DESCRIPTORS- *PROGRAMED INSTRUCTION, *LANGUAGE INSTRUCTION,
PROGRAM EFFECTIVENESS, READING, COMPUTER ORIENTED PROGRAMS,
LITERACY, *BIBLIOGRAPHIES, DISTRICT OF COLUMBIA,
CLEARINGHOUSES

    SELECTED ARTICLES IN PROGRAMED INSTRUCTION WERE
COLLECTED AND ANNOTATED FOR THIS PUBLICATION. TYPES OF
MATERIALS INCLUDED WERE BASIC REFERENCE BOOKS, JOURNAL
ARTICLES, RESEARCH DOCUMENTS, AND SOME UNPUBLISHED PAPERS,
COVERING THE PERIOD 1960-66. REFERENCES WERE LISTED ACCORDING
TO THE FOLLOWING CATEGORIES--PROGRAMED INSTRUCTION - GENERAL
REFERENCES, LISTS OF AVAILABLE PROGRAMS, REVIEWS OF THE
LITERATURE AND RESEARCH, PROGRAM EVALUATION, PROGRAMED
FOREIGN LANGUAGE INSTRUCTION - GENERAL PAPERS, PROGRAMING
PRINCIPLES, RESEARCH AND DEVELOPMENT, REVIEWS OF PROGRAMS AND
PUBLICATIONS, PROGRAMED INSTRUCTION IN READING AND LITERACY
TRAINING, AND COMPUTER-ASSISTED INSTRUCTION AND LANGUAGE
TEACHING. (RS)

ERIC CLEARINGHOUSE FOR LINGUISTICS   A. Hood Roberts, Director

SELECTED BIBLIOGRAPHY IN PROGRAMMED INSTRUCTION

December, 1966

This bibliography in programmed instruction represents an initial
effort of the ERIC Clearinghouse for Linguistics in the direction
of periodically supplying the educational community with bibli-
ographies from the field of linguistics, related language sciences
and uncommonly taught languages. It is a selected listing and
as such does not include all publications in the field of pro-
grammed instruction.

The bibliography has been compiled for the ERIC Clearinghouse for
Linguistics by Mrs. Ruth Spodak of the Clearinghouse for Self-
Instructional Language Materials operated by the Education and
Research Program of the Center for Applied Linguistics.

In the spring of 1967, abstracts of selected documents from this
list will appear in a monthly bulletin published by the U.S.
Office of Education. Copies of these documents will, for a nominal
fee, be available in the form of microfiche or hard copy from Bell
and Howell Company, ERIC Documentation Reproduction Service,
Micro-Photo Division, 1700 Shaw Avenue, Cleveland, Ohio, 44112.
In the meantime, all users of this bibliography are requested to
cooperate with ERIC by sending relevant new material to: Adam G.
Woyna, Project Manager, ERIC Clearinghouse for Linguistics, 1717
Massachusetts Avenue, N.W., Washington, D.C., 20036.

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        Educational Research Information Center
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1. PROGRAMMED INSTRUCTION

1.1. General References

Berlin Conference. *Bericht über die internationale Konferenz program-mierter Unterricht und Lehrmaschinen, Berlin 1963.* Berlin: F. Cornelsen Verlag, 1964.

Many of the papers are in English, including several on the state of programming activities and program use in different countries.

Coulson, J.E. *Five major obstacles to the growth of programmed instruc-tion in education.* Paper presented at the NSPI Convention, May 1965. Santa Monica: System Development Corporation, Publication SP-1944, 1965.

Discusses problems in present status of use of programmed instruction and offers possible approaches for solutions.

DeCecco, John P. *Educational technology: Readings in programmed instruction.* New York: Holt, Rinehart & Winston, 1964.

A collection of readings on programmed instruction, emphasizing the rela-tionship between the psychology of learning and programmed instruction. Includes groups of papers on such subjects as stimulus factors, response mode, individual differences, and the function of knowledge of results in programmed learning. Also has several papers on the evaluation and use of programs in the schools.

Fry, Edward B. *Teaching machines and programmed instruction.* New York: McGraw-Hill, 1963.

A useful introduction to programming and teaching machines, which includes pictures and descriptions of several kinds of program presenta-tion devices. Different chapters deal with program objectives, programming techniques, and a number of problems in program construction and evaluation. Also includes, in an appendix, Fry's detailed list of program characteristics, "Classification of variables in a programmed learning situation."

Glaser, Robert, ed. *Teaching machines and programed learning, Volume II: Data and directions.* Washington, D.C.: Department of Audio-Visual Instruc-tion, National Education Association, 1965.

The successor volume to the Lumsdaine and Glaser book listed below, with papers on program development and research since 1960.

Goodman, Edith Harwith, ed. *Automated Education Handbook.* Detroit, Michigan: Automated Education Center, 1965.

A collection of articles in the field of programmed instruction and computer-assisted instruction, with special sections on language laboratories and curricular considerations. Includes a list of avail-able programs and university computing centers.

Green, Edward J. Programmed learning, Encyclopaedia Britannica: 1964.

A very brief, clear summary of the field of programmed instruction.

Lumsdaine, A.A. and Glaser, Robert, eds. Teaching machines and programmed learning: A source book. Washington, D.C.: Department of Audio-Visual Instruction, National Education Association, 1960.

Includes reprints or abstracts of most of the papers written on programmed instruction to 1960, including a number that are not available elsewhere.

Lysaught, Jerome P. & Williams, Clarence M. A guide to programmed instruction. New York: John Wiley & Sons, 1963.

A clearly written, useful introduction to programs and programming, organized in order of the steps taken in constructing a program. Meant to be used as an introduction both for those who plan to write programs and for those who wish to become familiar with programming methods in order to make effective use of programs written by others.

Markle, Susan Meyer. Good frames and bad: A grammar of frame writing. New York: John Wiley & Sons, 1964.

A program on programming. Discusses and utilizes linear, branching, and other styles of programming and includes a section on program editing, containing a number of practical problems for the student to work out. [The author is active in program writing (Dr. Markle has also written the junior high school vocabulary development program, Words, and other programs) and in the general field of programmed instruction.]

Ofiesh, Gabriel D. and Meierhenry, Wesley, C., eds. Trends in programmed instruction, papers from the first annual convention of the National Society for Programmed Instruction. Washington, D.C.: Department of Audiovisual Instruction, National Education Association, 1964.

A collection of papers representing current theory in the field of programmed instruction.

Resnick, Lauren B. Programmed instruction and the teaching of complex intellectual skills: Problems and prospects. Harvard Educational Review, 1963, 33, 439-471.

A discussion of the application of the principles of programming to the analysis of complex intellectual behaviors and the development of techniques for shaping these behaviors from simpler ones.

Skinner, B.F. The science of learning and the art of teaching. Harvard
  Educational Review, 1954, 24, 86-97. Also in A.A. Lumsdaine & R. Glaser,
  eds. Teaching machines and programmed learning: A source book. [Listed
  above.]

--------. Teaching Machines. Science, 1958, 128 , 969-977. Also in
  A.A. Lumsdaine & R. Glaser, eds. Teaching machines and programmed
  learning: A source book. [Listed above.]

  These two papers by B.F. Skinner were central to the beginning of
  widespread interest and activity in programming in the past decade.

--------. Review lecture: The, technology of teaching. Proceedings of the
  Royal Society, B., 1965, 162, 427-443.

  A lecture delivered November 19, 1964. Discusses operant conditioning
  procedures and their application to instruction in various subject
  matters.

Stolurow, Lawrence M. Teaching by machine. Washington, D.C.: Office of
  Education Cooperative Research Monograph No. 6, Contract No. OE-34010,
  1961.

  An examination of programs, programming principles, and teaching machines
  of different degrees of adaptability, in their relationship to various
  characteristics of the learner. Includes a chapter on research findings
  and an extensive bibliography.

Wiley, John & Sons. A guide for Wiley authors in the preparation of auto-
  instructional programs. New York: John Wiley & Sons, 1963.

  Guidelines for program writing, developed by one of the most active
  program publishers.

1.2.   Lists of Available Programs

Center for Programed Instruction. Programs, '63; A guide to programed
  instructional materials available to educators by September 1963.
  Washington, D.C.: Office of Education, OE-34015-63, 1963.

  Programs, '63, a list of 352 programs available at that time, gives
  information on publisher, price, program format, and other program
  characteristics, and includes a sample page or pages for each program.

Center for Programed Instruction. Programed instructional materials 1964-'65, a guide to programed instruction materials available for use in elementary and secondary schools as of April, 1965 (including a listing of programs annotated in Programs '63). New York: Bureau of Publications, Teachers College, Columbia University, 1965.

   This is a supplement to Programs, '63, cited above.

Clearinghouse for Self-Instructional Language Materials, Program Information Sheets. Washington, D.C.: Center for Applied Linguistics.

   A collection of descriptions of existing programs in foreign languages, English as a foreign language, English as a native language, and reading (literacy). Makes no attempt at evaluation but presents information as to terminal objectives, student level, related research reports, etc. Supplements and revisions appear as necessary.

Hendershot, Carl H. Programmed learning: A bibliography of programs and presentation devices. Bay City, Michigan: Carl H. Hendershot, 4114 Ridgewood Drive, 1964.

   Lists individual programs and information on their cost, publisher, availability, etc., though no samples of programs are included. Also has information on publishers and program presentation devices. Supplements to this bibliography are issued periodically.

1.3. Reviews of the Literature and Research

Gee, R.D. Teaching machines and programmed learning, A guide to the literature and other sources of information. Hatfield, Hertfordshire: Hertfordshire County Council Technical Library and Information Service, Hatfield College of Technology, 1965.

   An annotated bibliography including books, monographs and reports in fields relating to programmed instruction.

Holland, James G. Research on programming variables. In R. Glaser, ed. Teaching machines and programed learning, Volume II: Data and directions, [Listed above, sec. 1.1.]

   A review of the research on programming variables written by a colleague of B.F. Skinner's and the co-author with Skinner of the program, The analysis of behavior.

Joint Publications Research Service. Teaching machines and programmed learning in the Soviet bloc. (A survey of the Published Literature, 1962-1963). Washington, D.C.: U.S. Department of Commerce, February 18, 1964.

Summarizes published Soviet literature on programming activities and teaching machines, including reports on several foreign language programs and presentation devices. Includes bibliography of Soviet literature in the field.

Schramm, Wilbur. The research on programed instruction: An annotated bibliography. Washington, D.C.: Office of Education, Contract No. OE-34034, 1964.

Includes, in addition to the annotated bibliographic listings, an introduction summarizing the results of research on different program variables.

Silberman, Harry F. Self-teaching devices and programed materials. Santa Monica: System Development Corporation, Publication SP-663, 1962.

Reviews and summarizes the research on programming variables and the studies comparing programs with other methods of instruction. Also includes a discussion of trends and problems in the field of programming, as well as a bibliography.

1.4. Program Evaluation.

Jacobs, Paul I., Maier, Milton, H.,and Stolurow, Lawrence M. A guide to evaluating self-instructional programs. New York: Holt, Rinehart & Winston, Inc., 1966.

A comprehensive treatment of programmed instruction including an introductory section, guide to selecting a program, and a method to evaluate a program.

Joint Committee on Programed Instruction and Teaching Machines. Criteria for assessing programed instructional materials. Audio-Visual Instruction, 1963, 8, 84-89.

The 1962 Interim Report on the Joint Committee on Programed Instruction and Teaching Machines established by the American Educational Research Association,the American Psychological Association, and the Department of Audio-Visual Instruction, NEA. Provides guidelines for program selection by teachers and others not closely familiar with programmed instruction. Has been printed in a number of journals concerned with education.

Joint Committee on Programed Instruction and Teaching Machines. Joint Committee reports, September 1964 (Revised July 1965). <u>NSPI Journal</u>, 1965, <u>4</u>(8), 3-5.

This is a report of the Joint Committee, incorporating suggestions for program evaluation and review and for the reporting of program use data.

--------. Recommendations for reporting the effectiveness of programmed instruction materials. <u>AV Communication Review,</u> 1966, <u>14</u>(1), 117-123.

Provides recommendations for evaluating the effects produced by a given program.

--------. Supplement I to recommendations for reporting the effectiveness of programmed instruction materials, recommendations concerning program manuals. <u>AV Communication Review</u>, 1966, <u>14</u>(2), 243-246.

Suggests information to be included and guidelines to be followed in preparing manuals for teachers and other users of·programmed materials.

--------. Supplement I to recommendations for reporting the effectiveness of programmed instruction materials, recommendations for preparation of technical reports. <u>AV Communication Review</u>, 1966, <u>14</u>(2), 247-259.

Gives recommendations for documentation of the effectiveness of programmed materials.

Lane, Harlan L. & Geis, George. A program for reviews and a review of a program in linguistics. In Harlan L. Lane, et al., <u>Experimental analysis of the control of speech production and perception: 6</u>. Ann Arbor: University of Michigan, Department of Psychology - Behavior Analysis Laboratory, 1964. 15 p.

A list of questions to be asked by the reviewer of a program, illustrated by utilizing them in a review of <u>A Programed Introduction to Linguistics</u>, by Cynthia D. Buchanan.

Lumsdaine, A.A. Assessing the effectiveness of instructional programs. In R. Glaser, ed. <u>Teaching Machines and Programed Learning, Volume II: Data and directions</u>, 267-320. [Listed above, sec. 1.1.]

"The attempt is made here to discuss major issues in a sufficiently simple, non-technical manner to be intelligible to the seriously interested nontechnical person concerned with program assessment, either as user or producer, while also trying to identify some of the more important technical problems involved." (p. 267-268).

Rothkopf, Ernst Z. Some observations on predicting instructional
  effectiveness by simple inspection. Journal of Programed Instruction,
  1963, 2, 19-20.

"Twelve educators were asked to predict the effectiveness of seven
self-instructional arrangements of anthropological information from
simple inspection of the programs. The rank correlation between these
predictions and observed effectiveness was -.75."[Journal abstract].

A replication of Rothkopf's experiment and a discussion of the
significance of the results of both experiments can be found in
the following: Markle, Susan M. It figgers. NSPI Journal, 1965, 4(2),
4-5.

Stolurow, Lawrence M. Problems in evaluating automated instruction.
  Teachers College Record, 1961, 63, 66-70. Reprinted and abridged in
  J.P. DeCecco. Educational technology: Readings in programmed instruction.
  [Listed above, sec. 1.1.]

Stresses the danger of unduly restricting programmed instruction by the
adherence to rigid evaluative criteria based on presently available
programs. Also emphasizes the need for basic research in the field
and the importance of fitting programs into broader educational systems.

Tracey, William R. Program reviewers checklist. NSPI Journal, 1965,
  4(1), 6-7.

A series of suggested questions to be used by a program reviewer in
discussing different features of a program. The NSPI Journal, in which
the checklist appears, is attempting to publish one or more program re-
views in each issue. The checklist also appeared in the December 1963
issue of the same journal.

2. Programmed Foreign Language Instruction

2.1. General Papers

Working Committee on Programmed Learning of the 1962 Northeast Conference
  on the Teaching of Foreign Languages. Programmed learning: "A New
  look at learning." In William F. Bottiglia, ed., Reports of the working
  committees, Oxford, Ohio: American Classical League Service Bureau, 1963,
  19-60.

A summary for foreign language instructors of the field of programmed
instruction, with particular reference to problems of programming foreign
languages. Includes extensive samples from two language programs, a list
of research projects in progress, and a selected bibliography.

Carroll, John B. A primer of programmed instruction in foreign language
teaching. IRAL, 1963, 1, 115-141.

This paper is divided into two major sections: a general introduction to
programmed instruction; and the application of programmed instruction
to the teaching of foreign languages, including comments on several of
the foreign language programs available, and a discussion of some
problems faced in the development of programs and the use of programs
in the schools.

Lane, Harlan L. Programmed learning of a second language, IRAL, 1964, 2,
249-301. Also in R. Glaser, ed. Teaching Machines and Programed Learning,
Volume II: Data and directions. [Listed above, sec 1.1.]

This paper, written by a Skinnerian psychologist, includes a survey of the
psychological and linguistic research on a variety of problems related to
programmed instruction in foreign languages, such as discrimination training.
The discussion is divided into two sections in which Lane, following Skinner's
formulation, treats formal repertuires (in which the stimulus and response are
directly related in a one-to-one fashion) and thematic repertoires (corres-
ponding more closely to the ability to form meaningful utterances). A table
summarizes available programs in foreign languages, characterizing them in
the terms of this theoretical outlook. Also includes an extensive biblio-
graphy of research relating to programmed instruction in foreign languages.

2.2. Programming Principles, Research, and Development.

Barcus, Delbert, Hayman, John L., Jr., & Johnson, James T., Jr. Programming
instruction in elementary Spanish. Phi Delta Kappan, 1963, 44, 269-272.
Reprinted and abridged in J.P. DeCecco, Educational technology: Readings
in programmed instruction. [Listed above, sec.1.1.]

Report on the development and use in the Denver public schools of a program
for teaching Spanish reading and writing to sixth grade students who had
already completed a year of audio-lingual instruction in the language.

Barcus, Delbert L. Using a programed text with television. Programed
Instruction, 1964-65, 4(6), 1ff.

A discussion and summary of some of the work of the Denver-Stanford
project using programmed texts in conjunction with televised Spanish
instruction in the Denver public school system.

Barrutia, Richard. A suggested automated branch program for foreign languages. Hispania, 1964, 47, 342-350.

Describes equipment and procedures used in research on developing branching foreign language programs.

Bell, Robert & McDonald, Pearl S. Experimental use of self-instructional courses in Russian and Spanish by secondary school students. Arlington, Virginia: Arlington County Public Schools, April 1964. Office of Education, Contract No. OE-3-14-033.

A report on the use of the Audio-Lingual Language Programming Project (ALLP) Spanish and Russian programs with twelve Arlington high school students in a summer session course.

Boyd-Bowman, Peter. Self-instruction in the 'neglected' languages: A progress report from Kalamazoo College. Modern Language Journal, 1966, 50(1), 21-23.

Discusses development and usage of self-instructional program in 'neglected languages' designed to "lay foundation in oral competence. . . roughly equivalent to the first three semesters of formal instruction elsewhere."

Buiten, Roger, & Lane, Harlan. A self-instructional device for conditioning accurate prosody. IRAL, 1965, 3, 205-219.

Describes research with the Speech Auto-Instructional Device (SAID) at the University of Michigan.

Carroll, John ... Programmed self-instruction in Mandarin Chinese. Wellesley, Massachusetts, Language Testing Fund, 1963.

A report on Carroll's development and use of a Mandarin Chinese program with his language program presentation device called the Audio-Visual Instructional Device.

--------, & Leonard, Graham. The effectiveness of programmed "Grafdrils" in teaching the Arabic writing system. Cambridge, Massachusetts: Laboratory for Research in Instruction, Graduate School of Education, Harvard University, 1963. Office of Education, Contract No. OE-3-14-006.

The "Grafdrils" were developed from the Phonetic Script section of the Modern Language Aptitude Test and used in several experiments comparing their effectiveness with that of other methods of teaching the writing of Arabic script.

Clark, William H. & Clark, Margaret G. Achievement in elementary German under programmed and conventional instruction: a preliminary study. Modern Language Journal, 1966, 50(2), 97-100.

"Compares performance on MLA-Cooperative Tests of two groups of college students, one using Ellert program."

Clark, William H. & Clark, Margaret G. Programmed German faces the test. NSPI Journal, 1966, 5(6), 11-13.

Supplementary report based on data gathered and reported in Modern Language Journal (listed above). Offers additional comments on results and plans for future research.

Egli, William. Some linguistic aspects of programming English as a foreign language. Paper read at the International Conference on Modern Foreign Language Teaching, Berlin, September 2, 1964.

This paper, and those by Julyan Watts and Jerome B. White listed below, deal primarily with the development of four EFL programs by General Programmed Teaching Corporation-Europe for publication by Encyclopaedia Britannica. Egli's paper discusses the choice of content for the programs.

Estarellas, Juan & Regan, Timothy F. Effects of teaching sounds and letters simultaneously at the very beginning of a basic foreign language course. Unpublished paper. Department of Languages and Linguistics, Florida Atlantic University, 1965.

Gives the results of an experimental use of Professor Estarellas' Spanish program, From Sound to Letter.

Ferster, C.B. The psychobiological investigation of the development of new verbal behavior. Silver Spring, Maryland: Institute for Behavioral Research, July 1966.

A discussion of three experiments involving the use of a semi-automatic teaching machine for instruction in German and Vietnamese. Effects of reinforcement are discussed.

Fund for the Advancement of Education. Four Case Studies of Programed Instruction. New York: The Fund for the Advancement of Education; June, 1964.

Detailed account of use of programs in four schools and implications for programmed instruction in general.

Garvey, Catherine & Rocklyn, Eugene H. <u>Development and evaluation of a tactical Mandarin Chinese language course.</u> HumRRO Technical Report 65-15, December 1965. Alexandria, Virginia: Human Resources Research Office of the George Washington University.

"To meet the need for a short, self-instruction tactical language course in a Far Eastern tonal type language of potential military significance, a course in Mandarin Chinese was developed, by adapting the methods described in Subtask CONTACT II . . . (Russian). The purpose of the course was to enable combat soldiers to acquire perishable tactical information from newly captured POWs. The course was programed in the format of the Russian model with a major change in the addition of tone-discrimination and tone-production lessons."

Hayes, Walter M., S.J. <u>An experiment in multi-language programming.</u> Paper presented at NSPI convention on May 5, 1965, Philadelphia, Pennsylvania.

Discusses development of language programs in Greek, Latin and French using the New Testament as text material.

Marquardt, William F. Programmed instruction: General principles for the teaching of English as a second language. <u>Language Learning</u>, 1963, <u>13</u> (2), 77-83.

Discusses some of the principles of programming in relation to the programming of foreign languages, particularly English as a foreign language.

Marty, Fernand. <u>Programing a basic foreign language course: Prospects for self-instruction.</u> Roanoke, Virginia: Audio-Visual Publications, 1962.

This is one of several publications by Fernand Marty about his development of <u>Active French: Dialogues</u> and <u>Active French: Foundation Course</u>. Discusses the programming principles he followed, some of the techniques used, and gives a description of the course materials developed to that time (these have since been revised).

Morton, F. Rand. The language laboratory as a teaching machine. <u>International Journal of American Linguistics</u>, 1960, <u>26</u>, 113-116. Also appears as Ann Arbor: University of Michigan, Publications of the Language Laboratory, Series Preprints and Reprints, Vol. I.

Includes a statement of Morton's programming principles and a description of his 1953-54 experiment in elementary Spanish instruction at Harvard, which formed the basis, in content and procedure, of the ALLP Spanish program. Provides an introduction to Morton's work and that of the Audio-Lingual Language Programming Project.

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‑‑‑‑‑‑‑‑‑ et al. <u>Programming of audio-lingual language skills for</u>
<u>self-instructional presentation. Selected work papers presented at</u>
<u>the first conference of language programmers.</u> Ann Arbor: University
of Michigan, Publications of the Language Laboratory, Series Pre-
prints and Reprints, Volume VI, 1961.

A selection of papers presented at the April 1961 conference held
at the University of Michigan. Includes papers by most of those
active in foreign language programming at the time, several of whom
have not published elsewhere. The most complete account of the field
of foreign language programming in 1960-61.

Morton, F. Rand. <u>The Lindenwood experiment: The trial use of the ALLP-II</u>
<u>Spanish self-instructional program as the sole instructional medium</u>
<u>for first year Spanish students in a liberal arts college.</u> Final report
to the U.S. Office of Education, Contract No. OE-5-14-020. September 1965.

Report of the use of Morton's ALLP Spanish program at Lindenwood College
during the academic year 1964-65.

Mueller, Theodore H. <u>Trial use of the ALLP French Program at the University</u>
<u>of Akron, 1963-64.</u> Akron: University of Akron, 1964.

A detailed report on Mueller's use and revision at the University of Akron
of the French program he developed under the Audio-Lingual Language
Programming (ALLP) Project directed by F. Rand Morton.

Mueller, Theodore H. <u>Revisions of the ALLP French Program and second trial</u>
<u>use at the University of Akron, 1964-65.</u> Report to the U.S. Office of
Education on research conducted under Title VI, Contract No. OE-5-14-007.
August 1965.

The second report on Mueller's revision and use of the ALLP French program.

Mueller, Theodore and Harris, Robert. First year college French through
an audio-lingual program. <u>IRAL</u>, 1966, <u>4</u>(1),19-38.

Compares performance of college students using F. Rand Morton's <u>Revised</u>
<u>ALLP French Program</u> with that of students taught by traditional methods.

Mueller, Theodore and Niedzielski, Henri. Programmed instruction in
teacher retraining (NDEA Institutes). <u>Modern Language Journal</u>, 1966,
<u>50</u> (2), 92-97.

Describes use of <u>ALLP French Program</u> to retrain teachers taught by
traditional methods.

Newmark, Gerald. A new design for teaching foreign languages using
dramatic motion pictures and programmed learning materials. Santa
Monica: System Development Corporation, Publication SP-1027, 1962.

On the development of a multi-media system for teaching foreign
languages (Spanish) to elementary school students, emphasizing
instruction in listening comprehension and a general audio-lingual
approach.

--------. Research in programmed instruction in Spanish with seventh-
grade students. Santa Monica: System Development Corporation, Technical
Memorandum TM-895/103/00, 1964.

A report of research conducted by System Development Corporation, in
which a published Spanish program was used with seventh-grade students
and systematically revised on the basis of student performance in order
to increase the program's effectiveness. A series of remedial branches
and fast tracks for the various language skills were developed, and
students assigned to different branches on the basis of diagnostic
tests administered at intervals through the program sequence.

Reynolds, R. Utilization of programmed instruction at Ball State University,
Paper presented at NSPI Convention, May 1965.

Describes use of programmed instruction in four different situations:
self-instruction; supplement to course; extra learning for marginal
students; and research on an experimental basis.

Rocklyn, Eugene H.; Moren, Richard I.; & Zinovieff, André. Development
and evaluation of training methods for the rapid acquisition of language
skills. HumRRO Research Report, January 9 1962. Alexandria, Virginia:
Human Resources Research Office of the George Washington University.

A report on the development of the Contact I prototype program for teaching
a limited amount of Russian for frontline questioning to members of the armed
forces.

Rocklyn, Eugene H. The evaluation of self-instructional foreign language
courses. Paper presented at the Annual Convention of the National Society
for Programmed Instruction, San Antonio, Texas, April 1-4, 1964. Mimeo.,13 p.

A discussion of some principles of program evaluation and a report on the
final evaluative testing of the Contact II Russian program.
These reports of the research on the development of the HumRRO Contact
Russian and Chinese programs are summarized and updated in the following
papers.

‒‒‒‒‒‒‒‒. Application of programed instruction to foreign language and literacy training. Paper presented at the Conference on the Military Application of Programed Instruction, North Atlantic Treaty Organization Science Committee, Naples, Italy, April 20-23, 1965.

‒‒‒‒‒‒‒‒. A self-instructional tactical language course in Russian. HumRRO Technical Report 65-14, December 1965. Alexandria, Virginia: Human Resources Research Office of the George Washington University.

"To enable the combat soldier to obtain perishable, tactical information from newly captured prisoners of war, a brief, self-instructional Russian language course was developed and evaluated. Materials obtained from questionnaires administered to combat-experienced personnel were reviewed and refined, resulting in a final version of course content that covered areas of information likely to be used in any offensive or defensive questioning situation . . . The structure and questioning techniques seem effective in helping to elicit understandable answers from non-English-speaking personnel and may serve as a basis for development of similar courses in other languages."

Saltzman, Irving J. Programmed self-instruction and second language learning. IRAL, 1963, 1, 104-114.

Dr. Saltzman is an experimental psychologist active in foreign language programming. This paper discusses some of the research undertaken by Saltzman and his colleagues in developing their program, Beginning Russian.

‒‒‒‒‒‒‒‒. The construction and evaluation of a self-instructional program in Russian. Indiana University. Final Report on Office of Education Title VII Project No. 658, no date.

A detailed report on the content, development, and underlying principles of the entirely self-instructional, one semester introductory Russian course being prepared by Saltzman and others at Indiana University.

Saltzman, Irving J., Buck, George C.,and Bongart, Klaus H. Observations on the use of three self-instructional programmed foreign language courses. AV Communication Review, 1965, 13(1), 53-58.

Comparison of Ellert German, Sapon Spanish and Saltzman Russian programs in adult education courses.

Sapon, Stanley M. Programmed learning and the teacher of foreign languages. In the Final Report of the Seminar in Language and Language Learning, Department of Romance Languages and Literatures, University of Washington, 1962.

A brief discussion of some problems and issues in the development of foreign language programs and the training of foreign language teachers.

Sawyer, Jesse, Ervin, Susan, Silver, Shirley, D'Andrea, Joanne, & Aoki, Haruo. The utility of translation and written symbols during the first thirty hours of language study. Berkeley: University of California, 1962. Report of research performed under contract with U.S. Office of Education.

A report of an experiment to determine whether the presence of a written text and the use of translation at the start of foreign language instruction impair or facilitate learning of different foreign language skills, and the effect of different orders of presentation of translation and untranslated materials on learning. The students were taught spoken Japanese, using a text printed in a modified phonetic script.

Schaeffer, Halmuth H. A vocabulary program using "Language redundancy". Journal of Programed Instruction, 1963, 2, 9-16.

A description and report on Schaefer's German vocabulary program, in which an increasing number of German words and structures were substituted for English ones in Poe short stories. A discussion of the same research appears in the report of the Berlin Conference. [Listed above, sec. 1.1.]

Schramm, Wilbur, and others. The context of instructional television-- Summary report of research findings, 1960-1964. Report on research conducted under Title VII Project No. 354. June 1964.

See also the papers by Barcus and others on the research conducted by the Stanford University Institute for Communication Research and the Denver Public Schools.

Shulze, S., Arendt, J.D., and Rainey, R. G. A two year study of the use of programmed materials for the instruction of French in high school. Minneapolis: Minneapolis Public Schools, 1966.

An evaluation of progress made by average high school classes using Valdman's SEF materials.

Torrey, Jane. The learning of grammar: An experimental study of two methods. Progress Report II on U.S. Public Health Service Research Grant No. 07167. New London, Conn.: Connecticut College, January 1966.

A laboratory experiment on the learning of word order in a foreign language, comparing learning from pattern drills with learning of vocabulary plus grammar. Three types of Russian sentences and eleven form-classes of Russian words were used for the experimental material. (Note: This supersedes the earlier Progress Report, February 1965.)

TMC-Field tests, Some representative annotated case studies of the use of TMI-Grolier programed materials during the 1961-62 school year.

Discusses several cases of use of programs for experimental purposes including one project (Case study IV) using the TMC Basic Spanish with 4-7th grade students.

Valdman, Albert. Toward self-instruction in foreign language learning. IRAL, 1964, 2, 1-36.

Discussion of the content and use of the Multiple Credit Elementary French (MCEF) program developed by Valdman, Belasco, and Cintas at Indiana University.

--------. The implementation and evaluation of a multiple-credit self-instructional elementary French course. Final report to the U.S. Office of Education on research conducted under Contracts No. OE-4-14-009 and OE 5-14-002.

A report on the development and use at Indiana University of Valdman, Belasco and Cintas' MCEF and SEF programmed three-semester college French course.

Watts, Julyan A. Administering and testing a series of self-instructional language programmes. Paper read at the International Conference on Modern Foreign Language Teaching, Berlin, September 4, 1964.

This paper, like those by Elgi and White, describes the development of the GPTC-EB programs in English as a foreign language, Watts being primarily concerned with developmental testing of the programs. He includes a discussion of a formula for figuring pre-test to post-test gain scores, based on the ratio of actual gain to maximum potential gain.

White, Jerome B. Foreign language learning in the light of programming theory and technique. Paper read at the International Conference on Modern Foreign Language Teaching, Berlin, September 2, 1964.

This paper, like those by Egli and Watts, focuses on the development of the GPTC-EB EFL programs. It also includes some general remarks on foreign language programming and discussion of the other language programs developed by GPTC.

2.3. Reviews of Programs and Publications.

Carroll, John B. Reviews of: Fernand Marty, Programing a basic foreign language course: Prospects for self-instruction; and F. Rand Morton et al., Programming of audio-lingual language skills for self-instructional presentation. Contemporary Psychology, 1962, 7, 437-439.

--------. Sorcerer's apprentice at large. Contemporary Psychology, 1964, 9, 188-90

A review of Writing Russian Script, by Irving J. Saltzman.

Valdman, Albert. Reviews of: Fernand Marty, Programing a basic foreign
language course: Prospects for self-instruction; and Eliane Burroughs,
A programmed course in French phonetics. French Review, 1963, 36, 419-
422.

3. Programmed Instruction in Reading and Literacy Training.

Berman, Mark Laurence. The development of proficiency in the use of the
English language in groups of non-western indigenous peoples through
programmed instruction: A study in applied anthropology and community
development. Paper No. 1, Tempe, Arizona: Report of the "Variables
Influencing Behavior" Project: Dr. Jones, Director, 1964.

Discusses development of one phase of English program to be used with
Mexican and Yaqui students in Guadalupe. Some preliminary data is
presented.

Brethower, Dale M. Classroom management of a reading program: The teacher's
role.

Analyzes the role of the teacher using the Michigan Successive Discrimination
Language Program.

Ellson, D.G., Barber L., Engle, T.L., and Kampwerth, L. Programed Tutoring:
A teaching aid and a research tool. Reading Research Quarterly, 1965, 1(1),
77-128.

Progress report of ten experiments using programmed instruction with tutoring
to teach beginning reading to retarded children, slow learners and normal
children.

Fanning, Robert. New York's use of programed instruction, with emphasis
on reading. Paper presented at the NSPI Conference, May 1965.

Discusses present status and future plans for the use of programmed
reading instruction at the elementary school level.

Hoffman, Wallace E. The use of programmed instruction in teaching high
school English. Paper presented at NSPI Convention, May 1965.

Report of research on use of English 2600 and English 3200 with high
school students.

Reid, James M. An adventure in programing literature. The English
Journal. 1963, 52(9), 659-673.

Describes the author's efforts in writing and testing programmed
instruction in poetry and reading.

Hayes, Alfred S., ed. <u>Recommendations of the work conference on literacy</u>
   <u>held for the Agency for International Development, United States Depart-</u>
   <u>ment of State, at Airlie House, Warrenton, Virginia, May 23-28, 1964</u>.
   Washington, D.C.: Center for Applied Linguistics, 1965.

   Although the report is not primarily concerned with programmed instruc-
   tion, some possible applications of programming to literacy :ra' ing
   are discussed in it.

Markle, Susan M. Programed instruction in English. In R. Glas , ad.
   <u>Teaching machines and programed learning, Volume II: Data and directions</u>,
   546-583. [Listed above, sec. 1.1.]

   Discussion of the feasibility of using programed materials for teaching
   English and brief review of some of the existing English programs.

Martin, John H. Freeport (Long Island) Public School's experiment on
   early reading. <u>Programed Instruction</u>, 1964-65, <u>4</u>(2), 9ff.

   Describes research on reading instruction utilizing computer-based
   typewriter.

Popp, Helen M. <u>Programmed reading in the elementary grades</u>. A paper
   presented at the International Reading Association National Convention.
   Philadelphia, 1964.

   A review of several reading programs and suggestions for teachers
   contemplating using them.

Project Literacy. <u>Report of the Fourth Research Planning Conference held</u>
   <u>under the auspices of Project Literacy in Princeton, New Jersey, December</u>
   <u>11-13, 1964</u>. Project Literacy Report No. 4, Cornell University, Ithaca,
   New York. December, 1964.

   Includes summaries of several research projects relating to programmed
   reading instruction.

Silberman, Harry F. Reading and related verbal learning. In R. Glaser,
   ed. <u>Teaching machines and programed learning, Volume II: Data and direc-</u>
   <u>tions</u>, 509-545. [Listed above, sec. 1.1.]

   Review of studies relevant to use of programmed materials for reading
   instruction.

Woolman, Myron. <u>The Progressive Choice Reading Program</u>. Washington, D.C.:
   The Institute of Educational Research, Inc. No date.

--------. Evaluation of the Progressive Choice reading method. Washington,
D.C.: The Institute of Educational Research, Inc., 1964.

These two papers describe the reading method and materials developed by
Dr. Woolman for use with culturally deprived adolescents, and deprived
or retarded young children. Some of the materials, entitled Reading in
High Gear, are published by Science Research Associates.

4. Computer-Assisted Instruction (CAI) and Language Teaching

Coulson, John E., ed. Programmed learning and computer-based instruction:
Proceedings of the Conference on Application of Digital Computers to
Automated Instruction October,10-12, 1961. John Wiley & Sons, Inc. 1962,

Basic book on computer-assisted instruction. The book contains several
articles and is divided into three sections: Theory and experimentation
in programmed learning; Computer-based instructional systems; and
Computer technology in automated teaching.

Dick, W., The development and current status of computer-based instruction.
American Education Research Journal, 1965, 2('). 41-53.

Discussion of current status and problems of use of computers with
programmed instruction.

Hickey, Albert E. and Newton, John M. Computer-assisted instruction: A
survey of the literature. Newburyport, Massachusetts: ENTELEK, Inc.
January 1966.

Brief description of the major computer systems and projects using
them for teaching purposes.

Koppitz, Werner J. and Charap, Marilyn. German through computer guided
instruction: First report. New York: IBM Research Paper RC-758,
August 1, 1962.

Describes a course designed to teach a reading knowledge of German,
using a digital computer (IBM 650).

Licklider, J.C.R. Preliminary experiments in computer-aid teaching. In
J.E. Coulson, ed. Programmed learning and computer-based instruction.
(Listed above.)

Describes a paired-associate drill phase of a computer-based German
program.

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Spolsky, Bernard. Computer-based instruction and the criteria for
   pedagogical grammar. <u>Language Learning</u>, 1965, <u>15</u> (3&4), 137-145.

   Discusses a CAI system to teach formation of verb phrases in
   English which allows branching on the basis of responses construc-
   ted by the student.