Microform collections offer one of the more promising methods of increasing student learning while, at the same time, responding economically to the pressure of increasing enrollments. This study reports on the first phase of a 3-phase project to determine student acceptance of microform, and on the effectiveness of microform for learning. Included in this report are a description of the problem to be investigated, the methods and activities involved in establishing the project office and selecting staff, and the progress of the project to date. At this time, microform materials will be used in conjunction with the following courses: art appreciation, Black studies, college algebra, economics, freshman composition, life science, nursing, political science, basic psychology, and beginning college Spanish. Bibliographies for these courses have been prepared (included as appendices to the report) and will be microformed to provide most of the necessary course material. In concluding the Phase I report, the principal investigator observes that completion of the full study could have a meaningful effect on patterns of information storage and retrieval, and on the field of educational resources in general. (Phase II will involve the conduct of a pilot study using developed materials, and Phase III will involve the conduct of a full field study and evaluation of the results.) (JO)
Final Report  
Contract No. OEC-0-9-180260-3703-(095)

A Research Project to Determine the Student Acceptability and Learning Effectiveness of Microform Collections in Community Colleges: Phase I

Louise Giles
American Association of Junior Colleges
Washington, D.C. 20036

June 1970

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.
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ACKNOWLEDGMENT

Patently, the Microfora Project would not have progressed as far as it did without the close cooperation with, mutual respect for, and flexibility among Richard E. Wilson (principal investigator), Sylvia Howe (secretary), Dale Gaddy (incoming director), and Aikin Connor (incoming assistant director). All played vital parts in helping to accomplish the objectives of Phase I. My sincere thanks is expressed to each of these persons.

L.G.
SUMMARY

Title of Project: A Research Project to Determine the Student Acceptability and Learning Effectiveness of Microform Collections in Community Colleges: Phase I

Amount of Federal Funds Requested: $65,618

Duration of Project: 15 June 1969 to 14 June 1970

The present study was the first step in a three-phase project to determine the acceptability of microform to community junior college students, and the effectiveness of microform for learning. Because a valid test requires more than occasional and casual use of microform collections, the microform collections must include documents and books that will contain the bulk of students' graphic assignments in several courses and programs. Therefore the first move was to identify basic collections or bibliographies in representative courses and programs offered in community junior colleges. This project ultimately will attempt to determine the acceptability and effectiveness of microform collections at community junior colleges, or, more specifically, under what conditions or circumstances community college students will select microform, and what effect, if any, the use of microforms has on learning.

In Phase I, the subject of this report, the project office was established; personnel were trained; the project was publicized; a survey of community colleges was made in order to determine which courses to include; subject specialists were selected to compile bibliographies of references for each course included; the bibliographies were received and processed; and plans were laid for the continuation of the project. Phase I was completed on schedule.
CHAPTER I

Background for the Study

The American Association of Junior Colleges is eager to identify new techniques, devices, media, and other innovations that will more efficiently facilitate student learning. Because of the rapid expansion of community junior colleges and the increased enrollments in almost every college, it is imperative that institutions of higher education become economically more efficient if a major financial crisis is to be averted.

Since 1964, fifty or more new community junior colleges have opened every fall. During the same period enrollments in community junior colleges have doubled from 1,043,963 to approximately two million students. Although it is unlikely that this growth rate will continue indefinitely, it is probable that the demand for more conveniently located colleges and additional resources at existent colleges will continue to strain limited financial resources. It is also apparent that other demands in higher education, most notably for dramatic salary increases for faculties and staffs, will spur the search for cost savings and more efficient methods, media, and facilities. Efficiency has always been desirable; now it becomes a necessity.

One area with considerable potential for cost savings is the library, or as it is often called, the instructional resources center, or learning resources center. The multiplicity of titles suggests the changing and growing role of libraries. Librarians are no longer limited to acquiring, cataloging and guarding books. Increasingly they are being held responsible for a wide variety of media and the equipment needed to employ the media. It is not surprising, therefore, to notice an ever-increasing need for money to house, administer, and service a burgeoning collection of resources and media for a growing student body.

The new prominence of the library makes it a major target for cost savings ideas. One idea that appears to be promising and reasonable is the creation of microform collections which may include microfilm, microcard, microfiche, and ultramicrofiche. A microform collection could save money in at least three ways: (1) it is less expensive than a book or other "hard-copy" collections; (2) it requires less space (a reduction in storage or housing costs); and (3) it could lead to libraries that distribute rather than circulate materials. Changing the library to a distribution center could bring about the elimination of certain support staff members, equipment, and facilities needed to operate check-out centers, account for books, send overdue notices, collect fines, account for the fines collected, maintain an inventory to replace lost items, and continuously monitor the library to discourage vandalism and thievery (all activities which are related to the circulation function) and, thus, could produce the greatest saving of the three.
The Problem and Objective

In view of the potential savings, then, there is every reason to develop microform collections in community junior colleges. The necessary technological expertise has been developed, but, unfortunately, two major questions remain unresolved: (1) Will students use microform media? (2) If students use microform media, will they learn as well as they do from standard books and other publications? Some research is already underway to ascertain which features of different microform viewers and related devices are most effective for learners. These projects include subtle and sophisticated experiments involving a small number of subjects in carefully controlled environments. The results of these studies will have important implications for the future of microform but the general questions of student acceptability and learning effectiveness still will remain unanswered. "A Research Project to Determine the Student Acceptability and Learning Effectiveness of Microform Collections in Community Junior Colleges" was undertaken to find these answers.

The completion of the project was estimated to require four to five years in three steps: (1) identifying courses and preparing bibliographies, (2) developing a research design and conducting a pilot study, and (3) conducting the field study and evaluating the results.

The first step, which is the subject of this report, was to identify the basic collections and to determine a research design to measure the acceptability and effectiveness of microform collections. This identifies commonly-found courses and programs that are adaptable to microform, develops bibliographies of basic publications in each, and constructs objectives for implementing the full project.

Principal Investigator

At the time of her selection as the principal investigator of this project, Louise Giles was Associate Dean of the Learning Resources Center at the Orchard Ridge Campus of Oakland Community College; during the year she became Dean of Learning Resources at Macomb County Community College. She received the B.A. from the University of Akron and the M.S. from Drexel Institute of Technology. Mrs. Giles' area of specialization in Library Science is the college library. She has worked twelve years at the Detroit Public Library. Six of those years were spent in an administrative capacity. She has had four years as the chief administrator of a Learning Resources Center, first helping to establish the Highland Lakes Campus Learning Resources Center when the College opened in September 1965, and later starting the Learning Resources Center at the new Orchard Ridge Campus in 1967.

As administrator of a Learning Resources Center in an experimental college devoted to the systems approach, Mrs. Giles had the responsibility of supervising the selection, ordering, repair and inventory of all audiovisual media, equipment and facilities on campus. She is a reviewer for Library Journal and a junior college library consultant for the Project for Developing Institutions of the American Association of Junior Colleges. She is a member of and holds positions in the American Library Association, the Michigan Library Association, and the Michigan Community and Junior College Library Administrators.

Facilities

Oakland Community College provided office space and furniture for a secretary in the Learning Resources Center at the Orchard Ridge Campus. This enabled the secretary assigned to the study to be located near the principal investigator. The College also provided sufficient furniture and additional space to accommodate records and materials for the study.

The American Association of Junior Colleges provided space and facilities in Washington, D.C., for the chief investigator and meetings of the advisory committee. Other facilities for collecting and storing data and information collected by the study were also provided by the American Association of Junior Colleges.
CHAPTER II

Methods and Activities

Publicity and Public Relations

Press releases announcing the start of the project* were prepared by both the American Association of Junior Colleges and Oakland Community College (see Appendix A). These press releases were sent to persons and institutions on the regular mailing lists of both the American Association of Junior Colleges and Oakland Community College and, in addition, to other selected library-related agencies (see Appendix A). Clippings from the following publications are included in Appendix A: the Detroit News; the Michigan Chronicle; the Northwest Detroiter; and the Pontiac Press. The project was announced and described at the American Library Association Convention in Atlantic City in June 1969. Reports on the status of the project were given at the American Association of Junior Colleges Convention in Honolulu in March 1970.

Advisory Committee

An advisory Committee of eleven members was appointed. The members represent the diverse interests of community college administration, community college libraries, research agencies, the publishing industry, and the microform production industry. A current list of the Advisory Committee membership is given in Appendix B.

Three advisory committee meetings were held during the year: June 28, 1969, at Atlantic City; November 6 and 7, 1969, at Washington, D.C.; and April 27, 1970, at San Francisco. The minutes for each of these meetings may be found in Appendix C.

Project Office

During Phase I, the project office was located at the Learning Resources Center at the Orchard Ridge Campus of Oakland Community College. The College provided office facilities. Project funds were allocated to lease a typewriter and to provide for the purchase of stationery and office supplies and printing and mailing costs. The principal investi-

*Due to a delay in allocating the project grant, the American Association of Junior Colleges requested permission from the Office of Education to change the starting date on the contract from April 15, 1969 to June 15, 1969. This request was granted.
gator's secretary assumed the secretarial duties of the project office in addition to her regular duties, and a part-time assistant was hired to assist her.

Field Trips

In order to gain background information and become informed about some activities in the field, the principal investigator made the following field trips: (1) August 4, 1969, to Fullerton Junior College, Fullerton, California for a conference with William T. Whitney who has a national reputation for extensive utilization of microfilm and instruction and who has written several articles and monographs on the subject; and (2) August 5, 1969, to the Denver Research Institute, Denver, Colorado for a conference with James P. Kottenstette who was conducting a study relating to the physical problems of microform utilization.

Course Selection

A principal criterion for the selection of courses for which bibliographies were to be developed was large enrollment. Because no current source listing high-enrollment courses in community colleges was found, a survey of eleven community colleges was made. The colleges polled were:

- Delta College (Michigan)
- Flint Community Junior College (Michigan)
- Foothill College (California)
- Grand Rapids Junior College (Michigan)
- Junior College District of St. Louis (Missouri)
- Lansing Community College (Michigan)
- Macomb County Community College (Michigan)
- Miami-Dade Junior College (Florida)
- Oakland Community College (Michigan)
- Schoolcraft College (Michigan)
- Washtenaw Community College (Michigan)

In addition to the courses selected from the list compiled by the survey, it was considered advisable to include a vocational-technical course (nursing) and a language course (Spanish). As a representative of new and innovative course offerings, Black Studies was selected. The list for which bibliographies were prepared follows.

Art Appreciation - Art history and appreciation. Art forms and the place and function of art in society.

Black Studies - Black history and culture in the United States from its beginning.

Economics - Principles, concepts and theories of American economics.
English - Freshman composition: reading, writing, and analyzing expository prose.

Life Science - Life processes and conservation. The relationships between man and his environment.

Mathematics - College algebra. The fundamental operations of algebra.

Nursing - Fundamentals of nursing (nursing skills, patient care, physical hygiene, accident prevention) and health-related problems, services, trends, and practices.

Political Science - The principles of the American system of government, local, state and national, with emphasis on the functions of the national government.

Psychology - Basic general psychology. Human behavior with respect to learning, experience, motivation, and intelligence.

Spanish - Beginning college Spanish.

Subject Specialists

In order to provide a consensus two subject specialists were selected to prepare a bibliography for each of the above-listed courses. The subject specialists were selected from recommendations by the United States Office of Education, the Microform Project Advisory Committee, and community college colleagues of the principal investigator. The following people agreed to serve:

Art Appreciation
John Davenport
Sam Wayne

Black Studies
Ed Beasley

Economics
Ethel Crockett
Uvan Handy

English
Charles Shuler
Grant Strickland

Life Science
Margaret Atwood
Robert Havlik

Mathematics
David Randall
Orlin Spicer
Nursing  
Floretta Cunegin  
Mary Jensen

Political Science  
William T. Bucklin

Psychology  
John Poole  
Wendell Rivers

Spanish  
Loletia Henson  
Paul Ross

A list of the colleges represented by the subject specialists is presented in Appendix D.

The principal investigator conducted a meeting for the subject specialists in Washington, D.C. on November 7, 1969, at which time written guidelines were distributed (see Appendix E). The deadline for the submission of the lists was April 15, 1970.

Bibliographies

When the lists were submitted, they were processed, revised and edited by the principal investigator and the project secretary. (A total of 4,166 entries is included in the ten bibliographies). Honoraria were paid to the subject specialists following the receipt of each bibliography. The complete bibliographies are given in Appendix F.
CHAPTER III

Results and Conclusions

The major objectives of the first phase of the project have been accomplished. Bibliographies for ten representative courses offered in community junior colleges were compiled; tentative plans for developing the research design were made; professional and trained personnel were selected to move the project to completion.

Planning for Phase II

Among the objectives for the first phase of the project was the laying of plans for later phases. Included in these plans were the selection of personnel to carry the project forward and the development of a research design.

Project Director

Almost from the outset of Phase I, it was apparent that the ever-pressing and expanding duties and responsibilities of conducting the project through the later phases would demand much more than a part-time commitment. With the approval of the project officer, a full-time project director was hired, to assume responsibilities in June 1970. Selected for this position was Dale Gaddy of the ERIC Clearinghouse for Junior Colleges (University of California, Los Angeles).

Project Secretary

When the completed bibliographies had been processed by the staff at the project office at Oakland Community College, the need for a full-time project secretary became evident. Because of her training and extensive experience with ERIC documents, Sylvia Howe was chosen to do the final editing and to prepare the bibliographies for this report.

Project Office

To utilize the full facilities of the American Association of Junior Colleges, the project office for Phases II and III was moved to Washington, D.C. Files and records were transferred.

Research Design

In order to facilitate planning for Phase II of the project, preliminary steps in developing a research design were made. Research firms,
including the Center for Research on Learning and Teaching in Ann Arbor, Michigan, and the Behavioral Science Corporation in Washington, D.C., were consulted. Following these consultations, the decision was made to hire a research specialist as assistant director of the project for Phase II and Phase III, who would be responsible for developing a research design for the project and assisting with its application. For this position, Akin Connor, a former staff member at the ERIC Clearinghouse for Junior Colleges, was chosen. Prior to assuming full-time duties in this position, Dr. Connor prepared an overview of the research problem and a tentative research design (see Appendix G), which were presented to the Advisory Committee.

A proposal for the continuation of the project was drafted in which objectives for Phase II and Phase III were developed. The proposal was submitted to the Bureau of Research, Office of Education, Department of Health, Education, and Welfare, and the project has been continued.

Observations and Conclusions

In evaluating the activities involved in the completion of Phase I of the Microform Project, the principal investigator offers the following observations and conclusions:

1. The microform study is more complicated and time-consuming than it appeared initially. Nevertheless, continued involvement only serves to reinforce the conviction of the participants that this is a worthwhile project and that it should be continued until its completion.

2. The results of the completion of all of the phases of the study could have a meaningful effect upon patterns of information retrieval and storage and on the field of educational resources, in general.

3. Interest in the results of this study has been shown, particularly by experts in the library and education fields.
APPENDIX A

Publicity

Washington, D.C., June 13--The American Association of Junior Colleges has received a federal grant of $66,000 to support a study of the use of microform copies of educational materials to supplement book and other publications collections in two-year college libraries, it was announced today by AAJC.

Provided by the Bureau of Research of the U.S. Office of Education, the grant will support the first year of a study into the development of microform collections as supplements to book collections, according to Richard E. Wilson, director of AAJC's project for new institutions.

"AAJC is anxious to identify new techniques, devices, and media that will more efficiently facilitate student learning and at the same time help to reduce costs of educating young men and women," Wilson said. "Microform collections of educational material have a lower initial cost, and are less costly to store, maintain, and to use."

Microform includes various processes for recording and storing large amounts of printed material on film. It is possible, for example, to put the material from a 500-page book on a microform card no larger than a desk calendar page.

The two questions that must be answered, says Wilson, are whether people will actually use microform, and if they use it, will they learn as well as they might from traditional media.

Mrs. Louise Giles, associate dean of the Orchard Ridge Learning Resources Center, Oakland Community College in Michigan, will serve as the principal investigator.

* * * * *

Bloomfield Hills, Michigan, July 17, 1969--Mrs. Louise Giles, Associate Dean of Oakland Community College's Orchard Ridge Campus Learning Resources Center, will serve as the principal investigator of a study of the use of microform copies of educational materials to supplement book and other publications collections in two-year college libraries.

The study, sponsored by the American Association of Junior Colleges (AAJC), is being supported by a $66,000 federal grant provided by the Bureau of Research of the U.S. Office of Education.

Mrs. Giles, 19769 Steel, Detroit, as principal investigator, will direct the project for AAJC and work with and be guided by an advisory committee consisting of authorities from various professional areas affected by the project.
Mrs. Giles, who has served as an administrator at OCC for four years, is the editor of *Aspects of the Junior College Field; A Bibliography*, published this year by AAJC. She also writes reviews for *Library Journal* and *Books Abroad*.


She served as secretary of Michigan Community and Junior College Library Administrators, 1967-68 and as chairman of this group 1968-69 and 1969-70. She is presently chairman of Junior College Roundtable of Michigan Library Association.
OCC Official to Aid Microform Study

An Oakland Community College official, Mrs. Louise Giles, will serve as principal investigator for a study of the use of microfilm copies of educational materials in two-year college libraries. The study, sponsored by the American Association of Junior Colleges (AAJC), is being supported by a $68,000 federal grant provided by the Bureau of Research of the U.S. Office of Education.

Mrs. Giles, who has served as an administrator at OCC for four years, is the editor of "Aspects of the Junior College Field: A Bibliography," published this year by AAJC. She also writes reviews for "Library Journal" and "Books Abroad." Mrs. Giles holds a master's degree in library science from Wayne State University.

OCC ASSOCIATE DEAN

Mrs. Giles To Head Microfilm Study

Mrs. Louise Giles, associate dean of Oakland Community College's Orchard Ridge campus Learning Resource Center, will serve as principal investigator of a study of the use of microfilm copies of educational materials to supplement book and other publications collections in two-year college libraries.

The study, sponsored by the American Assn. of Junior Colleges (AAJC), is being supported by a $65,000 federal grant provided by the Bureau of Research of the U.S. Office of Education.

Mrs. Giles, 1969 Steel, Detroit, as principal investigator, will direct the project for AAJC and work with and be guided by an advisory committee consisting of authorities from various professional areas affected by the project.

Mrs. Giles, who has served as an administrator at OCC for four years, is the editor of "Aspects of the Junior College Field: A bibliography," published this year by AAJC. She also writes reviews for "Library Journal" and "Books Abroad." Mrs. Giles is a member of the American Library Assn., Michigan Library Assn., Junior College section; Michigan Women's Librarians Assn., Junior College Library Staff Assn., Friends of the Detroit Public Library, and representative to Michigan Assn. of Community College Instructional Administrators, 1969-70.
Mrs. Louise Giles, associate dean of Oakland Community College, will be the chief sleuth in an investigation of library resources under a $66,000 federal grant.

Mrs. Louise Giles, associate dean of the Learning Resources Center at the college's Orchard Ridge campus in Farmington Township, will guide the project.

The study is sponsored by the American Association of Junior Colleges and funded by the Bureau of Research of the U.S. Office of Education.

The project includes a study of the use of Microform copies of educational materials to meet book and publication collections in two-year college libraries.

Mrs. Giles lives at 19768 Steel, Detroit.
APPENDIX B

Advisory Committee

1. Mr. Austin McCaffrey, Executive Director
   American Educational Publisher's Institute
   432 Park Avenue South
   New York, New York 10016

2. Dr. Jordan Jr. Baruch
   130 Dudley Road
   Newton Centre, Massachusetts 02159

3. Dr. Frank J. Bertalan, Director
   School of Library Science
   University of Oklahoma
   Norman, Oklahoma 73069

4. Mr. Richard L. Ducote, Director
   Instructional Resources Center
   College of DuPage
   Glen Ellyn, Illinois 60137

5. Miss Harriett Genung
   Dean of Libraries and Audio Visual Services
   Mt. San Antonio College
   Walnut, California 91789

6. Mr. John Herbst, Head Librarian
   Metropolitan Junior College
   560 Westport Road
   Kansas City, Missouri 64111

7. Mr. Donald Holmes
   Association of Research Libraries
   1755 Massachusetts Avenue, N.W.
   Washington, D.C. 20036

8. Dr. Alfred M. Philips, Vice-Chancellor
   Dallas County Junior College District
   Dallas, Texas

9. Mr. Carl Spaulding
   Council on Library Resources
   1028 Connecticut Avenue, N.W.
   Washington, D.C. 20036
10. Dr. Vernon D. Tate, Executive Secretary
   National Microfilm Association
   P.O. Box 386
   Annapolis, Maryland 21404

11. Dr. Richard E. Wilson, Director
    Project for New Institutions
    American Association of Junior Colleges
    One Dupont Circle, N.W.
    Washington, D.C. 20036
APPENDIX C

Minutes of Advisory Committee Meetings

1. Atlantic City, New Jersey, June 21, 1969

Present:

Dr. Jordan Baruch
Dr. Frank J. Bertalan
Mr. Richard L. Ducote
Mrs. Louise Giles
Mr. John Herbst
Mr. Donald Holmes
Mr. Carl Spaulding
Dr. Vernon D. Tate
Dr. Richard E. Wilson

Guest: Mr. F. Curt Cylke (Project Officer from the Office of Education)

Absent:

Mr. Leonard Ambos
Dr. Joseph P. Cosand
Miss Harriett Genung
Dr. Alfred M. Philips

The Microforms Advisory Committee held its first meeting at the Holiday Inn. It began with luncheon at 12:30 p.m. After lunch, the principal investigator started the meeting with the following announcements:

1. The USOE had recently sent the contract for the proposal to AAJC. USOE has given approval to change the starting date from that specified on the contract (4/11/69 to 4/10/70) to 6/15/69 to 6/14/70.

2. The budget in the original proposal had been cut by USOE from $72,700 to $65,618. A copy of the revised budget was passed out.

3. Travel expense charges of Advisory Committee members should be sent directly to Dr. Richard E. Wilson at AAJC. AAJC personal expense forms were passed out.

Kurt Cylke, our Project Officer from USOE, gave his view of how the project might be conducted.

Further discussion centered mainly around the agenda which had been prepared by the principal investigator and distributed to the members several weeks before the meeting. Comments fell into the following categories:

I. Courses

1. The Principal Investigator asked the committee members how to decide which courses should be involved in the study.

2. The members recommended that the following curriculum areas be considered for inclusion: Business; Secretarial; Literature; History; Music; Data Processing; Art; Nursing; Biology; Psychology; Sociology; Automotive Technology.
3. The committee recommended that Louise Giles determine which courses were offered most regularly in community colleges and that she select from those a proposed list to be included in the project and present it to them by the next meeting.

II. Bibliographies
1. It was pointed out that compilers of subject lists cannot be appointed until the courses have been identified.
2. The committee felt that this should be the next step to be taken immediately after determining the courses.

III. Conversion to Microform and Number of Microforms
1. Louise Giles wondered if there would not be great difficulty in getting approval to convert materials to microform.
2. Donald Holmes felt that the committee would have no trouble in getting approval to convert materials for the purpose of experimentation; but, first he felt we should compile our lists, see which publishers are involved, and proceed to seek approval from them. Most of the members seemed to agree.
3. Louise Giles wondered if the study should limit itself to one, two or more types of microform, and, if so, which ones?
4. Donald Holmes said he hoped we would not limit ourselves to ultramicrofiche.
5. The members felt it was not necessary to decide that at this point.
6. One member felt that the study should not include any material that would not fit on the reader that the Office of Education is now developing. (24X; takes reel and fiche)
7. Consensus was that the study should select material with a reduction ratio compatible with one of the several currently accepted standards, but that this decision too could be deferred.

IV. Research Design
1. Louise Giles asked the committee for recommendations on the research design of the project, or, more specifically, how to determine what specialists to consult on measuring or evaluating the effectiveness or acceptability of microforms to students. For example, should we call in a statistician, psychologist or learning and research specialist?
2. Jordan Baruch made two very good points:
   a. Should we not re-state our premise? Would it not be preferable to try to determine what is the degree of effectiveness of microforms in learning and what is the...
level of acceptability of microforms to students?

b. If we wish to determine certain things about students using microforms, then should we not also have another group of students set up to take the same subjects without using microforms so that an effective comparison can be made? This is a point which everyone had previously overlooked, but they all agreed.

3. Other variables that Dr. Baruch felt should be taken into consideration in determining the research design:

   a. Economic level of the students
   b. Academic level of the students
   c. Availability of the material in other forms
   d. Rural/urban orientation of the students

4. The committee tentatively suggested that the following people be consulted with in determining the research design:
   Dr. John Cenders at Brandeis; John Tuckey, statistician at Princeton.

V. Field Trips
1. Louise Giles asked the committee to recommend some field trips for her to take in order to gain more background about what is currently being done with microforms.

2. The following recommendations were made:
   a. William T. Whitney at Fullerton Junior College
   b. Dr. Vernon Toy
   c. Oral Roberts University
   d. Denver Research Institute
   e. National Microfilm Association Convention

3. Donald Holmes advised Louise Giles to keep an eye out in her travels for the relationship between the number of fiche collections available for use and the number of readers available. And to observe "who's using what for what?"

VI. New Committee Members
1. Dr. Jordan Baruch:
   Dr. Baruch, President of EDUCOM, is an interested observer who attended our first meeting at his own expense. EDUCOM is experimenting with fiche also and their work is closely
related to what we are doing. After getting approval from our project officer, we invited Dr. Baruch to be a member of our committee and he accepted.

2. Dr. William Shannon (ex-officio):
   Dr. Shannon, Associate Executive Director of AAJC, was affiliated with the microforms proposal early in the game. He continues to be interested in it and we felt it appropriate to invite him to be an ex-officio member of our Advisory Committee.

NOTE: Revised list of Advisory Committee members enclosed.

VII. Meetings
1. Louise Giles stated that, since the revised budget for the proposal was somewhat less than the original budget request, she felt that advisory committee meetings for the remainder of the year should be cut to two, rather than three as proposed in her memo of April 30. She wished to drop the January meeting, but asked members to express their feelings about the dates of the remaining two.

2. The committee felt that the October meeting should be delayed until November in order to give Louise Giles time to take some background trips, do the necessary research about community college courses, and draw up the list of courses recommended for inclusion in the project. Definite dates could be determined by Louise Giles and Richard Wilson and the committee could be notified.

3. The committee, especially Vernon Tate, saw real value in having the second meeting around the time of the National Microfilm Association Convention in San Francisco in April. But, Dr. Tate wished to have the committee meetings precede the convention rather than run concurrently with it so as to avoid conflict with the participation of some of the members.

4. Dr. Tate recommended further that future meetings last a whole day or even two days.

The meeting adjourned at 4:30 p.m.

Louise Giles
Principal Investigator
7/28/69
Washington, D.C., November 6-7, 1969

THURSDAY

Present:
Jordan Baruch
Frank Bertalan
F. Kurt Cylke
Richard Ducote
Harriett Genung
Louise Giles
John Herbst

Donald Holmes
Richard Wilson
Morning Session Only:
William Shannon
Afternoon Session Only:
Leonard Ambos

MORNING SESSION

1. The minutes were reviewed and approved.
2. The status of the project was reported by the principal investigator as follows:
   a. The courses to be included in the project have been selected.
      A fast survey of the top 15 courses (highest enrollment) in
      15 large community colleges was conducted; the 10 courses to be
      included in the project were selected from these and from the
      suggestions of the Advisory Committee members at the June
      meeting. (A revised list of courses in the project accompanies
      these minutes.)
   b. The subject specialists have been selected and the offers of
      the bibliography assignments have been made. Subject specialists
      were selected from a group of about 40 names recommended
      by ALA and junior college colleagues, Michigan community college
      colleagues and the Office of Education. A briefing meeting was
      to be held with the subject specialists in the same room on the
      next afternoon. (A revised list of subject specialists accom-
      panies the minutes.)
3. There was a question regarding the size of the lists that would be
   requested from the subject specialists. It was concluded that it
   would be of no value to mention a minimum or maximum number of titles
   to them, as the number would tend to vary sharply from course to
   course. The emphasis is to be put on requesting an inclusive list
   of the most commonly used materials in the country for each specific
   course. The same honorarium will be paid to each specialist upon
   submission of his completed list--regardless of the number of titles
   included.
4. A member asked if the subject specialists would be given written
   guidelines. The principal investigator felt loathe to establish
   written guidelines before meeting with the Advisory Committee or
   the subject specialists, since this aspect of the project is an
   uncharted area of research and discussions with the people involved
   would be likely to unearth important points heretofore unanticipated.
   Written guidelines are to be formulated later that incorporate the
   thinking of both these groups.
5. There was an extensive discussion revolving around a review of the
   courses and why they were selected that resulted in the following
decisions and/or comments:

a. Donald Holmes commented that colored microfiche might present a problem as the resolution might not be sufficient in reduction. The consensus was to include Art Appreciation in the project anyway, since the technology might be improved by the time we need to convert the materials and this would be a good chance to experiment anyway.

b. Holmes also questioned the inclusion of Automotive Fundamentals on the basis that mechanics are not currently utilizing fiche on the job. Originally, an automotive course was recommended by the Committee on the grounds that it would be of value to include a course that had some carry-over use of fiche on the job. Richard Wilson recommended that the principal investigator check with the automotive subject specialist and others to see if it was indeed true that no mechanics were using fiche in everyday applications.

c. Richard Ducote remarked on the noticeable lack of inclusion of any non-public community college in the project.

d. Harriett Genung wished to make sure that some courses were included that would allow the exploitation of the rich number of government documents on fiche.

e. Omissions and Additions: It was noticed that, through oversight, Political Science had been omitted from the course list. Jordan Baruch suggested that Black Studies be included in the project and the group agreed. The following Committee members suggested the following sources for subject specialist in this area:

| Cylke       | Nairobi University at Stanford |
| Ducote     | Chicago City College          |
| Herbst     | Ed Beasley from Metropolitan Community College |

6. Reports were given on:

a. The principal investigator's field trips to Fullerton Junior College and Denver Research Institute--two locations where microforms are being worked with in some way.

b. Giles and Wilson reported on their efforts to get someone to do the research design; The Center for Research on Learning and Teaching in Ann Arbor and the Behavioral Science Corp. in Washington, D.C. have been approached, with no commitments to anyone yet.

7. The principal investigator announced that Dr. Cosand had resigned from the Advisory Committee and that she was considering replacing him with Dr. Bob Jones, Director of Instructional Resources at the Junior College District of St. Louis. The Advisory Committee felt strongly that Dr. Cosand should be replaced by another chief executive of a junior college, as Cosand's vacancy would leave only one such. Ducote suggested Dr. Morton Shanberg, Vice President for Instruction at Hillsborough County Community College in Tampa, Fla. To one member's question whether or not the Advisory Committee for Phase I would be the same for Phase II, Cylke and Wilson replied "no." (Giles and Wilson decided later that, since Phase I is almost half over, they would wait until Phase II to replace Cosand.)
AFTERNOON SESSION

1. The principal investigator recapped decisions made at the morning session in order to confirm certain points of action.

2. Kurt Cylke raised the question of the search for someone to do the research design again in order to confirm that now was the time to pursue this, since this had originally been planned for Phase II of the project and had not been budgeted in Phase I. It was generally agreed that it would be wise to get the matter settled as soon as possible, although a question was raised as to where the money was coming from. Richard Wilson stated that the facts that 1) the project did not hire a full time secretary and 2) only half the number of consultants budgeted would be used, would probably cover the initial expenses of hiring a firm to do the design. Giles and Wilson were advised to proceed with all deliberate speed in this effort and to choose a good firm. Cylke emphasized that whatever firm or person was selected should be able to be justified.

3. With regards to the subject specialists, Ducote voiced two points of concern:
   a. He felt that the project, AAJC and USOE, might possibly be called into question because of the fact that the majority of the subject specialists came from the midwest, and specifically two large, multi-campus public community colleges: the Junior Colleges: the Junior College District of St. Louis and Oakland Community College.

   Note: After some discussion, the members decided that, while it was something to keep in mind, geography wasn't all that important--particularly if good subject specialists had been selected who would be aware of the necessity for representing what is being used in their course from a nationwide viewpoint.

   b. Second, Ducote wished to know why go to the great expense and effort to have the lists compiled? Why not just let the teachers select their own materials and then convert them to microforms?

   Note: It was pointed out by the principal investigator that several teachers would be teaching the same course at several different colleges and if each selected his own lists, there would be no control factor to use as a basis of research. She further clarified a point which heretofore all the members had not understood: the complete list produced by each subject specialist will not be converted to microforms. The emphasis will be on producing as exhaustive a list as possible of commonly used materials for each course and, then when the teachers are selected, they will, from that list, agree on what basic materials to use. These, then, will be converted to microforms. Further, once the lists are compiled, Richard Wilson indicated that AAJC might be willing to underwrite a questionnaire survey sending the titles on this list to junior college instructors to see just how much in use they really are. The Committee agreed, finally, that the compilation of the lists was worthwhile.
MORNING SESSION

1. The principal investigator outlined her activities for the rest of the project year:
   a. Continue trying to select someone to do the research design.
   b. Receive and process bibliographies.
   c. Write project progress report and final report for USOE.
   d. Prepare with Richard Wilson the proposal for Phase II of the project.
   e. Attend National Microfilm Association Convention.
   f. Write Publishers for permission to convert the bibliographies.

2. At the request of the members, the goals of the remaining phases of the project were reviewed:
   a. Phase II—one year
      -Completion of research design
      -Selection of teachers and sites
      -Conversion of bibliographies
      -Identification of hardware and determination of quantities needed
      -Acquisition of hardware and distribution of same to appropriate sites
   b. Phase III—one to three years
      -Field study
      -Statistical analysis
      -Final report

3. The bulk of the meeting was devoted to working out guidelines for the subject specialists to use in compiling their bibliographies. (A copy of the written guidelines incorporating suggestions from both the committee and the subject specialists accompanies this list.)

4. Leonard Ambos questioned whether or not the project should spend as much money as it would take to hold the next meeting in San Francisco and wondered whether it would not be preferable to hold it nearer to the homes of the majority of the members. Richard Wilson said that he would have to check the state of the budget to see if we could afford to transport the members and, if so, he wanted to know how many wished to meet there. A vote showed that 8 out of 10 members wished to meet at the NMA Convention in San Francisco if funds were available. The members agreed to meet in San Francisco on April 27, 1970, the day before the NMA Convention if the budget allows. Further arrangements would be made by L. Giles with Vernon Tate.

Note: San Francisco is on: According to Richard Wilson, the state of the project budget permits. More details when plans are completed.

5. The meeting adjourned at 5:00 p.m.
3. San Francisco, California, April 27, 1970

MORNING SESSION
Present:

Frank Bertalan  
Aikin Connor  
Dale Gaddy  
Louise Giles  
John Herbst  
Don Holmes  
Sylvia Howe  
Austin J. McCaffrey  
Jim Prevel  
Richard E. Wilson

1. Richard Wilson announced that Louise Giles would be relinquishing the job of principal investigator after completing Phase I of the project. He introduced Dr. Dale Gaddy who will begin as the full-time project director with the start of Phase II in June. Also introduced were Dr. Aikin Connor, who will start as assistant director and research specialist in June and Mrs. Sylvia Howe, who was employed as project secretary in March. Dr. Austin McCaffrey, Executive Director of the American Educational Publishers Institute, was introduced as a new member of the Advisory Committee, replacing Leonard Ambos who resigned from the Institute to take another job.

2. Dr. Wilson passed out a copy of the proposal for Phase II, and stated that he has received written notification that it will be funded. The proposal was examined and discussed by the members.

3. Dale Gaddy passed out a listing of his proposed activities for Phase II. These were discussed.

4. He also passed out a copy of the research design proposed by Aikin Connor.

5. Louise Giles reported on her activities in attempting to complete Phase I. The subject bibliographies are all in. She is now processing them with the help of Sylvia Howe.

AFTERNOON SESSION
Present:

Frank Bertalan  
Aikin Connor  
Richard Ducote  
Dale Gaddy  
Louise Giles  
John Herbst  
Don Holmes  
Sylvia Howe  
Austin J. McCaffrey  
Carl Spaulding  
Richard E. Wilson

The whole afternoon session was devoted to an intense study of the research design (which is rather complicated to the layman) and questions and answers concerning it. The meeting was adjourned at 4:30 p.m. Dick Wilson and Dale Gaddy are to communicate with the members at a later date regarding the next meeting of the committee.
APPENDIX D

Subject Specialists

ART APPRECIATION

Mr. John Davenport
Oakland Community College
Orchard Ridge Campus
27055 Orchard Lake Road
Farmington, Michigan 48024

Mr. Sam Wayne
Meramec Community College
959 South Geyer Road
St. Louis, Missouri 63122

BLACK STUDIES

Mr. Ed. Beasley
Penn Valley Community College
560 Westport Road
Kansas City, Missouri 64111

ECONOMICS

Mrs. Ethel Crockett
City College of San Francisco
50 Phelan Avenue
San Francisco, California 94112

Mr. Uvan Handy
Forest Park Community College
5600 Oakland Avenue
St. Louis, Missouri 63110

ENGLISH

Mr. Charles Shuler
Oakland Community College
Orchard Ridge Campus
27055 Orchard Lake Road
Farmington, Michigan 48024

Mr. Grant E. Strickland
Monroe County Community College
1555 South Raisinville Road
Monroe, Michigan 48161

LIFE SCIENCE

Mr. Robert Havlik, Librarian
Nova University Libraries
Fort Lauderdale, Florida 33314

Ms. Margaret S. Atwood
Librarian
College of Pennsylvania
York College
York, Pennsylvania 17405

MATHEMATICS

Mr. David Randall
Oakland Community College
Highland Lakes Campus
7350 Cooley Lake Road
Union Lake, Michigan 48085

Mr. Orlin C. Spicer
Head of Library Services
Morton High School
2423 South Austin Boulevard
Cicero, Illinois 60650
NURSING
Mrs. Floretta Cunegin
Oakland Community College
Highland Lakes Campus
7350 Cooley Lake Road
Union Lake, Michigan 48085

POLITICAL SCIENCE
Mr. William T. Bucklin
Lansing Community College
419 North Capitol
Lansing, Michigan 48914

PSYCHOLOGY
Mr. John Poole
Foothill College
Los Altos Hills, California 94022

SPANISH
Mrs. Loletia Henson
Oakland Community College
Orchard Ridge Campus
27055 Orchard Lake Road
Farmington, Michigan 48024

Miss Mary Jensen
744 South Bundy Drive, Apt. E
Los Angeles, California 90049

Mr. Wendell L. Rivers
Meramec Community College
959 South Geyer Road
St. Louis, Missouri 63122

Mr. Paul E. Ross
Monroe County Community College
1555 South Raisinville Road
Monroe, Michigan 48161
APPENDIX E
Guidelines for Bibliographies

PRIMARY AIM

The primary aim of the bibliographies is to produce an exhaustive list of the most commonly used texts, related references, articles and instructional materials in the country for each of the courses included in the microform project. The overwhelming majority of items in each bibliography should be in-print (or available) materials, but selected out-of-print items may be interspersed sparingly.

When the bibliographies are completed, several instructors at several community colleges will select from the lists the basic references which they will use to teach their courses. For example: The list for Life Sciences includes 500 titles. Four Life Sciences instructors from four community colleges agree to use the same 75 titles as the basic references with which to teach the course. (Example only).

TYPES OF MATERIALS FOR INCLUSION

Books: Both main texts and related secondary references, whole books, chapters, pages may be cited. Exception: Dictionaries may be omitted.

Periodicals: A periodical title may be included as a basic item in itself. A specific issue may be referred to, or a specific article or page may be cited. Pamphlets, documents, or leaflets also.

Media: Transparencies, filmstrips, slides, study prints, charts, diagrams, or any still pictures may be cited.

Note: Important--All nonbook materials should have the medium specified within the citations.

Remember, use is the primary basis of inclusion, along with the potential of the item to be converted to microform.

If a course is commonly taught in a two-semester sequence, include all references that may be used in both sections of the course. (Example: Economics, English Comp.)

FORMAT

The bibliographic form should be patterned loosely after that used in Frank Bertalan's Junior College Library Collection. (A page from this volume is attached: We have the editor's permission to reproduce this.) Generally, that will include: Author, title, publisher, date of publication, and number of pages. Not in the Junior College Library Collection but essential to us: Price or whether or not the item is O.P. (out-of-print).
You do not need to include, from the Junior College Library Collection, the following: author’s birth/death dates; repetition of author’s name following the title; place of publication; subject headings, illustrations, or Library of Congress numbers.

If the item is nonbook, the same format should still be used as far as possible. The type of medium should be indicated in parentheses at the end of the citation.

The subject specialist’s evaluation of the importance of each item to the course in relation to each other item should be indicated by placing four spaces to the right of the last entry in each citation one of the following abbreviations:

Req. = Required
Rec. = Recommended
Av. = Available

The list should be headed Microforms Project Subject Bibliography: (Course). The entries should be typed in a single column on 8 1/2 x 11 inch sheets of white paper. Double space the entries themselves; triple space between each entry.

RE-CAP OF BIBLIOGRAPHIC FORM

Author. Title. Publisher. Date. Number of pages. Price or O.P. (Medium). Req.

Arrange list alphabetically by author; if no author, leave author space blank and arrange alphabetically by title.

DUE DATE

The lists are due on February 15, 1970. The honorarium promised will be paid to each subject specialist upon the submission of his completed list.
APPENDIX F

Course Bibliographies

Following are bibliographies for each of the courses listed below:

1. Art Appreciation
2. Black Studies
3. Economics
4. English
5. Life Science
6. Mathematics
7. Nursing
8. Political Science
9. Psychology
10. Spanish

__________. Ancient Art of the Near East and North Africa. Herbert E. Budek Films and Slides. 17 sets. 668 frames. $102.00. (Color Filmstrips). Av.

__________. Architecture in Sweden, Finland, Russia. Herbert E. Budek Films and Slides. 5 sets. 200 frames. $30.00. (Color Filmstrips). Av.


__________. The Art of the Mosque. Herbert E. Budek Films and Slides. 3 sets. 120 frames. $18.00. (Color Filmstrips). Av.


__________. Asian Art. Herbert E. Budek Films and Slides. 3 sets. 120 frames. $18.00. (Color Filmstrips). Av.


Bell, Clive. The French Impressionists. Phaidon (Distributed by N.Y.G.S.), 1951. 70p. $5.95. Av.


_____ British Painters. Herbert E. Budek Films and Slides. 3 sets. 48 frames. $7.50. (Color Filmstrips). Rec.


31
Byzantine Art. Herbert E. Budek Films and Slides. 5 sets. 164 frames. $30.00. (Color Filmstrips). Av.


Cirici-Pellicer, Alexandre. Treasures of Spain, Vol. 2 - From Charles Fifth to Goya. Skira. 236p. $32.50. Av.


———. Etruscan Art. Herbert E. Budek Films and Slides. 2 sets. 80 frames. $12.00. (Color filmstrips). Av.


Flemish and Dutch Painters: 11 Artists. Herbert E. Budek Films and Slides. 11 sets. 182 frames. $27.50. (Color filmstrips). Rec.


German and Swiss Painters: 4 Artists. Herbert E. Budek Films and Slides. 4 sets. 66 frames. $10.00. (Color filmstrips). Rec.
German Drawings: Masterpieces from Five Centuries. Herbert E. Budek Films and Slides. 6 sets. 171 frames. $36.00. (Color filmstrips). Av.

German Paintings of the 20th Century. Herbert E. Budek Films and Slides. 4 sets. 116 frames. $24.00. (Color filmstrips). Rec.


The Great French Impressionists: Forerunners, Masters, Followers. Herbert E. Budek Films and Slides. 1 set. 44 frames. $6.00. (Color filmstrips). Rec.

Greek Architecture and Sculpture. Herbert E. Budek Films and Slides. 9 sets. 360 frames. $54.00. (Color filmstrips). Rec.


History of Egyptian Art. Herbert E. Budek Films and Slides. 10 sets. 400 frames. $60.00. (Color filmstrips). Rec.

History of French Architecture. Herbert E. Budek Films and Slides. 10 sets. 400 frames. $60.00. (Color filmstrips). Av.

History of Indian Art. Herbert E. Budek Films and Slides. 9 sets. 356 frames. $54.00. (Color filmstrips). Av.

History of Italian Architecture. Herbert E. Budek Films and Slides. 10 sets. 400 frames. $60.00. (Color filmstrips). Av.
The History of Italian Sculpture from about 1200 to about 1800. Herbert E. Budek Films and Slides. 10 sets. 160 frames. $45.00. (B and W Filmstrips). Av.

History of Mexican Art. Herbert E. Budek Films and Slides. 9 sets. 360 frames. $54.00. (Color filmstrips). Av.


How Prints Are Made. Herbert E. Budek Films and Slides. 2 sets. 75 frames. $12.00. (Color filmstrips). Av.


The Inca Empire. Herbert E. Budek Films and Slides. 1 set. 38 frames. $6.00. (Color filmstrip). Rec.


Italian Painters: 21 Artists. Herbert E. Budek Films and Slides. 21 sets. 319 frames. $52.50. (Color filmstrips). Rec.


———. Landmarks in American Painting. Herbert E. Budek Films and Slides. 6 sets. 197 frames. $36.00. (Color filmstrips). Rec.


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<th>Author</th>
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<td>Leymarie, Jean</td>
<td>Dutch Painting.</td>
<td>Skira, 1956.</td>
<td>214p.</td>
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<td>Maiuri, Amedeo</td>
<td>Roman Painting.</td>
<td>Skira, 1953.</td>
<td>156p.</td>
<td>$20.00</td>
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Metropolitan Museum of Art Seminars. 1958-60. 24 vols. $3.75. Av.


Mollet, J.W. Mosaics and Frescos in Italian Church Buildings from the 4th to the 13th Centuries. Herbert E. Budek Films and Slides. 6 sets. 209 frames. $36.00. (Filmstrips). Av.


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<tr>
<td>Myers, Bernard S.</td>
<td>Art and Civilization</td>
<td>American Library Color Slide Co.</td>
<td>1962</td>
<td>420</td>
<td>$462.00</td>
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<td>Myers, Bernard S.</td>
<td>Fifty Great Artists</td>
<td>Bantam Books</td>
<td>1962</td>
<td>267</td>
<td>$1.25</td>
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<td>Myers, Bernard S.</td>
<td>Modern Art in the Making</td>
<td>McGraw</td>
<td>1959</td>
<td>457</td>
<td>$9.50</td>
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<td>Myers, Bernard S.</td>
<td>Understanding the Arts</td>
<td>Holt, Rinehart, Winston</td>
<td>1963</td>
<td>502</td>
<td>$7.50</td>
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<td>Myers, Bernard S.</td>
<td>Non-Figurative-Geometric Art</td>
<td>Colonial Film, Inc.</td>
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<tr>
<td>Myers, Bernard S.</td>
<td>The Nude in Art</td>
<td>Universal Color Slide Co.</td>
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<td>Ocvirk, Bone, Stinson, and Wigg</td>
<td>Art Fundamentals: Theory and Practice</td>
<td>W.C. Brown</td>
<td>1968</td>
<td>240</td>
<td>$7.50</td>
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<td>Ol'erogge, Dimitry</td>
<td>Negro Art</td>
<td>Tudor Publishing Co.</td>
<td>1969</td>
<td>168</td>
<td>$7.95</td>
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<td>Osborne, Harold</td>
<td>Aesthetic and Criticism</td>
<td>Philosophical Library, Inc.</td>
<td>1955</td>
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<td>Ovirk, Bone, Stinson, and Wigg</td>
<td>Non-Figurative-Geometric Art</td>
<td>Colonial Film, Inc.</td>
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<td>Paleolithic to 17th Century</td>
<td>Universal Color Slide Co.</td>
<td>(Master sets 1 and 2)</td>
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<td>Pallottino, Massimo</td>
<td>Etruscan Painting</td>
<td>Skira</td>
<td>1952</td>
<td>140</td>
<td>$18.50</td>
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<td>Panofsky, Erwin</td>
<td>Meaning in the Visual Arts</td>
<td>Anchor Books</td>
<td>1955</td>
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<td>Perruchot, Henri</td>
<td>Toulouse-Lautrec</td>
<td>World Publishing Co.</td>
<td>1960</td>
<td>317</td>
<td>$6.00</td>
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<td>Pita Andrade, J.M.</td>
<td>Treasures of Spain, Vol. 1</td>
<td>Skira</td>
<td>1967</td>
<td>248</td>
<td>$32.50</td>
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<td>Ponente, Nello</td>
<td>Modern Painting - Contemporary Trends</td>
<td>Skira</td>
<td>1960</td>
<td>216</td>
<td>$29.50</td>
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Rogers, L.R. Sculpture. Oxford University Press. $4.95. Av.
Roman Art and Architecture. Herbert E. Budek Films and Slides. 8 sets. 193 frames. $48.00. (Color filmstrips). Rec.


Ross, James Bruce, and Mary M. McLaughlin, eds. Portable Medieval Reader. Viking, 1949. 690p. $5.50. Av.


________. Spanish Painters: 6 Artists. Herbert E Budek Films and Slides. 6 sets. 100 frames. $15.00. (Color filmstrips). Rec.


45


BLACK STUDIES


Graham, Shirley and George D. Lipscomb. Dr. George Washington Carver, Scientist. Messner, 1944. $3.50. Av.


Handlin, Oscar. Fire-Bell in the Night; The Crisis in Civil Rights. Little, 1964. $3.75. Rec.


Hoyt, Edwin P. Paul Robeson, the American Othello. World, 1967. $5.95. Av.


King, Martin Luther, Jr. Where Do We Go From Here: Chaos or Community? Harper, 1967. $4.95. Rec.


Moody, Anne. Coming of Age in Mississippi. Dial, 1968. $5.95. Av.


52


Still a Brother: Inside the Negro Middle Class. McGraw. $4.00. (16mm film). Rec.


54


AFL-CIO Federation. The American Federationist. $2.00 per year. (Periodical). Av.


American Credit Indemnity Co. Annual Chart of Business Terms from 1839 to Present. Av.


Arnold, Thurman Wesley. The Folklore of Capitalism. Yale University Press, 1937. 400p. $10.00, $2.75 paper. Av.


Congressional Quarterly Service. Weekly Report. $120.00 per year. (Periodical). Av.


Erickson, Edward W., and Hinshaw. Student Workbook to Accompany Fels Introduction to Economics. 2d ed. Allyn and Bacon, 1966. 184p. $3.75. Av.


64


66


National Industrial Conference Board. Road Maps of Industry. 1-99 copies--$.10 each; 100+ copies--$.05 each. (Periodical). Rec.


71


Time. $10.00 per year. (Periodical). Rec.

Trenton, Rudolph W. Basic Economics. 2d ed. Appleton Century Crofts, 1968. 448p. $3.95. Av.


_______ U.S. News and World Report. $10.00 per year. (Periodical). Rec.


_______ The Wall Street Journal. $28.00 per year. (Newspaper). Rec.


ENGLISH


Bonazza, Blaze O., and Emil Roy. Studies in Drama. 2d ed. 583p. $4.95. Req.


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<td>Dreiser, Theodore</td>
<td>Sister Carrie</td>
<td>Houghton Mifflin</td>
<td>1959</td>
<td>418p</td>
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<td>Drury, Allen</td>
<td>Advise and Consent</td>
<td>Doubleday</td>
<td>1959</td>
<td>616p</td>
<td>$5.95</td>
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<td>Eliot, George</td>
<td>Adam Bede</td>
<td>Holt, Rinehart and Winston</td>
<td>1948</td>
<td>551p</td>
<td>$1.95</td>
<td>Av</td>
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<td>Eliot, T.S.</td>
<td>Murder in the Cathedral</td>
<td>Harcourt, Brace and World</td>
<td>n.d.</td>
<td>88p</td>
<td>$1.45</td>
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<td>Ellison, Ralph</td>
<td>The Invisible Man</td>
<td>Signet</td>
<td>n.d.</td>
<td>503p</td>
<td>$.95</td>
<td>Av</td>
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<td>Elsbree, Langdon, and Frederick Bracher</td>
<td>Brief Guide to Rhetoric</td>
<td>D.C. Heath</td>
<td>1968</td>
<td>352p</td>
<td>$3.25</td>
<td>Req</td>
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<tr>
<td>Elsbree, Langdon, and Frederick Bracher</td>
<td>Brief Handbook of Usage</td>
<td>D.C. Heath</td>
<td>1968</td>
<td>384p</td>
<td>$2.95</td>
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<td>Emerson, Ralph Waldo</td>
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James, Henry. The Turn of the Screw and Other Short Novels. Signet, 1962. 453p. $.75. Av.


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Weaver, John E. Prairie Plants and Their Environment. University of Nebraska, 1967. 276p. $6.95. Av.


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Court, Nathan A. Mathematics in Fun and Earnest. Dial, 1958. $4.75. Av.


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Fine, Henry B. College Algebra. Dover, 1905. $2.75. Av.


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Administration of an Intramuscular Injection. J.B. Lippincott, 1969. 3-4 min. $21.50. (Filmloop). Req.


Admission and Discharge. Trainex Corp., 1967. 15 min. $45.00. (35 MM strip). Req.


Applied Mathematics. Lippincott, 1968. (Transparencies). Includes: Calculating Drug Dosage, $80.00; Metric System and Apothecaries' Equivalents, $69.50; Preparing Solutions, $80.00. Rec.


Basic Nursing Procedures. McGraw-Hill, 1968. $120.00 or $8.00 each. (Films strips with scripts). Includes: Blood Pressure; Body Mechanics and Patient Positioning; Colostomy Care; Disinfection and Sterilization; Enemas; Food Service; Isolation Technique; Making the Occupied Hospital Bed; Making the Unoccupied Hospital Bed; Oxygen Tent Administration; Patient Transportation--The Wheelchair; Postoperative Care; Preoperative Care; Pulse and Respiration; Routine Physical Examination; Temperature. Rec.

Basic Nursing Skills. Minnesota Mining and Manufacturing Co., 1969. $15.00 or $5.00 each. (Transparencies). Includes: Administration of Medications; Irrigation and Elimination; Patient Care. Rec.

Basic Patient Care, Unit One. Brady, 1969. $225.00 or $25.00 each. (Films strips with records). Includes: Administration of Enemas; Female Continuous Bladder Irrigation--Tidal Drainage; Female Foley Catheterization, Bladder Irrigation; Female Regular Urethral Catheterization, Bladder Instillation, and Clean Voided or Mid-Stream Catch Urine Specimen; Male Continuous Bladder Irrigation--Tidal Drainage; Male Foley Catheterization, Bladder Instillation, and Clean Voided or Mid-Stream Catch Urine Specimen; Siphonage Enema, Colonic Irrigation (Enteroclysis) and Placement of Rectal Tubes; Vaginal Douche and Perineal Care. Rec.

Basic Patient Care, Unit Six. Brady, 1969. $225.00 or $25.00 each. (Films strips with records). Includes: Administration of Medications--General Considerations; Administration of Medications--Intravenous Fluid Therapy; Administration of Medications--Routes, Procedures, and Techniques; Intradermal Injection Technique; Intramuscular Injection Technique; Intravenous Injection Technique; Parenteral Drug Administration; Subcutaneous (Hypodermic) Injection Technique. Rec.


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Proposed Research Design

In the abstract of the proposal for the study the stated purpose of the study is "to determine the acceptability and effectiveness of microform collections at community colleges," as the project title indicates. To accomplish this purpose it was determined to conduct an experimental study of the conditions under which student acceptance of microforms occurs and in which student learning is effective. Such a study, naturally, requires a design to determine data collection procedures and analytical procedures which will make possible general conclusions regarding the questions of acceptability and effectiveness of microforms. The following report presents a discussion of relevant questions and proposes a tentative design for the study.

Research Hypothesis

Before any experiment is conducted a research hypothesis, no matter how vague, must be formulated. Such a hypothesis is usually in the general form, "If A, then B." In research parlance, A represents the independent or treatment variable which is under the control of the experimenter; B represents the dependent or criterion variable whose relationship to the independent variable is hypothesized.

A general conceptualization of the present study is that student acceptance and learning effectiveness of microforms are related to the conditions under which students use microforms. From this conceptualization it follows that as such conditions are made more favorable, the level of student acceptance of microforms will increase.

The research hypothesis stemming from this conceptualization of the problem, then, may be stated as follows:

As conditions under which students use microforms vary in terms of favorableness, the level of student acceptance and learning will vary accordingly.

Dependent Variables

In the present study, two dependent variables are implicit--student acceptance of microforms and student learning. Because experimental evidence is available which indicates that microforms are effective in student learning, the focus of the present study will be upon student acceptance of microforms. Learning effectiveness, then, will be considered as an interacting, confounding variable.

Independent Variables

According to the research hypothesis, the independent variable is the
set of conditions under which microforms are used. Considering a set of conditions as a "treatment," several levels of treatment can be arranged. If the basic hypothesis is valid, these treatment levels should be reflected as varying degrees of student acceptance.

**Nuisance Variables**

Variables which are not classed as independent variables or dependent variables act as undesired sources of variation. Such variables are called confounding or nuisance variables, since they tend to confuse the analysis of the data. In the present study, the principal nuisance variables are those represented by differences among schools and differences among courses. If such differences exist and are not controlled they may be counted upon to produce variations in the dependent variable that cannot be attributed to the independent variable. Two other possible nuisance variables are student ability and student achievement (see discussion under "Dependent Variables").

**Critical Issues**

1. A question which is basic to the development of an appropriate design for the study is whether the independent and dependent variables are properly conceived as qualitative or quantitative. That is, is a variation of conditions (treatment levels) one of amount or one of kind? Is a variation of acceptance one of degree or one of kind?

In the present report, both independent and dependent variables are conceived as quantitative.

2. A second basic question is that of measurement. Assuming both independent and dependent variables to be quantitative in nature, measures which will indicate different levels of treatment and measures which will reflect different levels of acceptance must be developed. Although it is beyond the scope of the present report to develop such measures, several suggestions are offered.

If treatment levels are to be established such that different points on a continuum of "favorableness" are represented, factors or elements which contribute to favorableness must be manipulated. One such factor must be accessibility of microform materials; another, ease of using equipment, such as readers; still another might be inducements or rewards, such as facility in preparing assignments, reduced book costs, etc. A less obvious factor may simply be experience in using microform materials.

To measure the acceptance level, consideration may be given to attitude measures, such as questionnaires, and unobtrusive measures, such as students' voluntary use of microform materials, perhaps in other classes. Developing instruments to produce the necessary measurements will be a prime activity of the next phase of the current project.

3. In addition to measuring the independent and dependent variables, controls must be established for the nuisance variables. In the present
proposed design the two main nuisance variables will be controlled by the experimental design: school differences and course differences will be measured and the portion of the total variance attributable to each will be removed. The two nuisance variables, student ability and student achievement, will be controlled statistically, through covariance analysis.

4. Sampling procedures in the study should allow the widest possible generalizations while recognizing certain practical constraints. One such constraint is that courses have already been selected on a basis other than random selection. Another constraint is the unfeasibility of randomly sampling the total population of some 1000 community colleges. Still another constraint is that students cannot be assigned randomly to courses or schools.

The problem of sampling from the college population may be solved by stratifying the population and selecting colleges randomly from each stratum. Unfortunately, the question of student sampling cannot be solved as easily. A solution of a sort is to recognize the lack of random sampling of students as an inherent limitation of the study and to interpret the findings accordingly.

A Tentative Research Design

The design tentatively proposed is of the type known as a Latin Square. In this design the two principal nuisance variables—school and course—are controlled by being included in the treatment. Although the microform project will utilize a larger (up to 10x10) square, the following 2x2 Latin Square will serve as an example. Suppose all courses are categorized as either humanities or science. Suppose, further, that only two schools are used: Grande College and Poco College. The treatment is also limited to two levels. The resultant Latin Square is given below.

<table>
<thead>
<tr>
<th>College</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Science</td>
</tr>
<tr>
<td>Grande</td>
<td>Treatment A</td>
</tr>
<tr>
<td>Poco</td>
<td>Treatment B</td>
</tr>
</tbody>
</table>

The total variance in the table can be partitioned and assigned to the variables "courses," "schools," and "treatment." In this way the strongest test of the treatment variable (given these circumstances) can be made.

In terms of the microforms project, the Latin Square design has the additional advantage of allowing comparisons among courses as well as comparisons among treatment levels.
Obviously, the proposed Latin Square design is related, ultimately, to the general conceptualization of the problem stated initially. Other valid conceptualizations are possible which might well suggest other research hypotheses and other research designs. Other considerations which could require alterations in the research design include significant interaction between courses and schools caused by widely differing teaching practices or, perhaps, greatly different student bodies.
APPENDIX H

Proposed Activities for Phase II

1. Assist with development of research design for Phase III
2. Select junior colleges
3. Determine courses to be involved at each college
4. Select media that will be used at each college
5. Determine mixture of microforms and publications
6. Obtain permission to film publications
7. Evaluate and select hardware
8. Requisition, order, and receive software and hardware
9. Develop data collection forms and procedures
10. Designate the location of software and hardware at each college
11. Select and train personnel at each college
12. Conduct trial runs
13. Evaluate trial runs
14. Revise research design
15. Prepare progress reports (OE, Ad. Committee, Colleges, Public)
16. Prepare budget for Phase III
17. Prepare agenda for Advisory Committee meetings
18. Maintain liaison with OE
19. AAJC staff activities