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**ABSTRACT**

A progress report (covering the period October 1, 1972--December 31, 1972) of the Research Coordinating Unit (RCU) of the Wisconsin Board of Vocational, Technical and Adult Education, the report briefly describes activities relating to the accomplishment of objectives and lists research activities. Objectives relate to the stimulation, coordination, information dissemination, and participation in the reviewing of research pertaining to occupational education. Research activities include a list of State approved research projects and a description of projects being developed at the Western Wisconsin Technical Institute, LaCrosse, Wisconsin. Also listed are recent University of Wisconsin publications pertaining to vocational, technical, and adult education. (EA)

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WISCONSIN BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION  
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4802 Sheboygan Avenue  
Madison, Wisconsin 53702

TWENTY-SEVENTH  
QUARTERLY PROGRESS REPORT  
OF THE  
RESEARCH COORDINATING UNIT (RCU)  
IN  
WISCONSIN

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

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Period

October 1, 1972 - December 31, 1972

## INTRODUCTION

This is the Twenty-Seventh Quarterly Progress Report submitted to the U. S. Office of Education for the Wisconsin Board of Vocational, Technical and Adult Education, Research Coordinating Unit (RCU). The report covers the period from October 1, 1972 through December 31, 1972.

The unit is operating in the State Office of the Wisconsin Board of Vocational, Technical and Adult Education as authorized under Section 131 (b) of Part C of P.L. 90-576. It is currently composed of two professionals and has access to the equivalent of one clerical person. This report consists of two parts: (1) Activities relating toward the accomplishment of objectives, and (2) A listing of research activities.

### ACTIVITIES RELATING TOWARD ACCOMPLISHMENT OF OBJECTIVES

**Objective 1:** Stimulate and encourage occupational education research and development activities in state departments, local school districts, colleges and universities and non-profit organizations.

Staff met with researchers at state agencies, and local educational agencies regarding projects in occupational education research, and exemplary projects. Assistance was given to two graduate students in obtaining information for their studies. Several other persons including state staff have consulted with RCU staff regarding information and assistance in planning, developing and submitting surveys, research proposals and studies.

Twenty grants were awarded during the period. Several projects have been approved commensurate with availability of FY 73 funds. The RCU is being drawn upon for the preparation of background data and the development of models, position papers, definitions of terms, and role of research of significance to the progress of vocational, technical and adult education in Wisconsin. The Wisconsin Board is represented on the Governor's Council on Environmental Education, and on the Council for Cooperative Area Man-power Planning.

**Objective 2:** Coordinate occupational research activities conducted within the state and, further, coordinate such research activities with those being conducted outside the state.

Within the state, RCU staff serve as consultants to the Research Committee of the Wisconsin Association of Vocational, Technical and Adult Education Administrators. Federal reports of research activities are reviewed for coordinative purposes. Research reporting procedures are in operation. The Convergence Technique as developed through UW-Stout will be used to assist in planning and managing the vocational education research program in Wisconsin.

**Objective 3:** Disseminate information on the progress and applications of the results of occupational research.

A newsletter, "Bits About Research", is published and disseminated periodically.

Acquisitions of studies, reports and other materials is announced in "Staff Notes", a state office weekly publication. Additional bibliographies and sources of research reports and other information are being acquired. A microform capability is continuing at the state level and in several of the districts. A standing order of ERIC microfiche has reached approximately 60,000 documents, providing a significant dissemination capability. State and District staff have been briefed on operations. Further workshops are being planned.

Equipment in the RCU includes a reader-printer, 2 readers, printer and developer, which gives the RCU the capability to duplicate microfiche as requested. The RCU has access to the microfilm laboratory in the state Department of Administration. It is planned to have agency materials placed on microfiche.

Approximately 25 requests for information, (some from out of state) during the period have been received and have been either satisfied or referred to the proper sources. About 25 requests for nearly 130 microfiche documents were processed. The usage of the ERIC microfiche library is expanding. An "ERIC Alert" system is in operation at the state level on a voluntary basis and is being adopted by several districts. Miscellaneous reports were compiled and in-house studies were made in interdepartmental services and on administrative request. Surveys of literature were done through the ERIC collection of priority administrative and legislative problems.

**Objective 4:** Stimulate activities which will result in increased interest and improved competence in research such as encouraging pre-service and in-service training of occupational researchers.

Planning has commenced on research in-service sessions for FY 73.

Information on national research and other institutes were disseminated to all districts.

A state plan of action for professional development under Part F of EPDA for FY 1973 is being developed. Several subprojects are being considered in the areas.

**Objective 5:** Participate in the review, monitoring or conduct, as appropriate, of occupational research and development projects supported by federal, state, local or private organization funds.

Several graduate students consulted with RCU staff. Several project applications submitted by local educational agencies and state universities have been reviewed and approved commensurate with availability of funds.

The RCU staff is represented on an interagency committee with Wisconsin State Employment Service. An exemplary project on articulation of occupational information, programs and placement in VTAE 11, Sheboygan, area approved by the USOE, is in progress. A career education project funded from USOE under Part C is in progress in VTAE 1, Eau Claire. Two additional career education

projects from VTAE District 2 at La Crosse, and VTAE 15 at Wausau have been submitted to USOE under Part D, Exemplary Projects and Programs. A report of an Environmental Education Project is being expanded at VTAE 10, Fond du Lac.

**Objective 6:** Identify and maintain an inventory of available occupational research and development resources in light of anticipated needs and programs within the state.

The RCU library is continually being expanded to include basic references, reports, research proposals, surveys, studies, bibliographies, government and other publications containing demographic, occupational, educational, and other valuable information.

**Objective 7:** Survey available data on employment opportunities, emerging occupational trends and future job projections as a base for planning vocational programs, curricula, and facilities within the state, and teacher training, recruitment and placement.

Constant liaison is maintained with the Wisconsin State Employment Service regarding employment opportunities, emerging occupations, and job projections. Employment Service Publications are acquired, reviewed and disseminated as appropriate. A concerted effort is being made to improve this information exchange at both the state and local levels.

The Wisconsin Board of Vocational, Technical and Adult Education is represented on the Cooperative Area Manpower Policy System Committee (CAMPS) and the newly formed Governor's Manpower Council.

**Objective 8:** Identify issues and problems relating to the nature and place of vocational education in the state school system and determine the contributions which occupational research and development could make in resolving them.

As a result of a study by Stout State University, review of federal priorities and suggested state priorities developed by a conference hosted by the Oklahoma RCU, and previous meetings of working committees, priority areas have been identified for FY 1973. These areas were included in the last quarterly report.

## RESEARCH ACTIVITIES

The information included in this section indicates research activities which have been reported as being planned, in progress or have been completed during the report period, some of which have been previously reported. The mere listing of activities in the report is in no way meant to indicate that the RCU was involved in the planning or conducting of the activity. Undoubtedly, there are other activities being conducted which for various reasons are not included in this report. We welcome information on these activities.

RESEARCH PROJECTS APPROVED UNDER PART C, P.L. 90-576 BY  
STATE BOARD STAFF RESEARCH PROJECT REVIEW COMMITTEE  
COMMENSURATE WITH AVAILABILITY OF FUNDS (1-6-73)  
GRANT AWARD LETTERS ISSUED

<u>Project Number</u>	<u>Project Description</u>	<u>C=Continuation Project</u>
02.033.151.223	<u>Individualized Instruction for Rural Disadvantaged.</u> To develop and evaluate a course for training providers of child day care services for rural disadvantaged.	
03.001.151.223	<u>Manpower Needs in Southwest Wisconsin.</u> To determine occupational education needs of 1,000 employers in Southwest Wisconsin to assist in VTAE program planning and student counseling.	
08.025.151.223	<u>Citizen Expectations of Post-Secondary VTAE.</u> To develop a taxonomy of expectations which Wisconsin people have of the post-secondary VTAE system.	
C-09.077.151.223	<u>VTAE Programs Sponsored by Business, Labor and Government.</u> To determine the areas and type of training programs offered by business, labor and governmental agencies to assist in planning programs by the VTAE system.	
10.007.151.223	<u>Identification of Services to Disadvantaged and Handicapped.</u> To use the nominal group technique in determining needs for, and gaps in services provided by private and public groups to disadvantaged and handicapped to assist in VTAE planning for them.	
10.045.151.223	<u>Family Approach to Career Education.</u> To identify the role of the VTAE system as a provider of career education for the family.	

- 12.013.151.223 Interaction of Learning Styles with Learning Experiences. To determine optimum individualized learning experiences and styles in terms of behavioral objectives, instructional units, and alternative modes and levels of instruction, media and learning environments.
- C-12.059.151.223 Task Analysis of Vocational Coordination. To conduct a task analysis of post-secondary vocational education coordinators as a basis for pre-service and in-service education.
- 15.055.151.223 Multi-Research and Development Project Grant. To stimulate staff mini-research and curriculum development projects through provision of an umbrella grant. Each mini project in abbreviated form to be approved by state staff review committee.
- C-17.438.151.223 Study of Recreation Education needs in Northwestern Wisconsin. To identify training needs of resort and recreation operators through survey of employees and to identify factors which attract tourists and to determine services desired as a basis for program planning.
- C-19.003.151.223 Convergence Research Project. To verify research problems and priorities as part of a plan for conducting and managing vocational education research in Wisconsin.
- C-19.004.151.223 Graduate Student Mini-Research Grant. To facilitate and stimulate relevant research by graduate students through working and development of proposals with state and local vocational practitioners.
- C-19.011.151.223 Evaluation of Secretarial Science Program. To follow-up of "withdrawals" and graduates of two year post-secondary secretarial science programs. To compare student characteristics and needs with program and occupational success.
- 10.043.151.223 Evaluation of Psychology and Human Relations. To evaluate the curriculum in terms of VTAE District #10, student, staff, and employer assessments. Recommendations for revisions will be made. Future field testing of revised course is proposed.

14.029.151.223

Field Testing Teacher Education Curriculum for Mentally Handicapped. Based on task analysis to field test alternative contents, instructional methods, media and learning environments.

03.039.151.223

Competencies in Food Service. To identify job competency requirements in the Food Service industry to be used as a base for articulated curriculum development.

09.083.151.223

Career Education Assessment. A Cooperative project with DPI and CESA 19 to conduct an assessment of career education needs and feasibility of implementation in Greater Milwaukee area.

C-01.039.151.223

Development of Visual Materials for Mfg. Processes. To photograph manufacturing processes in industry and develop narrated audio visual sets of colored slides for use in Mechanical Design program.

19.025.151.223

Evaluation of Pilot Courses in Mentally Handicapped. To assess the effectiveness of the course "Development in Early Education of the Mentally Handicapped Child" which would be offered to selected Child Day Care workers in 3 VTAE districts.

C-04.042.151.223

Evaluation of Automotive Curriculum. A survey of employers and former students to obtain ratings on job performance as a basis for possible curriculum revisions.

PROJECTS IN PROGRESS

Western Wisconsin Technical Institute  
Sixth and Vine Streets  
La Crosse, Wisconsin

1. A Study of the Correlation Between Reading Tests Scores and Withdrawals  
To identify which students have the highest withdrawal rates - those students who have low reading scores or those who have high reading scores. (Grosskoph, Vitale)
2. Room Utilization Study:
  - a. To complete informational forms requested by the State Office.
  - b. To supply our institutional administrators with information on room utilization, or hours per week which each classroom is used (day and evening) as well as a comparison with generally accepted standards of other institutions.
3. Professional Library Development: (See Previous Report)
4. Student Station Utilization:
  - a. To complete informational forms requested by the State Office.
  - b. To supply our institutional administrators with information on station occupancy or number of students in various types of classes, (day and evening) and how they compare with similar institutions or generally accepted standards. It was found many of our rooms were overutilized and that percentages and comparisons were needed to decide how efficient station usage is. A study is in process to determine percentages and prepare tables to illustrate current usage.
5. Life Skills Development in General Education:

This study should create an awareness on the part of general education instructors as to what constitutes "life skills" and how our curriculums may be molded, or revised to achieve our type of students' desire for certain "life skills".

An instrument consisting of 68 questions regarding the students satisfaction with certain "life skills" they possess will be administered to 10 sections of general education students. These students will constitute a representative sample of our student body. Each section will be composed of approximately 20-30 students. The instrument was developed by a panel of university and technical school experts in a statewide study. The sections will be divided into two groups similarly equated, one of whom will be administered the test at the beginning of the quarter and one at the termination of the quarter. Correlations of these scores will be made between recent follow-up studies of our graduates and a study by U.W. - Stout graduate students on characteristics of our industrial division students.

The survey instrument in this study will reveal what a cross-section of our one and two year students desire in life skills and how this compares with

similar reports of previous graduates both at this institution and throughout the state. Tables will be prepared to tabulate specific life skills and compare them with results of a state study for both diagnostic, curriculum development and counseling purposes.

A comparison of the scores of Group 1 at the beginning of the course with those in Group 2 at the end of the course will be made to determine the outcome of objectives set down for recording in the research instrument.

6. Curriculum Development in Bio-Medical Electronics:  
To assure that requirements stipulated by state laws and regulations have been complied with and that programs have been initiated in accordance with original proposals. Also to supply evaluation personnel with all necessary data to expedite state approval.
7. The Initial Follow-up Study of Graduates, Nongraduates, Completers
8. and Withdrawals (1972) - (Vitale)
9. Second Follow-up Study (1969) - (Vitale)
10. Third Graduate Follow-up Study (1967) - (Vitale)
11. Student Institutional Evaluation - (Vitale)

#### PROJECTS IN EXPLORATORY STAGE

Western Wisconsin Technical Institute  
Sixth and Vine Streets  
La Crosse, Wisconsin

12. Development of New Instructional Methods in Teaching Drawing (Maas, Rusch):
  - a. Develop video recordings to implement and enhance live teacher lectures and laboratory demonstration.
  - b. Develop instructional packages for alternative study methods.
  - c. Determine student progress via instructional packages.

Three project phases are:

1. Development of video recordings and instructional packages for approximately 9 units of study.
2. Implementation of new instructional media.
3. Evaluation of student progress and comparison of achievement of students in new methodology with traditional methodology.

13. Development and Evaluation of Curriculum and Media to Train Part-time Fire Service Instructors in Rural Areas (Kloss):

To determine the Fire Service Training needs in District 2 and 3. Determine units of instruction to be included in curriculum and relative emphasis to be placed on each. Evaluation of curriculum materials and processes.

All Volunteer Fire Departments contacted need advice and help in Fire Administration, prevention, and control. Qualified instructors are difficult to obtain on a part-time basis. Curriculum materials must be developed to suit specific needs. Much training materials must be provided. Programs in institutions, hospitals, and major industries are generally incomplete. Additional help will be needed to effectively administer and continue the program in Districts 2 and 3.

14. A Study of the Correlation Between the DAT Scores and Reading Scores (Grosskoph, Durall):

- a. To identify problem readers and to refer them to the proper program for help.
- b. To find another method of early problem reader identification.
- c. To find which entry tests give the most information in the prediction of academic success at Western Wisconsin Technical Institute. Several methods of comparing and correlating various scores are under consideration.

PROJECTS COMPLETED

Western Wisconsin Technical Institute  
Sixth and Vine Streets  
La Crosse, Wisconsin

15. Northeastern Nebraska Survey - Junior College Curriculum Study:

An educational institution that is trying to upgrade its programs and standards needs to be particularly conscious of its instructional methods. This study is a survey of what we are doing at WNTI in some of the recognized areas of instructional techniques to compare our efforts with those of similar institutions.

A survey instrument prepared by the Northeastern Nebraska College, Norfolk, Nebraska, pertaining to the Junior College curriculum was circulated among our educational divisions. The instrument requested information in four areas, namely; audio-tutorial, modular, programmed instruction, and management by objectives. A fifth category requested other curriculum methods. The completed survey was returned for compilation and comparison with other institutions.

It was found that most of our divisions were familiar with these methods. Other surveys of this type are recommended because of stimulation of thinking and dissemination of research in these current areas. (Hutchison)

16. HEGIS REPORT:

A review of almost all activities in the institution are necessary to keep the U. S. Office of Education informed on activities they deem pertinent. Necessary standards have been stipulated by the North Central Association of Junior Colleges by whom we are accredited.

It has been found that we do not always have the information required in these HEGIS requests and have to study what our current situation is. The study of facilities has resulted in several recommendations and additional ones are being formulated. (Hutchison)

17. Development of Core Curriculum for Pollution Abatement and Control Technicians:

To determine if industry needs pollution abatement and control technician, the number currently employed, the starting salaries of technicians, where their technicians acquired their training, the number of professional specialists, other than technicians now employed; to learn of the number of men needed to fill jobs that are presently needed, and projected needs for 1973 and 1975. Also, the survey revealed the technical skills that technicians need and the courses the employers feel would result in the acquiring of knowledge and skills he will need to do a good job.

A survey of personnel managers in industries that are located in Iowa, Minnesota and Wisconsin was conducted.

There is an existing manpower shortage of qualified technicians as over 50 jobs are now available. \*The number of jobs increase per year for the future. A two year program in a technical school can provide sufficient training for the jobs. The pay with no experience will surge from \$500 to \$900 per month.

18. Student Profiles 1972-73 - Tente - Final Report.

19. Needed Abilities Analysis for the Dental Assisting Program - Smith, Vitale and Cunningham - Final Report

Moraine Park Vocational, Technical and Adult Education District

235 North National Avenue  
Fond du Lac, Wisconsin 54935

RESEARCH PROJECTS IN PROGRESS

1. Survey of the Food Service Industries.
2. Survey of students enrolled in two-year Associate Degree and Diploma programs in the fall of 1971, who did not return in the fall of 1972.
3. Psychology of Human Relations course evaluation.
4. Identification of Vocational Education Services, Levels and Parameters of Services Provided for the Disadvantaged and Handicapped.
5. Career Education--A Family Approach.
6. Vocationally Coordinated Curriculum for General Education.
7. Six-Months Follow-up of 1972 Graduates.

RESEARCH COMPLETED

1. Reactions to 1972-73 School Calendar.

## RECENT UW FACULTY PUBLICATIONS

(As listed in the 1970-72 Industrial Relations Research Institute, University of Wisconsin, Madison. Write to the Institute, Social Science Building, 1180 Observatory Drive, Madison, Wisconsin 53706)

George P. Huber, Business

"Computer-Based Man-Job Matching Systems: Current Practice and Applicable Research," with C. Falkner, Socio-Economic Planning Sciences, Vol. 3, No. 3 (January 1970).

"Progress Toward a National Job Matching Network," Manpower, Vol. 2, No. 11 (November 1970).

"An Empirical Comparison of Five Utility Models for Predicting Job Preference," Organizational Behavior and Human Performance, Vol. 6, No. 2 (March 1971).

Gerald Nadler, Industrial Engineering

Design Concepts in Information Systems, with J. T. Johnston and J. E. Bailey. Monograph to be published by the Computer and Information Systems Division of the American Institute of Industrial Engineers. Work Design: A Systems Concept. Homewood, Illinois: Richard D. Irwin Inc. (1970).

Gerald G. Somers, Economics

Vocational Education: Today and Tomorrow, editor, with J. Kenneth Little. Center for Studies in Vocational and Technical Education (1970).

"Federal Manpower Policies," Canadian Labour in Transition, ed. by Richard U. Miller and Fraser Isbester. Scarborough, Ont.: Prentice-Hall of Canada, Ltd., 1971.

A Cost-Effectiveness Analysis of the Neighborhood Youth Corps, with Ernst W. Stromsdorfer. Center for Studies in Vocational and Technical Education, 1970.

Employment Effects of Plant Expansions and Accelerated Public Works in Rural Redevelopment Areas. Industrial Relations Research Institute, 1971.

An Analysis of the Economic Benefits of Vocational Education at the Secondary, Post-Secondary, and Junior College Levels. Center for Studies in Vocational and Technical Education, 1971.

"Manpower Projections for Instructional Staff in Vocational-Technical Education," Teacher Education in Vocational Education, ed. by Rupert N. Evans. Urbana: University of Illinois Press, 1971.

"Manpower Specialists: The Government's Influence on Supply and Demand," The Production of Manpower Specialists: A Volume of Selected Papers, ed. by John R. Miland. Ithaca: Cornell University, 1971.

James L. Stern, Economics

"Blue Collar Workers: A Recruitment Source for White Collar Openings," with David B. Johnson, Personnel Journal, Vol. 49, No. 6 (June 1970).

"Wisconsin Public Employee Relations at the Crossroad," 1970 Supplement to the Governors' Task Force Report on Labor Relations in State and Local Government. Chicago: Public Personnel Association, 1971.

"Collective Bargaining Trends and Patterns," A Review of Industrial Relations Research, Vol. 2, Madison: Industrial Relations Research Association, University of Wisconsin, 1971.

"Consequences of Plant Closure," Journal of Human Resources, Vol. VII, No. 1 (Winter 1972.)

George B. Strother, University Extension

"Making the University Accessible," with David L. Jensen, Journal of Cooperative Extension, Vol. VII, No. 4 (Winter 1969).

"A Critical Incident Evaluation of Supervisory Training," with Peter D. Couch, Training and Development Journal (1971).

"Extension Courses for Continuing Education (Business and Industry Related)," with Kurt F. Wendt and John P. Klus, Encyclopedia of Education (1971).

"Increasing the Impact of Extension," The NUEA Spectator (December 1970-January 1971).

"A Census of Opportunities in University Extension," The NUEA Spectator (June-July 1971).

#### UW STUDENT RESEARCH AND PUBLICATIONS

Joseph W. Adams, "Black Employment: An Analysis of Occupations and Advancement, Selection and Training, and Income and Discrimination in Six Selected Firms," Master's Thesis, January 1971.

The purpose of this study is to examine the employment situation of black workers in selected industries in a midwestern city. It describes and evaluates many of the problems faced by black workers throughout their employment history. The principal data used in this study were obtained from in-depth personal interviews with black workers currently employed at the firms which consented to participate in this research project. Given the nature of how the sample was selected, comments pertain to the people and firms involved, but generally are a good indicator of the type of problems and conditions facing the entire black work force of this city.

Susan F. Fernbach, "An Analysis of the Economic Benefits of Vocational Education at the Secondary, Post-Secondary, and Junior College Levels," Master's Thesis, June 1970.

This study presents an analysis of the economic benefits of vocational education at the secondary, post-secondary, and junior college levels. The general objective was to provide evaluative data and an analysis of the effectiveness of vocational and technical education in the United States that will (1) provide baseline data against which progress can be measured in future years, (2) reflect the early influences of the Vocational-Education Act of 1963, (3) generate implications for the improvement of the quality of vocational education, and (4) provide information which will be used for a subsequent proposal for additional follow-up surveys of the same respondents; and subsequent proposals for detailed cost-benefit analyses.