FOR USE OF THE COPIER

Along with choosing the proper machine goes another concern, namely how to pay for its use. As matters now stand, copiers may be either leased on a price per copy basis, or they may be purchased outright. For many schools purchase would be out of the question.⁸ However, assuming a copying machine was selected for library use, many have the automatic option of being used on a "pay-as-you-go" basis. This would mean that it could be installed and if all things went according to plan there would be absolute cost control. Xerox Corporation, Minnesota Mining and Manufacturing Company, Dennison Manufacturing Company and Documat, Incorporated, are representative of those firms which market models that have this sort of payment plan.

When considering payment on a coin operated basis, the experience with this of the San Francisco Public Library⁹ should be noted. The librarian there reported that increased use of the copying machine was made when the price per page was lowered from twenty-five cents to fifteen cents per page. The increased use made the machine profitable.

⁸Annual Report to Shareholders, Xerox Corporation, Rochester, New York, April 11, 1969, p. 25. The (model) 914, 720 and 813 copiers were quoted as being available for purchase at prices of \$8,000, \$10,000 and \$2,500, respectively. Most Xerox machines are leased at the present time.

⁹William R. Hawken, Photocopying from Bound Volumes (Supplement #3), (Chicago: American Library Association, 1964), p. 34.

Of course it should be borne in mind the purpose of considering having a copying machine in the library would be to offer a useful related service and that it is not there in order to show a profit. Machines are in use in public libraries, with a usage cost as low as ten cents per copy, which would be very reasonable for use in a school library.

There are those who advocate the use of a copying machine on a no-fee basis.¹⁰ Though in theory this may sound good, in actual practice this could easily lead to abuse, and therefore a restriction which involved payment of some sort, though nominal, would appear to be the best course. In discussing copying machines for the library it rarely comes out that there might be little use for it. The problem seems more to be in the area of cost and how this shall be met. There never seems to be any doubt about the fact that the potential for use does exist. An independent research firm¹¹ has estimated that the rate Xerox would charge for its smallest copier for rental would be about forty-five dollars per month. The librarian ought to weigh and consider a good long time before deciding to give up this amount from the library budget each month. If it was deemed an absolute necessity to have one at this price, the administration might be persuaded to get the machine and to finance it out of another part of the overall school budget.

Thus far in this paper it has been assumed that it deals with the thought of reproducing copy which will not vary in size from the

¹⁰Jack J. Delaney, The New School Librarian, (Hampden, Connecticut), Shoe String Press, 1968, p. 75.

¹¹"Cheap Ways to Get Things Printed", Changing Times, 22 (November, 1968), 35.

original. If for any reason one would want to reduce or enlarge the copy from the original a photocopying device of another sort, such as the Photostat¹² would be advised. This can enlarge or reduce documents and reproduce photographs satisfactorily.

¹²Ibid., p. 37.

Chapter 5

COPYRIGHT CONSIDERATIONS

The librarian cannot get far into the subject of copying machines before the question of copyright asserts itself. The problems of size, cost and choice of copier are one aspect, but there is another problem entirely when it comes to grappling with the legal details.

Copyright as a Legal Monopoly

Copyright is granted by the government and in effect is a legal limited monopoly. Copyrighted material is thus protected by law, and is valuable in terms of money because copyright owners stand to gain considerably.

The librarian need have no fear of reprisal if he copies things which are considered to be the "public domain", such as government documents and reports and material on which the copyright has expired or lapsed. There is some material which for other reasons may not be able to be copyrighted.

Examination of copying machines will reveal that prominently placed on the cover of the machine or in some other obvious place, attention is called to the fact that there are copying restrictions for some works.

It is well advised that the librarian be aware of the legal hazards which may be involved when use of the machine is contemplated. Here is a partial list of commonly asked questions about copyright as applied to the problem at hand:

- Is the material free of restriction; i.e., is it in the public domain?
- Is there a copyright claim?
- If so, is the claim valid?
- If the material is copyrighted, what are the circumstances under which one can go ahead anyway?
- How many copies are to be made?
- Is it to be copied in whole or part?
- How large a part?
- Is it "fair use"?
- What is the ultimate purpose?
- Is it "not for profit"?
- Are the author's or publisher's profits affected?
- Is it impossible to identify or locate the copyright owner?¹³

Presently, where a copyright has not been obtained, as in the case of an unpublished paper or manuscript, this document has common law copyright protection. There seems to be some problem where ownership of a copyright is obscure, and reproduction might bring the copier under danger from legal action.

There is no doubt that there must be a decision regarding what constitutes "fair use" of material deposited in the charge of the library. It should be clear that if a library patron does not harm a publisher or author by cutting into profits from their works, he has not made unfair use of the material. After a great deal of thought the American Library Association Joint Committee on Fair Use in

¹³William R. Hawken, Copying Methods Manual (Chicago: American Library Association), 1966, p. 309.

Photocopying presented these findings, summarized as follows:

1. The making of a single copy by a library is a direct and natural extension of traditional library service.
2. Such service, employing modern copying methods, has become essential.
3. The present demand can be satisfied without inflating measurable damage on publisher and copyright owners.
4. Improved copying processes will not materially affect the demand for single-copy library duplication for research purposes.¹⁴

School librarians will readily admit there are problems and perplexities enough in administration and implementation of their work without becoming involved in lawsuits over copyrights, or even the hint of such potential trouble. However, this threat is extant, and as copying machines enjoy greater popularity and use, librarians may find themselves more likely in the center, rather than the periphery of the controversy.

Hawken notes that libraries in general try to protect themselves in three ways when they have fully developed photocopy services.

First, they admonish and endeavor to require their patrons to observe the principles of fair use. Second, they require the patron to assume all responsibility for any infringement by signing a statement on photocopy order blanks. Third, they contend that they are not selling photocopies, but merely acting as agents.¹⁵

A close examination of the above method of dealing with this reveals that teachers might be able to understand some of the implications, but that students could be assumed to not be able to fully comprehend the restrictions or their reasoning. Therefore it follows

¹⁴Library Journal XC (September 1, 1965) 3403-3405.

¹⁵Hawken, op. cit., pp. 313-314.

that this is one more reason to keep the machine under close scrutiny and supervision in an area of the library that would be close to the office and charging desk.

Copyright Implications of Information Retrieval

It is commonly talked about that in the not too distant future in the United States there will be a number of regional distribution centers for bibliographic information. Eventually it is thought that many libraries, including school libraries, will be linked to such a system in order to benefit from the information of the center and also for interlibrary loans. The copying machine is vitally involved in any such system, as is the principle of copyright. Citing an example of an advanced technique for use in such a network, a recent article described the Central Intelligence Agency's "Walnut" system, by which a legal size sheet of information is reduced to a microscopic image. Any one of 990,000 images can be retrieved from computer banks within five seconds, after which it can either be projected on a screen or reproduced on paper.¹⁶

A similar system is in use in the specialized field of medical education, but incisive educators could easily see adaptations which could be made to education. The librarian for the National Library of Medicine describes this scheme:

Wherever a work from the rare book collection is requested on interlibrary loan, the existing film copy, if any, or a new one prepared for the purpose is sent on loan. Like all the

¹⁶"Libraries", Time. (September 3, 1965), 57.

interlibrary loans, this service is provided without charge. Librarians or individuals who wish to retain a film beyond the usual loan period may purchase a copy or, if they prefer, a Copyflo or other prints made from the film.¹⁷

At the time of the foregoing writing, the National Library of Medicine had on hand 1,900 master reels and was adding at the rate of 100 per year, so obviously the system was serving its purpose, but the question of how to properly compensate copyright owners and protect their interests seems only to become more muddled with each such similar citation.¹⁸

Ethical Problems Involved in Copying

Do present methods of information storage and retrieval and use in conjunction with copying machines constitute a meaningful and sizeable threat to authors and publishers? Their opposition appears to be growing as the copying machine industry also grows. It could well be that the law may someday be changed so as to give them a larger profit than they now experience. Ethical questions are being raised by those who see the present trends in educational innovations moving along a collision course with the conventional printing industry also.

¹⁷John B. Blake, "National Library of Medicines Medicine Collection", Library Journal, 92 (February 1, 1967), 507-508.

¹⁸A typical example of the burgeoning informational storage and retrieval industry is the Cytek Information Systems Corporation, 366 Fifth Avenue, New York, N.Y. It features a "micro Interactive Retrieval System" whose main function is information storage and retrieval of microfiche. By using a dry copier process, individual items on film can be converted into hard copy.

A continuing trend in American schools is to offer less instruction from a single source, as in the case of the textbook, and to substitute a large variety of media in its place. Copying machines enable a teacher to make an instant film for projection on a master for copying. In this way, the teacher can offer a variety and mixture of texts. But an ethical conflict faces such a teacher - whether or not to appropriate someone else's work without adequate compensation, and how to serve the students' best interests. Dr. Bernard Everett,¹⁹ Assistant Superintendent for Instruction, Newton, Massachusetts, submits this as an ethical problem which may not have an easy solution.

He felt strongly that an even more serious long-range threat to the conventional printing process was to be found in information storage and retrieval. He surmised this could easily bypass usual printing methods and cause serious economic upheaval.²⁰

Author's Position and Proposed Solution

Authors have a position to state too in regard to the technological revolution which makes copying a very quick and easy process. One of the things they particularly object to is indiscriminate copying of an author's work without his being able to claim a sale of it or to even be aware it is being copied. Janeway put her position and that of her colleagues succinctly when she said: "...we think that if readers and users of our material are willing to pay for photocopying

¹⁹"Teaching Machines: The Impact of New Devices on Educational Publishing", Publisher's Weekly, (March 7, 1966), 104.

²⁰Ibid.

the words they want, they ought to be willing to pay a royalty for the words too."²¹ She no doubt spoke for many when she expressed displeasure also at the American Library Association Copyright Committee because it had taken no clear position on the question of multiple copying of extracts from copyrighted works. She pointed out that there really was no fundamental difference between multiple copying and selling a single copy to an individual.²²

The situation continues to fester, and school libraries may perhaps be involved if there is found to be a just case for the authors. They themselves have proposed solutions, and perhaps one of the most workable and practical was set forth by the Author's League of America, Incorporated.²³ Under the system which they plan, payment would be quick and simple, involving no record keeping and royalties would only be due on copying within the limits of use. Rates would be fixed and published annually and posted on all machines, and payment would be by means of a "copyright stamp" sold by a clearinghouse or could also be sold by a dispensing machine on the copier. When copies were to be made, a four inch by five inch remittance card would be filled in identifying the material. These cards would be mailed to the "Copyright Clearinghouse" at Washington, D.C. The expense of operating the licensing system would be met from the royalty

²¹Elizabeth Janeway, "The Toad Beneath the Harrow Knows", Library Journal, 91 (February 15, 1966), 890.

²²Ibid.

²³"A Licensing System", Library Journal, 91 (February 15, 1966), 892-893.

income and collected by a discount applied against remittance stamps when they are redeemed by the clearinghouse. It is their feeling that "...there is every reason to assume that school libraries, and business concerns are inherently honest and would comply voluntarily."²⁴ This could be a solution to the dilemma, though it may well have unforeseen difficulties of administration. Such a system is not in operation, and if it were, it could be a long and involved process to work out the details to the satisfaction of authors and all others concerned.

²⁴Ibid., p. 893.

Chapter 6

SUMMARY AND CONCLUSIONS

As inclusion of a copying machine is contemplated in the overall equipment needs of the school library, a rather thorough analysis of the need for the machine must be made. Past observation has shown that the perennial problems of overdues, mutilation and losses can be cut down substantially if a convenient copying machine is at hand and its use is inexpensive. Classroom teachers could make good use of a copier as they make preparation for class meetings and assignments.

Choice and cost of a copier are closely related. Small schools might investigate the services of the "Self-help Plan" of small businessmen which has been set up by Minnesota Mining and Manufacturing Company of Saint Paul. Larger schools could benefit from the reports of International Evaluations, Incorporated, of Hauppauge, New York, which does large scale copier evaluation studies.

Machines may now be either purchased outright or be leased. Use of the copier is now commonly done on a coin operated basis. Since rental of a copier may be \$45 per month or more, the school often elects to make use of the machine on a "pay as you go" plan.

A subject which goes hand-in-hand with the use of copiers is copyright. It is a good idea to keep currently informed on this subject so that criticism and even lawsuit do not overtake the librarian who exceeds what the law considers "fair use".

Consideration of copyright becomes a greater and more complex problem as libraries become more automated and school libraries look toward the time when they will be linked within large networks of information dissemination. Ethical questions remain to be resolved, especially as material is used for classes from sources other than textbooks.

A licensing system has been proposed by the Author's League of America, but it may have to be refined in order to be practically applied. Hopefully their proposal seems to be a step in the right direction in compensating copyright holders, yet allowing copiers to be used for a reasonable fee.

BIBLIOGRAPHY

A. BOOKS

- Delaney, Jack J. The New School Librarian. Hampden, Connecticut: Shoe String Press, Incorporated, 1968.
- Dessauer, John H. and Clark, Harold E. Xerography and Related Processes. New York: Focal Press, 1965.
- Gipe, George A. Copyright and the Machine, Nearer to the Dust. Baltimore: Williams and Wilkins, 1967.
- Hattery, Lowell H. and Bush, George P. (eds.). Reprography and Copyright Law. Baltimore: Port City Press, 1964.
- Hawken, William R. Copying Methods Manual. Chicago: American Library Association, 1966.
- _____. Full-Size Photocopying. New Brunswick, N. J.: Rutgers - The State University, 1960.
- _____. Photocopying from Bound Volumes (Supplement #1). Chicago: American Library Association, 1963.
- _____. Photocopying from Bound Volumes (Supplement #2). Chicago: American Library Association, 1964.
- _____. Photocopying from Bound Volumes (Supplement #3). Chicago: American Library Association, 1964.
- Katz, William A. Introduction to Reference Work: Vol. II, Reference Services. New York: McGraw Hill Book Company, 1969.
- Verry, H. R. Document Copying and Reproduction Processes. London: Fountain Press, 1960.
- Wittenberg, Phillip. The Protection of Literary Property. Boston: The Writer, Inc., 1968.

BIBLIOGRAPHY

B. PERIODICALS

- Annual Report to Shareholders, Xerox Corporation, Rochester, New York, (April 11, 1969), 25.
- Blake, John B., "National Library of Medicines Medicine Collection", Library Journal, 92 (February 1, 1967), 507-508.
- Buhagiar, Marion, "The Xerox Annual Report: A Guided Tour", Fortune, (June 15, 1967), 184-187.
- "Challenge for Top Copier Cats", Business Week, (November 1, 1969), 106.
- "Cheap Ways to Get Things Printed", Changing Times, 22 (November, 1968), 35-37.
- "A Copier that Copies in Color", Business Week, (November 2, 1968), 117-118.
- "The Hardest Duplicating Job Xerox Ever Faced", Fortune, (November, 1966), 140-143.
- "The Information Revolution: Copying, Duplicating and Printing", Dun's Review, (September, 1966), 136-137.
- Janeway, Elizabeth, "The Toad Beneath the Harrow Knows", Library Journal, 91 (February 15, 1966), 887-894.
- Kothe, D. W., "Put All Reproduction Equipment in One Place and Save", American City, (April, 1966), 106-107.
- "Libraries", Time, (September 3, 1965), 57.
- Minnesota Mining and Manufacturing Company Business Equipment, All Products Catalog, 1970 Edition, Duplicating Products Division, Saint Paul, Minnesota, 2-22.
- Myrick, Frank B., "Reprography: Regulation is Needed", Publisher's Weekly, (December 4, 1967), 70-75.
- "Taking on Xerox With A Fast Copier", Business Week, (April 26, 1969), 78-79.
- "Teaching Machines: The Impact of New Devices on Educational Publishing", Publisher's Weekly, (March 7, 1966), 103-109.

"Some Things to Know About Office Copiers", American City, (April, 1968), 37-59.

"Three M's Self-help Plan", Business Week, (December 3, 1966), 62.

"Trying to Duplicate the Success of Xerox", Business Week, (October 22, 1966), 66-75.

"Xerox: The McColough Era", Forbes, (July 1, 1969), 24-26.

NEWSPAPERS

Des Moines Register, April 22, 1970.

UNPUBLISHED WORKS

Warren Firstenberg, Vice President, Cytex Information Systems Corporation, as quoted from an advertising letter, March 29, 1970.