This final report of the Alabama Research Coordinating Unit for Vocational and Technical Education summarizes activities during the period from May 1, 1967 to August 31, 1968. The major activities of the RCU included: (1) employing and developing a competent research staff, (2) conducting informative meetings, (3) publishing brochures, (4) appointing a Unit Advisory Committee, (5) developing a research-resource center, (6) disseminating research findings, (7) assisting local school system with comprehensive studies, (8) conducting research and development seminars, (9) conducting institute-workshop for local level personnel, and (10) conducting research studies. (CH)
FINAL REPORT
Project No. 6-2783
Contract No. OEG-2-6-062783-2212

ALABAMA RESEARCH COORDINATING UNIT
FOR VOCATIONAL AND TECHNICAL EDUCATION

Alabama State Department of Education
Montgomery, Alabama 36104
under contract to
Auburn University
Auburn, Alabama 36830

September, 1969

U.S. DEPARTMENT OF HEALTH,
EDUCATION AND WELFARE

Office of Education
Bureau of Research
The educational research and development activities reported herein were performed pursuant to Contract No. OEG-2-6-062783-2212 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.
## CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. SUMMARY</td>
<td>1</td>
</tr>
<tr>
<td>II. INTRODUCTION</td>
<td>2</td>
</tr>
<tr>
<td>Problem</td>
<td>2</td>
</tr>
<tr>
<td>Background</td>
<td>2</td>
</tr>
<tr>
<td>Purposes</td>
<td>3</td>
</tr>
<tr>
<td>III. METHOD</td>
<td>4</td>
</tr>
<tr>
<td>Organization</td>
<td>4</td>
</tr>
<tr>
<td>Unit Administration</td>
<td>8</td>
</tr>
<tr>
<td>Personnel</td>
<td>10</td>
</tr>
<tr>
<td>Facilities</td>
<td>10</td>
</tr>
<tr>
<td>IV. RESULTS</td>
<td>12</td>
</tr>
<tr>
<td>V. DISCUSSION</td>
<td>15</td>
</tr>
<tr>
<td>VI. CONCLUSIONS</td>
<td>16</td>
</tr>
<tr>
<td>VII. APPENDIXES</td>
<td>18</td>
</tr>
</tbody>
</table>

Figure 1 - Administrative Organization for Vocational Division

Figure 2 - Administrative Organization for Alabama Research Coordinating Unit
SUMMARY

The Alabama Research Coordinating Unit was established through a grant to State Department of Education on June 27, 1966 under the provision of Section 4(c) of P.L. 88-210. The Unit became functional on May 1, 1967 under contract with Auburn University as the Occupational Research Coordinating Unit (ORCU) for the purposes of stimulating activities to improve research competencies, assist individuals with research design and methodology, conduct significant research, and disseminate research findings.

The Unit is organized into five operational sections with designated staff members assuming responsibilities for the research functions of each of the sections. The professional staff of the Unit consists of a director, three research associates, a research information specialist, and three part-time research assistants. The clerical staff consists of one and one-half equivalent persons. Student assistants are utilized for handling duplicating, assembling, and mailing materials.

During development the Unit staff engaged in activities designed to accomplish its purposes. Some of the more significant activities were: (1) employing and developing a competent research staff, (2) conducting meetings to inform state and local personnel about the Unit, (3) publishing brochures, (4) appointing of a Unit Advisory Committee, (5) developing a research-resource center, (6) disseminating research findings, (7) assisting local school system with comprehensive studies, (8) conducting research and development seminar, (9) conducting institute-workshops for local level personnel, and (10) conducting research studies.

Subjective evaluation indicates that the activities conducted were relevant to fulfilling the objectives of the Unit. The Research Coordinating Unit continues to operate under contract with Auburn University under the provisions of the Alabama State Plan for Vocational Education.
INTRODUCTION

The Problem

The organization and development of the "Alabama Research Coordinating Unit for Vocational and Technical Education" was prompted by expressions of the need for more emphasis on research in vocational education. These expressions for greater research involvement from sources on the local, state, and national level seem to epitomize that research should permeate all programming phases of vocational education.

The Panel of Consultants on Vocational Education in 1962 recommended..."the importance of research in vocational education must be recognized more widely and steps taken to develop research and development commensurate with needs."

The mandates of the legislation for vocational education also reflect the need for research as evidenced by provisions made for research and development in the Acts. Legislation has been directed toward providing assistance to maintain, extend, and improve existing programs of vocational education.

In recent years legislation has been more explicit in providing assistance for developing new programs, so that persons of all ages in all communities of the State—those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with handicaps—will have ready access to vocational training or retraining of a high quality and realistic in light of actual or anticipated opportunities for gainful employment. A mandate of this magnitude requires and emphasizes the integration of research into the programming of programs.

Basically the project explained in this report is the initial step of the state to administer a systematic and continuing program of research in vocational education.

Background

In April, 1966, the Vocational Division of the Alabama State Department of Education submitted a proposal for the development of a Research Coordinating Unit for Vocational and Technical Education to the U. S. Commission of Education under provisions of Section 4(c) of P. L. 88-210, 88th Congress. The proposal was funded on June 27, 1966. However, due to staffing difficulties the Research Coordinating Unit (RCU) did not become functional until May 1, 1967. Since the
RCU was not able to initiate research activities, a large amount of the funds under the original contract remained unexpended.

On May 1, 1967, the Research Coordinating Unit became functional under a contract between Auburn University through the School of Education and the State Department of Education through its Vocational Division. On June 27, 1967, the period of the grant contract was extended to June 27, 1968, without additional cost to the Federal Government.

On June 27, 1968, a second grant contract was authorized for $49,600 in Federal funds and $25,960 in local funds for a total of $75,560. This contract was extended on June 24, 1969, to August 31, 1969, without additional cost to the Federal Government.

The Research Coordinating Unit (ORCU) is presently operating under contract (Appendix A) with Auburn University under provision of the Alabama State Plan for Vocational Education.

Purposes

The Alabama Research Coordinating Unit (ORCU) was organized to stimulate and activate research and development activities in vocational-technical education. The original objectives which continue to govern unit activities are:

1. To stimulate activities which will result in increasing interest and improving competence in research through individual consultation and group training programs.

2. To provide assistance for individuals and groups in vocational-technical education with research design and methodology.

3. To conduct research in vocational-technical education.

4. To provide research and program development assistance to the vocational-technical education services.

5. To disseminate relevant research findings in vocational-technical education.
METHOD

Organization

The Occupational Research Coordinating Unit occupies a strategic position (Figure 1) within the state structure enabling it to enhance and strengthen local involvement in research and research related programs that are beneficial to the improvement of vocational education in the state.

The efforts of the Unit are directed toward serving public school programs; however, this is not its sole concern. The role of coordination between the Unit and businesses and industries necessitates working with agencies and organizations outside the formal structure of public education, especially those that conduct program activities that are related to or have implication for program development in vocational-technical education.

The ORCU is considered as a service unit within the state structure for vocational education. Requests for services are received by the Unit from vocational teachers, instructors, and counselors; local boards of education; state vocational education supervisory services; and the Office of the Assistant Superintendent for Vocational and Adult Education.

The Unit is organized into five operational sections (Figure 2) with designated staff members assuming responsibility for the research functions of the sections.

The primary research purpose of the Community Resources Analysis (CRA) section center around the analysis of manpower supply and demand information. Specific functions of the section are:

1. To collect and systematize data as to job opportunities for use in vocational counseling.

2. To collect and systematize data of labor supply and demand by occupational classifications for program planning purposes.

3. To collect and systematize data relative to skills availability, skilled labor shortages, substantial unemployment and underemployment.

4. To collect and systematize economic base data for the planning of community economic growth and development through vocational-technical education programs.

Research efforts of the Manpower Development and Utilization (MDU) section involve the sociological, cultural, and educational
considerations necessary for programming vocational-technical education. Specific functions of the section are:

1. To systematize manpower supply and demand data relative to skills potential and/or availability for the purpose of stimulating the development of vocational-technical education programs in public schools.

2. To generate* studies to assess the special needs of the future and present labor force that could be served by vocational-technical education.

3. To generate studies relative to student follow-up and the measurement and evaluation of trainee progress.

4. To generate studies related to sociological and cultural factors related to occupations.

Activities of the Program Management and Development (PMD) section are directed toward improving vocational-technical educational programs through the organizational structures and administrative patterns in the public schools. Specific functions of the section are:

1. To generate studies related to programs in leadership development, teacher recruitment and education, program standards, instructional facilities, and accreditation.

2. To generate studies for the development of programs for individuals with special needs that should be served by vocational-technical education.

3. To generate studies related to program development for the comprehensive high schools, area vocational schools, and technical institutes.

4. To generate evaluative studies to assess the efficiency and effectiveness of vocational-technical education programs.

The research activities of the Curriculum Development and Evaluation (CED) section are directed toward the development of curriculums in vocational-technical education. The evaluation of curricular materials and other educational media and practices also receive attention. Specific functions of the section are:

*Generate to be interpreted as a source of stimulation, coordination, conducting field studies, and researching reviews.
1. To generate studies to determine trainee needs for entry and advancement in occupations.
2. To generate studies for the development of commonality curricula, articulation, and inter-disciplinary programs for vocational-technical education.
3. To generate studies to assess the communicative effectiveness of teaching methods and learning resources for vocational-technical education programs.
4. To generate studies for the development of occupational information programs and the improvement of vocational counseling programs.

The Research Information Services (RIS) section promotes the application of research and development findings to the problems faced by vocational teachers, supervisors, and administrators of vocational-technical education programs. Specific functions of the section are:

1. To collect and assemble operational and planning data for local and state programs.
2. To interpret and disseminate research findings for the practitioner in non-technical language.
3. To repackage research and development findings for specific non-research audiences.
4. To conduct research utilization seminars for vocational-technical education personnel.

Unit Administration

Service requests received by the ORCU are classified as either active or inactive by the staff. Classification is based on the following:

1. Is the request research or research related?
2. Is the request related to the state research priority areas, and the recommendations of the advisory councils on the local, state, and national level?
3. Will the request require the allocation of resources beyond what is available at the time the request is received?
4. Is the request a service normally provided by the vocational
supervisory services of the Vocational Division of the State Department of Education?

Individuals making a service request are notified of the priority classifications within two weeks. Notifications of inactive priorities state reasons for the classification. Service requests receiving an inactive priority classification will be referred to other appropriate institutions and agencies if the individual making the request so desires. Active priority projects are assigned to ORCU staff coordinators, and the individual making the request is notified as to when project outputs can be expected.

All monies, except those expenditures available for staff time and travel, are budgeted for internal ORCU operations. No monies are available through the Unit for funding projects; however, the Unit provides proposal assistance to individuals, school systems, and other agencies seeking funds from the state or other agencies.

The allocation of Unit staff time and travel for funded projects is held to a minimum. Local school systems requesting staff services associated with funded projects are expected to pay staff expenses not to exceed the established per diem and mileage rate for state employees. Continuous and extended staff services associated with funded projects from government agencies and private foundations are handled through contract negotiations.

A project management plan is developed for all active projects conducted by the Unit. The process of initiating and carrying out a project consists of the following procedural steps:

1. Staff coordinators identify and organize project objectives and then plan and employ resources to accomplish the objectives by developing a work breakdown structure.

2. Staff members calculate time estimates for each work-task in the project breakdown structure. Estimates are based upon average work schedules and established independently of pre-set calendar days.

3. A flow diagram (network) consisting of planned sequences of accomplishment, interdependencies, and the inter-relationship of the activities and events is developed by the project staff.

4. Outlook charts showing positive and negative stack conditions are kept on all non-routine activities.

5. Final reports or output documents are prepared for all research, training and dissemination projects.
The ORCU is not considered as being primarily a research conducting unit. The primary concern of the Unit is stimulation, coordination, and development of research and development activities. All full-time staff members are assigned duties in (1) research, (2) research training, (3) research dissemination, and (4) routine operational activities. All part-time research assistants are assigned to specific projects or Unit operational duties.

In addition to special in-house and field projects the RCU conducts the following continuous activities.

1. Preparing and distributing periodically a state listing of significant research and development priorities for vocational-technical education.

2. Gathering, reviewing, classifying, and filing pertinent research literature.

3. Disseminating research findings to vocational-technical education personnel.

4. Assisting local school systems in making comprehensive studies for vocational education.

5. Conducting research utilization seminars for vocational-technical education personnel.

6. Assisting the Vocational Division of the State Department of Education with the administration of the state research exemplary program under the state plan.

**Personnel**

The professional staff has ranged in number from half-time director in May of 1967 to full-time director and four full-time research assistants, two who served as full-time research associates from July 15, 1967 to June 15, 1969.

The clerical staff of the Unit has ranged in number from one part-time secretary in 1967 to one and one-half-time equivalent persons at present. Wage-hour student assistants have been utilized for handling, duplicating, assembling, and mailing materials.

Appendix B reflects the names, positions of professional staff, percent time, and dates of employment of the ORCU staff since May 1, 1967.

**Facilities**

The ORCU is located in the School of Education at Auburn University.
sity, Auburn, Alabama. The University has assigned space for the Unit in the Vocational Education Center. The area includes four offices for eight staff positions, an office-conference room for the director, an office for clerical staff, areas for graduate research assistants and the research-resource center. All space was recently renovated.

Equipment for the ORCU is compatible with equipment used by other research information centers. Indexes and files are maintained in accordance with subject indexing systems.

Acquisition of equipment is accomplished by priority. Continuous updating and replacement is annually. Leasing is considered as an alternative to purchase. Monies are budgeted annually for equipment maintenance.

Special equipment for the Unit includes microfiche reader, microfiche reader-printer, offset duplicating equipment, copying machine, folding machine, stapler, spiral binding machine, calculator, and portable tape recorder.

The location of the Unit at Auburn University makes accessible many resources which facilitate research and research training activities. The Unit has access to the facilities of the Computer Center, University library, curriculum material centers, and consultants in the related disciplines. The Unit is in the Department of Vocational, Technical, and Practical Arts Education which includes teacher education programs in all of the vocational education fields and professional preparation programs in rehabilitation services.

Auburn University is located only 56 miles from the State Department of Education; therefore, the consultants from all areas of education, including all fields of vocational education, are readily accessible to the Unit.

A resource of great potential value to the Unit is the University graduate student. The students and the ORCU can be of a mutual benefit. The students can gain valuable research experience while serving as graduate research assistants to the Unit staff in conducting research and related activities.
RESULTS

The staff devoted considerable time in organizing the Unit, developing staff competencies, developing and conducting in-house research projects, and providing field assistance to local school systems.

The following is a list of ORCU activities dating from May 1, 1967, to August 31, 1969, including both those completed and those in progress. These have been classified according to the purposes of the Unit.

A. Stimulate activities which will result in increasing interest and improving competence in research through individual consultation and group training programs.

1. Research and Development Seminars for Local and State Level Personnel in Vocational-Technical Education (2).

2. Institute-Workshop for Planning Developmental and Related Programs in Vocational-Technical Education for Local Level School Personnel.

B. Provide assistance for individuals and groups in vocational-technical education with research design and methodology.

1. A Five-Year Developmental Occupations Core Program for Academically and Socio-Economically Disadvantaged Youth.


4. An Evaluation of Electronic-Communications Farm Records and Accounting System.

5. A Survey of Food-Service Operations by Selected Hospitals in the Southern Region.

6. Training Institute for Modifying Vocational Education in Rural Areas.

7. Consultative services provided twelve graduate students from four different institutions.
C. Conduct research in vocational-technical education.

1. An Occupational Survey of Former Students of Alabama High Schools Offering Programs in Vocational Education.

2. Development of A Verbal Model for Systematizing and Integrating Data for Program Planning and Development in Vocational-Technical Education.

3. A Scale for Measuring Attitudes Toward Vocational-Technical Education.


8. A Study of Occupational Placement by Vocational Agriculture in Alabama.


*10. A Study of Competencies Needed in Selected Occupations as Basis for Course Planning and Curriculum Construction for Basic Vocational Education.


D. Provide research and program development assistance to the vocational-technical education services.

1. Assisted fourteen local systems in collecting supportive data for five-year plans for vocational education.

*Study in progress.
2. Assisted three state vocational supervisory services with eight program development projects.

3. Assisted Vocational Division, State Department of Education, with the development of the information sections of the State Plan for Vocational Education.

E. Disseminate relevant research findings in vocational-technical education.

1. Development of a research information center by indexing and filing microfiche and hard copy materials.

2. Development of procedures for implementing a Selective Dissemination of Information System for selected audiences in vocational-technical education and other related areas. The purpose of the system is to provide correct, related information that will enable the selected audience to stay abreast of applicable research in vocational-technical education and hopefully to stimulate an interest in research and development activities. The first type of SDI, Series I, consists of a narrated review of research highlights or related materials with special emphasis on program planning. The second type, Series II, consists largely of brief abstracts prepared from research publications.

3. Disseminated approximately 10,000 copies of SDI's to selected audiences in vocational-technical education.
DISCUSSION

The employment of a competent research staff was an initial problem with the ORCU. Most of the staff employed had not reached their academic or professional goals. However, the atmosphere engendered by this situation has been beneficial in some ways. The inexperienced staff members had empathy for one another's problems and were inclined to direct their efforts toward a team research approach. The efforts and contributions of the inexperienced Unit staff was most encouraging and greatly appreciated by the University and state level staffs.

The most disappointing self-assessment of the Unit has been the evidence of the impact of the Unit's efforts at the local level. In all fairness, however, the progress should be evaluated in light of the history of the impact of research on education in Alabama. Undoubtedly the impact of research on local programs will remain a difficult task until the value of research findings can be demonstrated to teachers in the instructional environment through teacher education and supervisory programs.

The most encouraging activities conducted b; the ORCU were the research institutes and workshops held for local and state level personnel. The impact of these activities are evident in the present research activities and future plans of the systems represented at the institutes and workshops.

In the future the primary role of the ORCU will continue to be directed toward programmatic research. Emphasis will be placed on: (1) the development of competencies among local and state level personnel, (2) coordination of local and state research activities, (3) dissemination of research findings, and (4) participation in research and development programs.
CONCLUSIONS

The Alabama Research Coordinating Unit made considerable progress toward attaining its purposes. The activities of the Unit were directly related to the stated purposes. An evaluation of the effectiveness of these activities must be subjective in nature. It should also be emphasized that the staff effort and funds expended represent a long range investment for a much needed state-wide program of research in vocational education.

At the conclusion of the Federal contract the Unit director believes that considerable progress has been made. This is evident from the increased interest in research and development activities in the State. The director and the Unit Advisory Council will continue to review periodically both the appropriateness of the Unit's purpose and the relevance and effectiveness of its activities. Undoubtedly, changes will need to be made in response to greater demand for research and program development services.
APPENDIXES
APPENDIX A

Memorandum of Agreement Between the School of Education of Auburn University and State Department of Education
Montgomery, Alabama

THIS AGREEMENT, made as of July 1, 1969, by and between the State Department of Education (hereinafter referred to as the GRANTOR) and the School of Education of Auburn University (hereinafter referred to as the UNIVERSITY):

WITNESSETH:

WHEREAS, the GRANTOR desires to establish at the UNIVERSITY a continuation contract for the purpose of operating the Occupational Research Coordinating Unit (OEG 2212-ED.), and WHEREAS, the UNIVERSITY is willing to accept such a contract and conduct such activities.

NOW, THEREFORE, it is mutually agreed as follows:

THE GRANTOR agrees to obligate funds for the operation of the Research Unit by an annual budget to be paid to the Treasurer of the UNIVERSITY in accordance with such fiscal control and funding accounting procedures as may be deemed necessary to assure proper disbursement of and accounting for Federal and State funds. The annual budget shall be prepared and submitted by the GRANTOR in concurrence with the UNIVERSITY at the beginning of each fiscal year.

It shall also be understood that the Research Unit will be funded principally with Federal funds, and that the proposed level of financing through the use of funds from the GRANTOR will depend upon continued availability of Federal funds from Section 131 (b) Part C of Public Law 90-576.

THE UNIVERSITY AGREES:

To conduct the activities as described in a management plan for the operation of the Alabama Research Coordinating Unit for Vocational-Technical Education. The plan shall be developed jointly by representatives of the Vocational Division of the State Department of Education and the Department of Vocational, Technical, and Practical Arts of the University.

Such a plan shall be consistent with the policies and procedures as stipulated in the Alabama State Plan for Vocational Education.
THE UNIVERSITY shall prepare and furnish the GRANTOR with annual reports.

Activities of the Research Unit shall be directed and supervised by a designated full-time director. The Director shall have a doctor's degree and at least three years' experience in the field of vocational education. In the event that a full-time director is not available, a part-time director may be appointed. Appointment of a part-time director shall be by mutual agreement between the Assistant Superintendent for Vocational Education and the Dean of the School of Education of the UNIVERSITY.

Research Associates shall have master's degrees and preferably doctor's degrees, with at least three years of experience in a field of vocational education, and should be knowledgeable in research design and methodology.

All other Unit personnel, with the exception of the clerical staff and student assistants, shall have baccalaureate degrees, and preferably master's degrees. They should have had previous employment in either education, industry or business, and should be knowledgeable in research methodology.

All personnel receiving salary stipends through State expenditures funded through the Vocational Education Division shall devote full time to the work of the Unit, unless otherwise waived by mutual agreement between the Assistant Superintendent for Vocational Education and the Dean of the School of Education of the UNIVERSITY.

All durable items of equipment and furniture purchased with State funds received through the Vocational Education Division shall be the property of the GRANTOR and at such time as no longer used for the purpose for which purchased shall be released to the University or transferred to the State Department of Education.

Housing for the Research Unit shall be provided by the UNIVERSITY and shall be consistent with the type of housing provided other administrative units within the School of Education.

Actual expenditures shall be recorded against the annual budget, and quarterly reimbursement claims shall be submitted to the GRANTOR for payment.

It is further mutually agreed that this agreement may be renewed or revised by mutual agreement in writing by the parties involved. This agreement may be terminated at any time by mutual agreement in writing by the parties involved, or by twenty-four months notice in writing by either party involved.

The UNIVERSITY in accepting this contract has for its purpose the promotion, development, and improvement of a systematic and continuing program of research in vocational-technical education.
IN WITNESS WHEREOF, the parties hereto have executed this agreement.

For the GRANTOR:

Ernest Stone
State Superintendent of Education

Date

J. F. Ingram
Assistant Superintendent for Vocational and Adult Education

Date

For AUBURN UNIVERSITY:

Richard A. Baker
Director, Occupational Research Coordinating Unit

Date

H. W. Montgomery
Chairman, Department of Vocational, Technical and Practical Arts Education

Date

Truman M. Pierce
Dean, School of Education

Date

For the PRESIDENT:

Ben T. Lanham
Vice President for Research

Date
APPENDIX B

Occupational Research Coordinating Unit Staff
Auburn University

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>% Time</th>
<th>Date Employed</th>
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<tr>
<td>Dr. Richard A. Baker&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Director</td>
<td>100</td>
<td>May 1, 1967</td>
</tr>
<tr>
<td>James Barnes</td>
<td>Research Associate</td>
<td>100</td>
<td>Jan. 20, 1969</td>
</tr>
<tr>
<td>James Drake&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Research Associate</td>
<td>100</td>
<td>Sept. 1, 1969</td>
</tr>
<tr>
<td>Perry L. Farrar&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Research Assistant</td>
<td>66 2/3</td>
<td>July 15, 1967</td>
</tr>
<tr>
<td>Raymond Hill</td>
<td>Research Associate</td>
<td>100</td>
<td>July 15, 1967</td>
</tr>
<tr>
<td>Melville Parker&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Research Assistant</td>
<td>66 2/3</td>
<td>July 15, 1967</td>
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<tr>
<td>Dr. James W. Selman</td>
<td>Res. Info. Spec.</td>
<td>100</td>
<td>April 1, 1969</td>
</tr>
<tr>
<td>Wade Rothwell</td>
<td>Research Assistant</td>
<td>33 1/3</td>
<td>Sept. 1, 1967</td>
</tr>
<tr>
<td>John H. McHaney&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Research Assistant</td>
<td>33 1/3</td>
<td>Sept. 1, 1967</td>
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<tr>
<td>Victor Yellen&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Research Assistant</td>
<td>33 1/3</td>
<td>March 24, 1968</td>
</tr>
<tr>
<td>Joel Silvey&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Research Assistant</td>
<td>33 1/3</td>
<td>April 1, 1969</td>
</tr>
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</table>

1 Employed, varied from half-time to two-third time from May 1, 1967 to September 1, 1969.

2 Employed as research assistant from September 1, 1968 - August 31, 1969.

3 Previously employed as full-time research associates.

4 Employment terminated.