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ABSTRACT

This document outlines the research and development plans of a consortium of organizations whereby they might (1) collect training materials to meet identified needs for persons with development and evaluation skills in education and industry, (2) establish a system for data collection and decisionmaking to manage the individualized instruction of persons in development and evaluation training programs, (3) find trained personnel to meet the immediate needs of educational and industrial organizations, and (4) make arrangements for delivery and finance of training programs to meet long-range needs for pre- and in-service training in development and evaluation. Each objective is documented and detailed into specific outcomes and/or tasks. Subcontracts and budgets are presented along with a time line for project completion. Related documents are EA 003 901, EA 003 902, and EA 003 903. (Author/RA)

The Proposal

for the MIDWEST EDUCATIONAL TRAINING CENTER

Training for Development and
Evaluation in Education

Prepared by:

William Ammentorp
Wayne Welch
Geraldine Evans

Upper Midwest Regional Educational Laboratory
1640 East 78th Street
Minneapolis, Minnesota 55423

December 14, 1970

The Proposal

Table of Contents

Part	Page
1. The Abstract	1
2. Proposal Documentation and Detailed Objectives	3
Training Priorities for Education Development and Evaluation	3
A Management System for Individualized Instruction	4
Provisions for Delivery of Instruction	5
Project Evaluation	6
3. Consortium Organization and Responsibilities	9
Program Governing Board	9
Upper Midwest Regional Educational Laboratory	10
Educational Research and Development Council	10
Department of Psychological Foundations, University of Minnesota	10
Division of Educational Administration, University of Minnesota	11
Control Data Corporation	11
Southwest State College	11
State Departments of Education	12
4. Project Timeline and Phases	13
5. Budget Summary	14
6. Contracts, Letters of Commitment, and Vitae	17
Prime Contractor--Upper Midwest Regional Educational Laboratory	17
Subcontractor #1--Educational Research and Development Council	33
Subcontractor #2--Division of Educational Administration, University of Minnesota	35
Subcontractor #3--Department of Psychological Foundations, University of Minnesota	44
Subcontractor #4--Control Data Corporation	81
Subcontractor #5--Southwest State College	108
Appendix I - Letters of Support	112

UPPER MIDWEST REGIONAL EDUCATIONAL LABORATORY

1640 EAST 78TH ST.

MINNEAPOLIS, MINNESOTA 55423

612-861-4421

December 14, 1970

Dr. John C. Egermeier
Acting Chief
Research Training Branch
National Center for Educational
Research and Development
U.S. Office of Education
400 Maryland Avenue, S.W.
Washington, D. C. 20202

Dear Dr. Egermeier:

I am enclosing the series of documents contracted for in response to RFP 70-12. The agreed-upon objectives of our design activity, and the pertinent documents are:

- 1) a detailed study of personnel needs in schools, industries, laboratories, and research and development centers.

Design Document I (The Need for Research, Development, Dissemination, and Evaluation Personnel in Education) presents the results of a manpower survey conducted by our Consortium.

- 2) an analysis of training inputs.

The Proposal for a Midwest Educational Training Center outlines the capabilities and contributions of members of the Consortium in training for development and evaluation.

- 3) a plan for training instruction researchers, developers, evaluators, and support personnel.

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National Indian Ed. Advisory Com.
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Lt. Governor, North Dakota
Dr. Richard Gousha, Superintendent
Milwaukee, Wisconsin
Mr. Carl Gordon Nelson, Exec. Secretary
Associated School Boards of S.D.
The Honorable David Obey
U.S. Congressman, Wisconsin

EXECUTIVE DIRECTOR

David N. Evans

Dr. John C. Egermeier
Page 2
December 14, 1970

Design Document III (The Management System) describes the organization and management of an individualized training program for specialized personnel.

- 4) a proposal whereby the Consortium might implement the above plan.

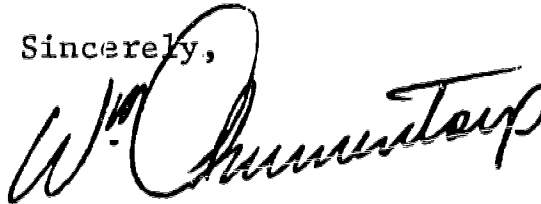
The Proposal for a Midwest Educational Training Center states a program of action and budgets pertinent to implementation of the training plan.

- 5) a paper outlining the theoretical structure on which instructional development is founded.

Design Document II (Conceptual Papers Defining the Knowledge and Skills Required to Function as Educational Developers and Evaluators) states the rationale underlying training in educational development and evaluation and provides a collection of training objectives.

I hope that you will agree that our contracted work is completed and that the Consortium deserves careful consideration for receipt of continued support for research and development in this important area.

Sincerely,



William Ammentorp

WA/mb

Enclosures

Prime Contractor for Operational Phase: Upper Midwest Regional
Educational Laboratory

Project Director for Operational Phase: William Ammentorp, Director
Wayne Welch, Co-Director

Principal Participants in Operational Phase

<u>Institutions</u>	<u>Individuals</u>
Upper Midwest Regional Educational Laboratory	William Ammentorp Jon Morris Geraldine Evans
Educational Research & Development Council	Tom Stark
Division of Educational Administration	Vernon Hendrix
Department of Psychological Foundations	Wayne Welch Paul Johnson John Rhetts James Terwilliger
Control Data Corporation	Robert Fallon Tom Mehring
Southwest State College	Richard Wollin Roger Raymond

Major manpower needs being addressed:

- 1) Persons capable of carrying out evaluation of educational products and programs in schools and industries.
- 2) Persons skilled in identifying training problems and developing instructional materials and techniques to resolve said problems.

Unique features of rationale, content, and process of the proposed design:

The Consortium is a unique combination of educational and industrial talent with a common interest in development and evaluation of educational products and programs. The proposed design develops and delivers instruction in educational evaluation and development to persons in industrial and educational organizations. The guiding principle of the Consortium is that training should be provided in terms of desired terminal behaviors rather than in terms of courses taken or time spent. To this end a set of terminal behaviors has been developed for educational developers and evaluators. Training modules designed to achieve these behaviors will be designed and administered on an individual basis. A detailed monitoring and management system has been developed to implement this individualized training program.

Part 1 - THE ABSTRACT

The consortium of organizations listed on the cover sheet of the document proposes to engage in cooperative efforts to attain the following objectives:

- 1) A collection of training materials to meet identified needs for persons with development and evaluation skills in education and industry.
- 2) A system for data collection and decision making to manage the individualized instruction of persons in development and evaluation training programs.
- 3) Trained personnel to meet the immediate needs of educational and industrial organizations.
- 4) Arrangements for delivery and finance of training activities to meet long-term needs for pre- and in-service training in development and evaluation.

The following pages outline the research and development plans of the Consortium whereby the above objectives might be realized. Each objective is documented and detailed into specific outcomes and/or tasks which the Consortium will undertake to carry out. Subcontracts and budgets are presented along with a time line for project completion.

The reader should consult the three "Design Documents" prepared by the Consortium from which the above four objectives were derived.

These are:

Design Document I - "The Need for Research, Development, Dissemination and Evaluation Personnel in Education."

Design Document II - "Conceptual Papers Defining the Knowledge and Skills Required to Function as Educational Developers and Evaluators."

Design Document III - The Management System."

Part 2 - PROPOSAL DOCUMENTATION AND DETAILED OBJECTIVES

Training Priorities for Education Development and Evaluation

The training outcomes selected by the Consortium were derived from two sources; studies of projected manpower needs and analysis of knowledge and skills needed to fill roles in educational development and evaluation. The primary source document for determining personnel needs is Design Document I (DDI) The Need for Research, Development, Dissemination and Evaluation Personnel in Education. The conclusions of DDI indicate that initial training for education development and evaluation should be primarily focused on public elementary and secondary school roles. These roles may be categorized as supervisory, where the task emphasis is on evaluation of educational materials and programs, or technical, with a task emphasis on development and use of instructional materials. DDI further documents the magnitude of personnel needs in the five state region (Minnesota, Wisconsin, Iowa, North Dakota, and South Dakota).

Design Document II (DDII) outlines the knowledge and skills needed for persons who are to carry out the above roles. DDII specifies hierarchies of objectives which comprise the clusters of skills required by educational employers. The combination of these two Design Documents results in the identification of training materials which the Consortium proposed to develop. The objectives below summarize the materials development phase of this project:

OBJECTIVE FOUR: The learner will meet together with an instructor, and any other learners who are also ready for this objective at the same time, to discuss the prepared list(s) of objectives. The discussion will focus on evaluating the objectives in terms of:

- A) their clarity and behavioral specificity (i.e., whether an objective reader can understand the written statements and can readily infer what the writer would in fact do).
- B) their appropriateness and priority for focusing the writer's learning during the period of this "course."

RATIONALE: This objective is designed to provide the learner with some external feedback concerning his work to date. In addition, if at all possible this feedback will be effected in a small group context. Cooperative efforts among group members can be extremely facilitative of learning, in that the chances are good that each person can profit from the comments and perspective of others in clarifying each group member's objectives. This is itself a learning experience for all. Also, the task orientation can in turn serve to initiate and facilitate further interactions among members of the group, thus developing and/or reinforcing group member/s interpersonal communications skills.

LEARNING ACTIVITIES: Bring your lists of objectives and meet with the instructor (plus any other learners who are also ready) to discuss and evaluate your objectives. You can anticipate that the instructor will make suggestions about necessary and/or appropriate additional objectives for your activity as will revisions in objectives you have stated yourself.

PERFORMANCE CRITERIA: You will subsequently produce amended sets or lists of objectives, incorporating necessary and appropriate revisions, additions, and deletions to your initial lists of objectives. This "second-generation" document will be the input for Objective Five.

- 1) Training materials for instructional problem analysis and programming.
- 2) Training materials for analysis and use of instructional technologies.
- 3) Training materials for evaluation design and interpretation.
- 4) Training materials for organizing and implementing evaluation in education.

A Management System for Individualized Instruction

The Consortium recognizes that persons seeking training in educational development and evaluation are likely to possess varying degrees of knowledge and skill needed for these activities. Accordingly, there has been an over-riding concern for individualization of instruction during the design phase of the project. This has resulted in a plan for a management system for training which is described in Design Document III (DDIII).

The proposed management system is essential to the individual focus of this project but has wider potential application. It is similar in conception to the instructional management system presently in operation at Southwest State College. Indeed, project staff has participated in design work at that College and anticipates that Consortium attainments will be closely integrated with the management of individualized instruction at the undergraduate level.

Based on DDIII, the Consortium proposed to develop and test an instructional management system to include:

- 1) Data gathering instruments and procedures.
- 2) Files for storing information related to instruction process, training content and student behavior.
- 3) Procedures and/or computer software for system implementation.
- 4) Design and analysis of reinforcement practices used during training.
- 5) Provisions for analysis of system outcomes and costs.

Provisions for Delivery of Instruction

The Consortium plans to meet immediate training needs of schools and industries in the region during the materials test phase of the project. While this training will be of immediate benefit to educational practice, it does not insure that organizational arrangements will exist for long-term delivery of needed training. Consequently, the Consortium proposes to test alternative delivery systems and, finally, to select the most suitable arrangement(s) for continuation of training in educational development and evaluation. Continuation, in this context, implies that financial support will be available not only for additional training, but for identification of new training needs and development of new and/or improved instructional materials as well.

Provisions for instruction delivery will be tested during Phase III of the project. The following objectives express the outcomes of that testing:

- 1) Training site(s) for delivery of instruction.
- 2) Practicum experience for trainees.
- 3) Fee structures adequate to meet continuation costs for training in educational development and evaluation.
- 4) Articulation of training with credit and compensation practices in schools and industry.
- 5) Recruitment practices to insure continued student input.
- 6) Procedures for identification of new training needs.
- 7) Training site staffing design(s) to insure instruction development and implementation.

Project Evaluation

The purpose of evaluation is to provide Consortium members with information for making decisions. These decisions fall into two major categories: those related to the content of training offered and those involving training methodology. Each of the four objectives of the project (listed on p. 1 of this proposal) are focal points for evaluation activities.

Objective 1, "A collection of training materials to meet identified needs for persons with development and evaluation skills in education.", is the basic statement of project intent against which program content must be evaluated. Since program content is initially chosen to meet needs articulated by employers, there is close correspondence between personnel needs and training content at the outset of the project. Evaluation must therefore be primarily con-

cerned with providing information about developing training needs and with the degree to which training influences on-the-job performance of trainees. Two evaluation strategies seem appropriate for this objective:

a) Status studies of educational development and evaluation:

Periodic study of educational and industrial organizations results in estimates of numbers of trained persons needed to fill jobs. Detailed analysis of job descriptions and the relationship between development and evaluation roles and organization goals identifies costs to new content; evaluators provide essential information for changes in program focus.

b) Trainee follow-up studies:

Longitudinal study of individual trainees gives information as to the kinds of tasks trainees perform on-the-job as well as indications of quality of performance. This is essentially a behavioral analysis problem; under what conditions do trainees engage in behaviors of which they have been trained? If trainees do not have opportunities to exercise their skills, program content should be altered. If, on the other hand, opportunities for action exist and trainee behavior is inadequate, training methods can be changed.

Objective 3, "Trained personnel to meet the immediate needs of educational and industrial organizations.", is derived from Objective 1. It refers more directly to the relationship between training and employer's needs in the immediate service area of the Consortium.

The evaluation of Objective 3 is basically a cost-effectiveness problem. The associated decision question is, 'Does the program provide locally needed training at equal or less cost to individuals and/or employers than other training options?'. The project manpower survey (Design Document I) indicates a baseline of need for personnel with development and evaluation skills. If the program meets these needs in a cost-effective manner, a positive evaluation of Objective 3 is in order.

Program management goals are summarized in Objective 2, "A system for data collection and decision making to manage the individualized instruction of persons in development and evaluation training programs.". This objective is detailed in Design Document III along with evaluation guidelines for determining attainment. Over-all evaluation of the project has the study of the management system as a component.

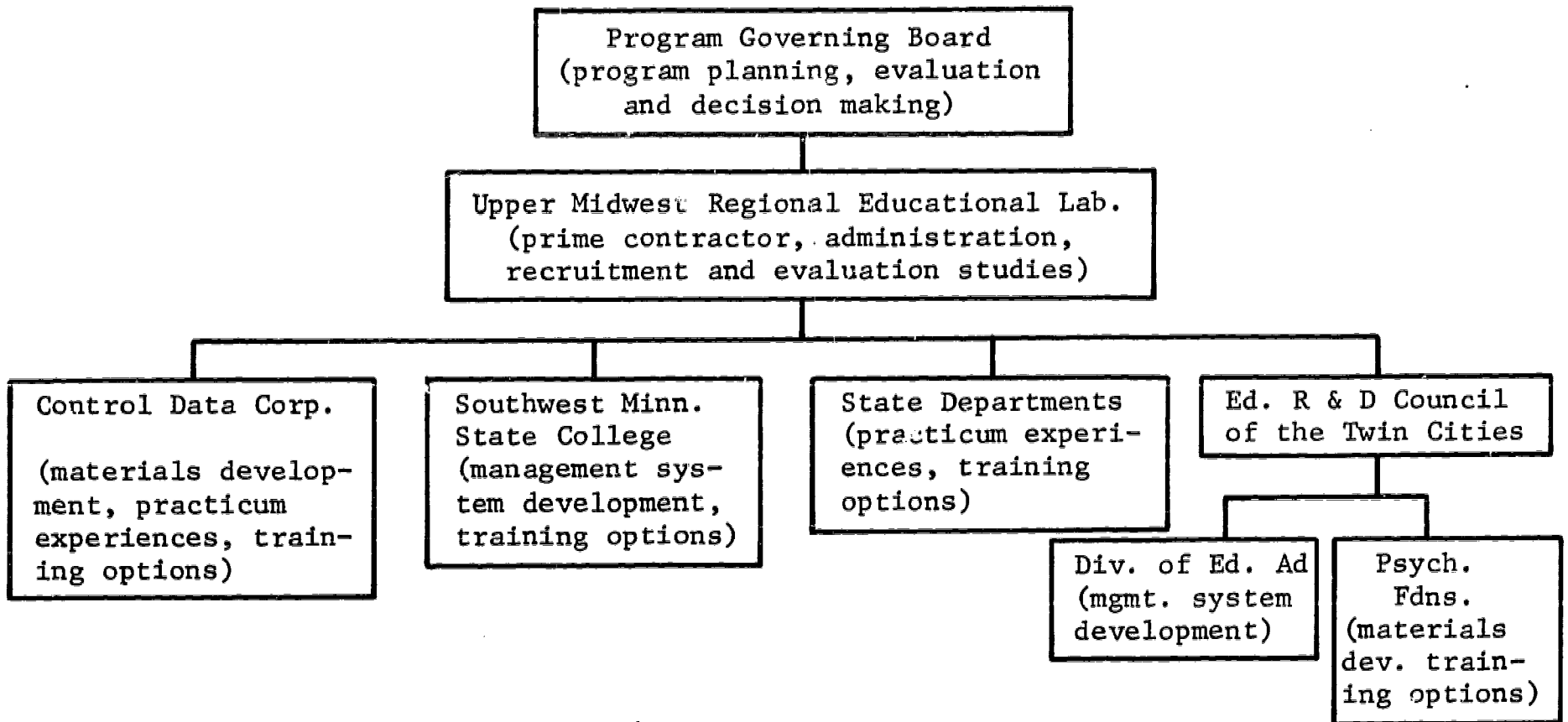
Evaluation of the attainment of Objective 4, "Arrangements for delivery and finance of training activities to meet long-term needs for pre- and in-service training in development and evaluation.", is carried out in the market for education development and evaluation training. A positive evaluation of training delivery systems is found in the balance sheet of the training organization. The most suitable training design is that which meets Objectives 1, 2 and 3 and can support training research and development as well as direct training costs entirely from purchased training. The various training delivery systems to be tested by the Consortium can be evaluated on this basis.

Part 3 - CONSORTIUM ORGANIZATION AND RESPONSIBILITIES

The administrative organization of the Consortium is designed to insure maximum probability of attaining project objectives without binding the project to an inflexible structure. Accordingly, the administrative arrangements proposed in this paper are subject to evaluation by members of the Consortium and can be changed to alternate designs at any time. This potential for change is reflected in the coordinate responsibilities depicted in the organization chart below:

Figure I

Consortium Organization
and
Project Responsibilities



Program Governing Board

Program decisions are made by the Board. This Board is comprised of members of the project design staff, representatives of

school districts and representatives of training organizations. It is responsible for all new program directions and for employing the project director. Program governors determine new administrative arrangements for later phases of the project and approve budgetary decisions made by the Project Director.

Upper Midwest Regional Educational Laboratory

UMREL will serve the role of prime contractor for the Consortium. It will provide administrative and support services to project staff and will deal with all problems related to student recruitment, support and program evaluation. Project administration will insure that subcontractors meet provisions of their contracts and that their respective efforts are coordinated and directed at project objectives. Through its administration of training, UMREL will determine the most suitable organization for delivery of training.

Educational Research and Development Council of the Twin Cities

ERDC serves as an administrative mechanism whereby the contributions of the Division of Educational Administration and Department of Psychological Foundations of the University of Minnesota can be obtained. ERDC also - through its representation of 44 school districts - provides an input of information as to needs for training in area schools.

Department of Psychological Foundations, University of Minnesota

This Department will be primarily responsible for developing and testing training materials for education evaluation. Several members of this Department have participated in the design phase of the project, and will continue to give important service to

the project. Additionally, Psychological Foundations will provide one of the training options to be tested by the project.

Division of Educational Administration, University of Minnesota

The Division will design and test the instruction management system for the Consortium. In addition to this work, the Division will assist UMREL in carrying out necessary project evaluation studies.

Control Data Corporation

Staff members of CDC will develop and test instructional materials related to education development. This training will consist of currently available CDC materials, materials available from other suppliers and new materials to be developed. In addition to development activity, the Control Data Institute will serve as a test site for delivery of training to school and industrial personnel. Cost for such training would be borne by the Prime Contractor.

Support personnel skilled in instruction development will be made available by CDC to those of the Consortium who are engaged in preparing training materials. CDC services will also be supplied to the Consortium for work on data files and other aspects of the instruction management system.

Southwest State College, Marshall, Minnesota

SWSC will be one of the test sites for delivery of training programs. It will supply opportunities for training to teachers in training as well as those educators presently in service. SWSC will also provide an opportunity to test features of the

instruction management system and a baseline of information regarding schools against which the impact of the training effort can be evaluated.

State Departments of Education

The five state departments of Education participating in the Consortium fill two major functions. They identify the content and scope of training needs which the Consortium must confront. They also become sites for training and for practicum experiences for trainees in the later phases of the project. All five departments have contributed to an analysis of training needs during the design phase of the project and are planning active involvement as the project matures.

1/71 6/71 1/72 6/72 1/73 6/73 1/74

Phase I
Planning, Staffing
Materials Evaluation

Phase II
Materials Development
Management System Design

Phase III
Materials Test (training)
Management System Test

Phase IV
Materials Revision & Production
Delivery System Development

Phase V
Implementation
and Evaluation



Part 5 - BUDGET SUMMARY (Totals by Project Year)

	6/71	6/72	6/73	6/74
1) UMREL				
Project Administration	6,000	18,000	19,000	20,000
Support Sources	2,500	5,000	5,500	6,000
Project Evaluation		8,000	9,000	12,000
Training Costs		109,000	82,000	47,000
Travel	<u>2,000</u>	<u>2,000</u>	<u>2,000</u>	<u>4,000</u>
Subtotal	10,500	142,000	117,500	89,000
2) ERDC				
Project Administration	1,000	4,000	4,200	4,400
Secretarial	<u>2,500</u>	<u>2,250</u>	<u>2,250</u>	<u>2,250</u>
Subtotal	3,500	6,250	6,450	6,650
3) Psychological Foundations				
Salaries (Prof)	6,500	34,000	43,000	45,000
Staff	3,000	10,000	14,000	14,000
Support	2,000	10,000	10,000	5,000
Materials	<u>5,000</u>	<u>10,000</u>	<u>5,000</u>	<u>5,000</u>
Subtotal	16,500	64,000	72,000	69,000
4) Educational Administration				
Salaries	9,000	18,000	20,000	22,000
Secretary	2,500	5,000	6,000	6,000
Materials	<u> </u>	<u>2,000</u>	<u>4,000</u>	<u>4,000</u>
Subtotal	11,500	25,000	30,000	32,000

5) Control Data Corporation			(est.)	
Materials Evaluation	10,398		20,000	Not
Materials Development	20,000	97,841	40,000	available
Pilot Testing		13,864		estimate
Production		15,317	12,000	approx.
Consulting	2,000	3,600	5,000	73 level
Stipends	<u> </u>	<u> </u>	<u>20,000</u>	<u> </u>
Subtotal	32,398	130,622	97,000	90,000
6) Southwest State College				
Staff	3,750	7,500	8,000	8,000
Travel and per diem	<u> 500</u>	<u> 500</u>	<u> 500</u>	<u> 500</u>
Subtotal	4,250	8,000	8,500	8,500
Total	78,648	375,872	331,450	295,150

SUMMARY OF BUDGET DATA FROM ABOVE DATA
FOR FIRST 18 MONTHS OF PROJECT

Total to 6/71	\$ 78,648
Total to 6/72	\$375,872
Total Indirect Costs for first 18 months	\$ 32,030
(Figure represents 8% times \$400,374 for program development, implementation, administration, and clerical salaries)	
Total Employee Benefits for first 18 months	\$ 54,854
(19% times \$288,703)	
Total	\$541,404

SUMMARY OF BUDGET DATA FROM 6022 FORMS
FOR FIRST 18 MONTHS OF PROJECT

Special Training Projects	\$ 3,000
Post-Doctoral Training	\$ 37,000
Graduate Training	\$ 69,000
Program Development	\$432,404
[Figure includes all salaries for program development, implementation, project administration, and clerical personnel, plus indirect costs and employee benefits.]	
Total	\$541,404

Part 6 - CONTRACTS

Prime Contractor: Upper Midwest Regional Educational Laboratory

UMREL will undertake to provide administrative services, project support and study of training designs for the Consortium. It will:

- 1) Administer all project funds and apportion said funds to subcontractors at its discretion.
- 2) Provide office space and secretarial support services to the project.
- 3) Recruit, compensate and evaluate the performance of trainees.
- 4) Coordinate contributions of project subcontractors.
- 5) Make summary evaluation studies and reports as indicated in the proposal.

Budget:

	to 6/71	6/72	6/73	6/74
administration	6,000	18,000	19,000	20,000
support services	2,500	5,000	5,500	6,000
project evaluation		8,000	9,000	12,000
trainee costs		109,000	82,000	47,000*
travel and per diem	<u>2,000</u>	<u>2,000</u>	<u>2,000</u>	<u>4,000</u>
Total	10,500	142,000	117,500	89,000

* Post doctorate and graduate student support will continue, however, stipends for teachers and administrators will now become cost effective.

VITA

William Ammentorp

Experience Background:

- 9/67 - Director of Research*, Upper Midwest Regional Educational
Present Laboratory, 1640 East 78th Street, Minneapolis, Minnesota.
- 1/67 - Executive Director*, Southern Minnesota Educational
9/67 Research & Development Council, Coffman Building, Rochester,
Minnesota.
- 1/65 - Dean of Men & Assistant Professor of Sociology, Carleton
7/66 College, Northfield, Minnesota.
- 9/63 - Associate Director of Admissions & Instructor in Sociology,
12/64 Carleton College, Northfield, Minnesota.
- 9/61 - Associate Director of Admissions, University of Chicago,
8/63 Chicago, Chicago, Illinois.
- 1/59 - Admissions Counselor, Carleton College, Northfield,
8/60 Minnesota.

*These positions were held in conjunction with present position as Associate Professor in Educational Administration at the University of Minnesota.

Memberships in Professional Organizations:

American Educational Research Association
Association of Higher Education
Phi Delta Kappa
Twin City Operations Research Society

Publications:

1. Surveys and Reports:

- a. "Research in Program Planning." Upper Midwest Regional Educational Laboratory, May, 1968.
- b. "A Rationale for Teacher Education." Upper Midwest Regional Educational Laboratory, November, 1968.

2. Addresses and Papers:

- a. Address: Associated Colleges of the Midwest, Student Personnel Conference, Monmouth, Illinois, 1965.

- b. Paper: "Social Thought in Educational Administration." University Council for Educational Administration, Columbus, Ohio, Spring, 1967.
- c. Paper: "Perspectives on Human Development." Brothers of the Christian Schools, Annual Conference, Adamstown, Maryland, Spring, 1968.
- d. Paper: "Social Organization for Special Education." U. S. Office of Education, Regional Conference, Minneapolis, Minnesota, Spring, 1968.
- e. Paper: "Politics and Education." Claremont Graduate Seminar, Claremont, California, July, 1968.
- f. Address: "Research on the Religious Life." Brothers of the Christian Schools, National Conference, Joliet, Illinois, Summer, 1968.
- g. Paper: "Prerequisites for Systems Analysis." American Educational Research Association Symposium, Los Angeles, California, February, 1969.

3. Monographs, Books, Articles:

- a. Monograph: "A System for Information Search and Retrieval." Upper Midwest Regional Educational Laboratory, November, 1968.
- b. Monograph: "A Format for Research and Development in Education." Upper Midwest Regional Educational Laboratory, November, 1968.
- c. Article: "Essay Review." Educational Administration Quarterly, III, 3, Autumn, 1968, pp. 85-89.
- d. Article: "Prerequisites for Systems Analysis: Analytic and Management Demands for a New Approach to Educational Administration." With Marvin F. Daley and David N. Evans, Educational Technology, September, 1969.
- e. Book: The Committed, St. Mary's College Press, Winona, Minnesota, 1968.

- f. Book: "Social Perspectives on Religious Renewal."
(Chapter) Approaches to Renewal (Washington, D. C.:
Center for Applied Research on the
Apostolate, 1970).
 - g. Book: "Social Behavior and Administrator Train-
(Chapter) ing." With Brian Fitch, The Social
Sciences in Educational Administration,
J. Culbertson (Ed), Columbus, Ohio,
University Council for Educational
Administration.
4. Research Reports:
- a. "Diffusion of Innovation in Two Ethnic Groups." Un-
published M.A. Paper (In Press), Department of Sociology,
University of Chicago, 1963.
 - b. "The Influence of Social Support in Decision Making."
Unpublished Ph.D. Dissertation, College of Education,
University of Chicago, 1964.
 - c. "The Christian Brothers Study: Some Preliminary Find-
ings." Brothers of the Christian Schools, Lewis College,
Lockport, Illinois, 1968.
 - d. School Finance in Southern Minnesota, with Dean E.
Fritze, Southern Minnesota Educational Research &
Development Council, Spring, 1968.
 - e. Staffing Southern Minnesota Schools, with Dean E.
Fritze, Southern Minnesota Educational Research &
Development Council, Spring, 1968.

Consulting Activities:

- 1967- Consultant to Brothers of the Christian Schools -
1968 National Study of Religious Life, 1967 (20 months).
- 1968- Consultant to Minnesota State College Board - Design
Present of a Teacher Education Program at Southwest Minnesota
State College, Marshall, Minnesota.
- Summer, Consultant to Upper Midwest Regional Educational
1967 Laboratory.
- 1967- Section Editor, Educational Administration Abstracts.
Present

1967- Editorial Consultant, Prentice-Hall Publishing
Present Company, Englewood Cliff, New Jersey.

1968 Research Consultant to Instructional Simulation
Incorporated, Macalester College, St. Paul,
Minnesota.

VITA

Geraldine Ann Evans

Education:

- 1968 University of Minnesota
Ph.D., Educational Administration (emphasis in
personnel administration), minor field - Educational
Psychology, collateral field - Industrial Relations
- 1965 University of Minnesota
M.A., Educational Psychology (counseling emphasis)
- 1960 University of Minnesota
B.S., Social Studies Education (sociology emphasis)

Work Experience:

- 1970 Project Coordinator, RFP 70-12 Project, UMREL,
Minneapolis, Minnesota
- 1970 Educational Consultant, Educational Programs,
Minneapolis, Minnesota
- 1969-70 Educational Consultant, Educational Management
Services, Inc., Minneapolis, Minnesota
- 1967-68 Research Assistant, Educational Research and Develop-
ment Council, University of Minnesota, Minneapolis,
Minnesota
- Summer, Personnel Consultant, Northwestern Bell Telephone
1966 Company, Minneapolis Office, Minneapolis, Minnesota
- Summer, Employment Counselor, United States Employment
1965 Service, Minneapolis Office, Minneapolis, Minnesota
- 1963-66 Secondary School Counselor, Anoka Public Schools,
Anoka, Minnesota
- 1960-62 Secondary Teacher of Reading and Social Studies
Hopkins Public Schools, Hopkins, Minnesota

Consulting activities include negotiations, personnel administration, staffing and organizational problems, inservice training, staff attitude surveys, community attitude surveys, preparation of administrative manuals, organizing and publishing data and projections regarding manpower needs, wages, benefits, and other economic data.

Published Works:

1. First-Line Supervision in the Public Schools (a monograph), Interstate Publishing Company, Danville, Illinois, March 1968.
2. Job Satisfaction and Teacher Militancy: Some Teacher Attitudes (a monograph with John M. Maas), Interstate Publishing Company, Danville, Illinois, 1969.
3. Preparing the Negotiations Proposal and Background Materials for Negotiations (two manuals prepared for the Minnesota Federation of Teachers), Fall 1969.
4. Educational Clerical Personnel, Educational Management Services, Inc., 151 Silver Lake Road, New Brighton, Minnesota 55112, January 1970.
5. Grievance Procedures in the Educational Setting, Educational Management Services, Inc., 151 Silver Lake Road, New Brighton, Minnesota 55112, January 1970.
6. Merit Pay for Teachers, Educational Management Services, Inc., 151 Silver Lake Road, New Brighton, Minnesota 55112, January 1970.
7. Class Size and Numerical Staffing Adequacy, Educational Management Services, Inc., 151 Silver Lake Road, New Brighton, Minnesota 55112, January 1970.
8. "A Study of Teacher Negotiations," The Minnesota Teacher, Winter 1969, Vol. XI, No. 2, pp. 14-17.

VITA

David N. Evans

Function:

Mr. Evans sets Laboratory policies and procedures with the recommendations of the Board of Directors, and the Laboratory Coordinating Committee. He communicates the Laboratory program to USOE, to the Board of Directors, State Departments of Education, to the congressional delegation from the region, and to other audiences within the educational community. His responsibilities also include maintaining liaison with sources of nongovernmental funding, and with other Laboratories and R & D centers. Additionally, he conducts yearly performance reviews of all staff members.

Academic Background:

- 1958 San Diego State College, Major in Elementary Education, Minor in English, A.B.
- 1962 San Diego State College, Elementary School Administration: Thesis on "Teachers Attitudes Toward Curriculum Development", M.A.
- 1966 Stanford University, Degree in General School Administration "Correlates of Educational Expenditures in Medium-Sized School Districts", Ed.D.

Professional Experience:

- July 1, 1968- Executive Director, Upper Midwest Regional Educational Laboratory, Minneapolis, Minnesota.

Chief executive officer of a non-profit corporation. This corporation is managed by a 24-member board of directors. Chief functions have been to recruit a very able staff representing many different disciplines and then to provide them with an environment in which they can use their skills. Deals with representatives from federal, state and local school districts. Continue to pursue major professional interests in organizational theory, administration of research projects and educational finance.

Laboratory policy and procedures:

Communicating lab program to USOE, Board of Directors, State Department of Education, Congressional delegation, and other audiences within educational community.

Liaison with sources of private nongovernmental funding.

All of recommendations of LCC in determining Laboratory policies.

Yearly performance review of all staff members.

Liaison with other Labs and R & D Centers.

May 15, 1966-June 1968
Research Director, State Committee on Public Education, Berkeley, California.

Plan, organize, and direct education projects of major scope; recommend and develop methods of procedures for the collection and use of required project data; define the variables and limits of the project and evaluate basic factors influencing variations in the data; direct the analysis of data qualitatively, using the methods of the appropriate field of specialization; arrange for the effective use of special consultants, ad hoc task force teams, and other advisory services; plan and arrange meetings of advisory committees; direct the preparation of and personally present progress reports to advisory committee; plan and provide leadership for regional meetings and workshops to disseminate pertinent information or to provide in-service training; provide liaison between project committees and interested persons and groups; select, train, and evaluate project staff; coordinate and schedule project staff efforts and presentation of material developed; represent project staff at meetings and conferences; keep abreast of current developments in this specific field.

September 1965-May 1966
Director Evaluation of the Impact of NDEA on California Education, California State Department of Education.

During this period I developed and administered a questionnaire designed to discover what impact the National Defense Education Act had on California Education. In the course of this study I traveled widely over the state, meeting with representatives of the 54 county departments of education that distributed the questionnaire. I also organized and chaired a one week conference that coded the open ended response to the questionnaire and cooperated in the final writing of the report.

June 1964- Research Assistant, Stanford University, School of
June 1966 Education, Stanford, California.

Served as project assistant to Professor James in this study of school finance. My major responsibility was to gather data on the City of Milwaukee. This study had two purposes; the first was to refine further the inductively-derived rationale for the study of school finance in which Professor James has been interested for a decade, the second was to apply the rationale to school systems in the great cities of the United States.

Septem- Supervisor of Intern Teachers, San Diego Unified School
ber 1963- District, San Diego, California.
June 1964

I had the responsibility of supervising five intern teachers. These teachers had no experience and it was my task to train them as elementary school teachers for the San Diego school system. I worked cooperatively with San Diego State College in this task.

February Instructor, San Diego State College Extension Division.
1964-

June 1964 Taught a class of thirty-five teachers on the topic "Modern Mathematics in the Elementary School".

Septem- Teacher and Master Teacher, San Diego Unified School
ber 1958- District, San Diego, California.

Septem-
ber 1963 I taught all subjects in a self-contained classroom in grades five and six and supervised student teachers. During two of these years I taught classes with children whose I.Q.'s exceed 148 on a Stanford-Benet Intelligence Test. During the last year I also served as the substitute principal for the school.

Publications:

1. The Impact in California of NDEA: Titles III, V and VIII.
2. Correlates of Educational Expenditures in Medium-Sized School Districts.
3. Correlates of Educational Expenditures in Medium-Sized School Districts (abstract to be published by N.E.A. as one of the papers given an award by 10th National Conference of School Finance).
4. Off With the Handcuffs; The State Committee on Public Education's plan for freeing schools. (Presented at 1967 California Association for School Administrators Conference).

5. Abstract of Citizens for 21st Century (submitted to American Educational Research Association).
6. Evans, David N. and Potter, Conrad H. "Correlates of Educational Expenditures in Medium-Sized School Districts; Educational Expenditures in Large City School Districts, 1950-60." The Challenge of Change in School Finance, Washington, D. C., National Education Association, 1967, pp. 204-210.
7. Guthrie, James W., Penfield, Douglas and Evans, David N. "Geographic Distribution of Teaching Talent in California." Citizens for the 21st Century - Long-Range Considerations for California Elementary and Secondary Education, Sacramento, California, California State Committee on Public Education, 1969, pp. 203-222.
8. Evans, David N. "Teacher Preparation, a Special Concern." Citizens for the 21st Century - Long-Range Considerations for California Elementary and Secondary Education, Sacramento, California, California State Committee on Public Education, 1969, pp. 223-229.
9. Guthrie, James W., Penfield, Douglas A. and Evans, David N. "Geographic Distribution of Teaching Talent." American Education Research Journal, 6(4), pp. 645-659, November 1969.
10. Ammentorp, William M., Daley, Marvin F. and Evans, David N. "Pre-requisites for Systems Analysis in Education." Behaviorally Engineered Environments - Staff Papers for AERA Symposium, 1970, Minneapolis, Minnesota, Upper Midwest Regional Educational Laboratory, 1970, pp. 41-42.
11. Honetschlager, Dean A. and Evans, David N. "Establishing Relationships for Research-Based Development in Schools." Behaviorally Engineered Environments - Staff Papers for AERA Symposium, 1970, Minneapolis, Minnesota, Upper Midwest Regional Educational Laboratory, 1970, pp. 45-47.
12. Evans, David N. "Directions for the Seventies." Needs of Elementary and Secondary Education for the Seventies, Washington, D. C., General Subcommittee on Education of the Committee on Education and Labor, House of Representatives Ninety-First Congress, 1970, pp. 183-186.
13. Evans, David N. and Johnson, I. T. The Impact in California of NDEA Titles III, V, VIII. Sacramento, California, California State Department of Education, 1967.

Professional Affiliations:

American Association of School Administrators
American Educational Research Association
National Education Association
Phi Delta Kappa

VITA

Jon R. Morris, Program Coordinator, UMREL

Function:

Mr. Morris' responsibilities are in two major areas; (a) designing and carrying out research on conditions in the UMREL school environment with a goal of validating existing educational designs and suggesting new ones and (b) advising graduate students both in programs of study and in dissertation research related to the Laboratory program.

Academic Background:

1963 B.S., Major-Mathematics, Physics
 Illinois Wesleyan University
 Bloomington, Illinois

1965 M.A., Mathematics
 University of Denver

1970 Ph.D., Major-Experimental Design, Statistics,
 Computer Applications in the Behavioral Sciences,
 University of Colorado

Professional Experience:

1964-65 Instructor, Part-time, Temple Buell College,
 Denver

1965-67 Programmer-Modeler, McDonnell Automation Company,
 St. Louis. System design, programming, and debugging
 of utility routines for the Gemini A trainer software
 system. Analyzed, designed, and implemented the
 aerodynamic data package for a commercial jet pilot
 trainer. Did considerable analysis of the post
 simulation data to verify the accuracy of the simulation
 technique.

1966-67 Instructor, Part-time, University of Missouri, St. Louis
 Instructed two classes of Introduction to Digital Programming.

1967-68 Director of Data Processing and Instructor of Mathematics,
 Wisconsin State University, Stevens Point. Duties were
 preparation of operational philosophy of the department,
 conduct a program of information and assistance to various
 areas of the university such as academic affairs, business
 affairs, library and student affairs as to the potential
 of the available equipment. Develop and maintain useful
 data systems for all areas of the university. Preparation
 and execution of the department budget. Supervision of
 personnel consisting of one programmer and three data
 preparation persons. Establish priority of use schedules.
 Furnish programming support as required by faculty members.

Professional Experience Continued:

Instruct one class in computer programming. Developed teletype interlink with University of Wisconsin Computer Center at Madison.

1968-

Internship experience through the Laboratory of Educational Research, University of Colorado.

- (1) Colorado State Department of Education Urban Planning Division. Implementation of SCANPED (System for Comparative Analysis of Programs for Educational Development) on the computer at University of Colorado. Consulted on appropriate regression techniques for projection, conversion of the program from a foreign machine and some debugging of the program.
- (2) Applications of the following data analysis techniques: Regression analysis, ANOVA, MANOVA, MANCOVA, discriminate function analysis, factor analysis, multivariate analysis of repeated measures, and canonical correlation analysis in actual experimental setting, including preparation for computer analysis, interpretation of results, and writing of final report. As a laboratory fellow a considerable amount of time is given to consultation on experimental design to clients (including faculty and students) from various departments of the university.
- (3) Consultant for computer usage and data analysis of Compensatory Education Act (Title I) evaluation.
- (4) Design and programming of two interactive mode programs for the C.D.C. 6400 Scope 282 graphics system. Programs are The Tape Editor and The University Planner.

1968-

Graduate Assistant, WICHE-MIS. Assignments have included: Conducting a review of the literature on Student Flow Models (Student flows as related to resource requirements predictions for higher education). Preparation of a report outlining the aims of the WICHE Student Flow Model including a schema for evaluating various prediction models using as test data historical data from the University of Colorado. Preparation of data tapes including six years of crossover data (by major by student) which can be matched with student entrance data, diploma card data, and instructional characteristics files. These tapes will be used for model evaluation. Preparation of crossover matrices, matched with characteristics data to be analyzed for structural components of student behavior (see research papers in progress).

Professional Affiliations:

American Educational Research Association

National Council on Measurement in Education

Association for Computing Machinery

Subcontracts and Letters of Commitment

The budget summary on page 14 is derived from the following documents. Each expresses the subcontractor's intent to attain certain project objectives. The reader's attention is drawn to:

- a) Objectives to be attained.
- b) Dollar amounts by project year.
- c) Staff qualifications.
- d) Letters of commitment.

Subcontractor #1: Educational Research and Development Council

The Educational Research and Development Council will provide administrative and coordination services to the Consortium. It will be the administrative agency for involvement of the Department of Psychological Foundations and the Division of Educational Administration of the University of Minnesota. The detailed budgets appended to the subcontracts of these participants will be managed by ERDC.

A person from the ERDC staff will be assigned to the project and will assure coordination of work done by University staff. ERDC will also provide office space and secretarial services as necessary for contract administration.

Subcontract Budget:

ERDC	6/71	6/72	6/73	6/74
Project administration ($\frac{1}{4}$ FTE)	\$1,000	\$4,000	\$4,200	\$4,400
Secretarial ($\frac{1}{2}$ FTE)	<u>\$2,500</u>	<u>\$2,250</u>	<u>\$2,250</u>	<u>\$2,250</u>
Total	\$3,500	\$6,250	\$6,450	\$6,650

-34-
COLLEGE OF EDUCATION
221 HEALTH SERVICE BLDG.
UNIVERSITY OF MINNESOTA
ST. PAUL, MINNESOTA 55101

EDUCATIONAL RESEARCH and DEVELOPMENT COUNCIL
of the Twin Cities Metropolitan Area, Inc.

COLLEGE OF EDUCATION
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA 55455

AREA CODE: 612
373-4872
373-4860



Active Members:

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Watertown
Wayzata
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White Bear Lake

Associate Members:

~~Archdiocese of~~
~~Minneapolis/St. Paul~~
Delano Public Schools
Rockford Public Schools

December 8, 1970

CCFY

Dr. John Egermeier, Acting Chief
Research Training Branch
National Center for Education,
Research and Evaluation
U. S. Office of Education
400 Maryland Avenue S. W.
Washington, D. C. 20202

Dear Dr. Egermeier:

The Educational Research and Development Council of the Twin Cities Metropolitan Area represents 44 school districts in the seven county Minneapolis-St. Paul metropolitan area. This consortium of schools is extremely interested in, and wholeheartedly supports, the proposal to initiate a Midwest Educational Training Center to train educational developers and evaluators.

Many problems and needs exist on the educational scene today, but paramount among problems and needs is the need to prepare people in the area of program development and evaluation. To accomplish this, a carefully designed program of inservice training is needed to train such personnel.

The Board of Directors of the Educational Research and Development Council of the Twin Cities Metropolitan Area enthusiastically endorses the aforementioned training project and would willingly assume a sub or prime contract to forward the effort.

Most sincerely yours,

Thomas F. Stark
Executive Secretary

40

TFS/rrr

cc: Wayne W. Welch

Subcontractor #2: Division of Educational Administration
University of Minnesota

The Division of Educational Administration proposes to design and test an instructional management system for the Consortium. This system will meet the objectives outlined for individualized instruction in Design Document III, namely,

- "1. The goals of learning are specified in terms of observable behavior and the conditions under which this behavior is to be exercised.
2. Diagnosis is made of the initial capabilities with which the learner begins a particular course of instruction. The capabilities that are assessed are those relevant to the forthcoming instruction.
3. Educational alternatives adaptive to the initial profile of the student are presented to him. The student selects or is assigned one of these alternatives.
4. Student performance is monitored and continuously assessed as the student proceeds to learn.
5. Instruction proceeds as a function of the relationship between measures of student performance, available instructional alternatives and criteria of competence.
6. As instruction proceeds, data is generated for monitoring and improving the instructional system.
7. Knowledge and skills available to trainees are modular in nature and can be aggregated to meet demands of particular employee roles.
8. Follow-up data on trainee performance on the job is gathered and used to revise and update training program content.
9. Students may enter and leave the program at any point. Enter/leave decisions are controlled by trainee characteristics and desired skill/knowledge outcomes.
10. Certification and/or credit is an optional feature of the program. Decision rules are available to insure wide interpretation of program content across receiving organizations.

- 11. Student performance - both during and subsequent to training - constitutes the data source for program evaluation. It also produces a baseline of performance against which instructional innovations can be judged."

Divisional staff assigned to the project will design and test a system to meet the above objectives. The outcomes of their work will be those outlined on page 3 of the Consortium proposal:

- a) Data gathering instruments and procedures
- b) Files for storing information related to instruction process, training content and student behavior.
- c) Procedures and/or computer software for system implementation.
- d) Design and analyses of reinforcement practices used during training.
- e) Provisions for analysis of system outcomes and costs.

To this listing will be added reports of system features and evaluation of implementation testing of the management system.

Budget:

	6/71	6/72	6/73	6/74
Staff:				
Assoc. Prof. (1/2 FTE)	\$4,000	8,000	9,000	10,000
V. Hendrix (1/2 FTE)	\$5,000	10,000	11,000	12,000
Secretarial (1 FTE)	\$2,500	5,000	6,000	6,000
Materials and				
Computer Time	_____	<u>2,000</u>	<u>4,000</u>	<u>4,000</u>
Total	\$11,500	25,000	30,000	32,000

UNIVERSITY OF *Minnesota*

DIVISION OF EDUCATIONAL ADMINISTRATION
203 BURTON HALL • MINNEAPOLIS, MINNESOTA 55455

December 1, 1970

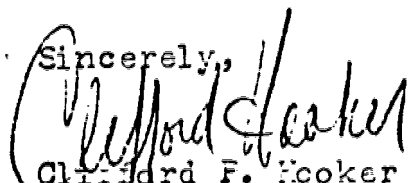
Mr. John Egermeier
Acting Chief
Research Training Branch
U. S. Office of Education
400 Maryland Avenue S.W.
Room 3040
Washington, D. C. 20202

Dear Mr. Egermeier:

The Division of Educational Administration is pleased to offer its assurance that the attached subcontract will receive high priority in Division efforts. Staff members named in the contract will be proportionately relieved of Divisional responsibilities and given the complete support of Division staff as they carry out this important work.

The Division's interest in new designs for instruction and special training to meet educational needs is one of long standing. I hope that this project will be an important step in Division effort to serve the educational needs of the region.

Sincerely,


Clifford F. Hooker
Chairman

CFH:hs

VITA

Vernon L. Hendrix

Present Position:

Professor, Division of Educational Administration,
College of Education, University of Minnesota.

Recently - 1967-69:

Assistant to the Chancellor for Research and Training,
Dallas County Junior College District.

Education:

B.M. from Texas Christian University, Music - History -
Composition.

M.M. from University of Texas, Musicology.

1962 Ph.D., from University of Texas, in Junior College
Administration.

Special Interests:

Institutional Research
Administrative Decision-Making
Computer Usage in Administration
Systems Analysis in Educational Institutions

Teaching:

Junior College Administration and Institutional
Research, University of California, Los Angeles.

Humanities, Music History and Theory, Pensacola
Junior College, Pensacola, Florida.

Administration:

Assistant Dean, College of Fine Arts, University of
Texas.

Member:

American Association of Junior Colleges
Association for Higher Education
American Educational Research Association
Association for Institutional Research
Association for Computing Machinery

Current Activities:

Teaching and supervising research in the
area of administration -- Higher Education.

Papers and Reports:

1. Environmental Measurements in Educational Institutions, National Conference of Professors of Educational Administration, New York University, August, 1964.
2. Systematized Institutional Research, National Conference of Professors of Educational Administration, New York University, August, 1964.
3. Population Age Distributions and Public Education Expenditures, (with Marvin C. Alken) American Educational Research Association, New York, February, 1967.
4. Research Opportunities in Comprehensive Public Junior Colleges: Inter- and Intra-College Organizational Problems, American Educational Research Association, New York, February, 1967.
5. Community Characteristics Related to Perceived Student Satisfaction and Achievement in 100 Public Junior Colleges. American Educational Research Association, Los Angeles, February, 1969.
6. Environmental Determinants of Successful Occupational Training in Public Junior Colleges, American Educational Research Association, Minneapolis, March, 1970. (Partial report of HRD-117-65).
7. College Environments and Student Change Mechanism in Public Junior Colleges, American Personnel and Guidance Association, New Orleans, March, 1970. (Partial report of HRD-117-65).

Publications:

1. Manual for the Preparation of Dissertation Research Proposals, Los Angeles: Junior College Leadership Program, University of California, 1963.
2. "Academic Rank: Mostly Peril?" Junior College Journal, 34, #4:28-30, December, 1963.
3. "An Iterative Solution of the Normal Probability Integral," Educational and Psychological Measurement, 24, #3:663-667, Fall, 1964.
4. "Emerging Dimensions in Junior College Environments," Institutional Research in the Junior College, A Report of a Conference Sponsored by the University of California, Los Angeles, Junior College Leadership Program and the Southern California Junior College Institutional Research Group, Los Angeles: School of Education, U.C.L.A., September, 1964, pp. 21-28.
5. "Rationale and Potential for Environmental Measurement in the Junior College," Institutional Research in the Junior College, A Report of a Conference Sponsored by the University of California, Los Angeles, Junior College Leadership Program and the Southern California Junior College Institutional Research Group, Los Angeles: School of Education. U.C.L.A., September, 1964, pp. 1-16.
6. "Relationships Between Personnel Policies and Faculty Life-Record Data in Public Junior Colleges," California Journal of Educational Research, 15, #3:150-157, 160, May, 1964.
7. "Relationships Between Personnel Policies and Faculty Personality Characteristics," California Journal of Educational Research, 15, #1:34-43, January, 1964.
8. "Academic Personnel Policies and Student Environmental Perceptions," Educational Administration Quarterly, 1, #1:32-41, Winter, 1965.
9. "Academic Rank Revisited," Junior College Journal, 35, #5:24-28, February, 1965.
10. "Administrative Research in Educational Systems," in A Conceptual Framework for Institutional Research, Proceedings of Fourth Annual National Institutional Research Forum, Washington State University, Pullman, Washington, 1965 (Conference at University of Minnesota) pp. 17-22.

11. "Institutional Research in Junior Colleges," in A Conceptual Framework for Institutional Research, Proceedings of Fourth Annual National Institutional Research Forum, Washington State University, Pullman, Washington, 1965. (Conference at University of Minnesota), pp. 67-82.
12. "The Blacky Test: Another Approach to Factor Analytic Validity," (with Sandra Robinson) Journal of Projective Techniques.
13. "Environmental Press Preferences of Students," in Research on Academic Input, Proceedings of Sixth Annual Forum of the Association for Institutional Research, State University of New York College at Cortland, Cortland, New York, 1966. (Conference in Boston), pp. 189-193.
14. "Input-Output Relationships," in Financing Junior Colleges in California, (with Marvin C. Alken) Sacramento: California State Department of Education, 1966, pp. 34-40.
15. Functional Relationships of Junior Colleges Environments and Selected Characteristics of Faculties, Students, the Administration and the Community, Minneapolis: University of Minnesota (Final Report of Cooperative Research Project #2849), 1967.
16. Input-Output Relationships in a Sample of California Public Junior Colleges, (with Marvin C. Alken) Los Angeles: Center for the Study of Evaluation in Instructional Programs, University of California, 1967.
17. "Factor Dimensions and Reliability of the Work Values Inventory," (with Donald E. Super) Vocational Guidance Quarterly, June, 1968, pp. 269-274.
18. "A Professional Library for Junior Colleges," (with Kenneth Oosting) Minneapolis: University of Minnesota, 1967. 20 pp.
19. "Junior College Environment Scales," in Institutional Research and Academic Outcomes, Proceedings of the Eighth Annual Forum on Institutional Research, University of Georgia: Atlanta, 1968. (Conference in San Francisco), pp. 61-72.

Reviews:

1. Schick, Thomas, "Disk File Sorting." Comm. ACM, 6,6 (June, 1963), 330-331.

2. Berkshire, James R., "Human Quality Control." Proceedings 4th IBM Medical Symposium., October, 1962, Endicott, N. Y., 355-370.
3. Bushnell, Donald D., "The Role of the Computer in Future Instructional Systems." AV Communication Review, Supplement 7 (March - April, 1963), 70p.
4. Egbert, Robert L., "The Computer in Education: Malefactor or Benefactor," Proceedings AFIPS 1963 Fall Joint Computer Conference, Las Vegas, Nev., November 1963, 619-630. Spartan Books, Baltimore, Maryland.
5. Kish, Leslie, "Survey Sampling," John Wiley & Sons, New York, 1965, 643 p.
6. Kuehn, Alfred A. and Weiss, Doyle, L., "Marketing Analysis Training Exercise," Behavioral Science, 10, 1 (Jan. 1965), 51-67.
7. Personnel Reports -- a CBS Special," Business Automation, 12, 3 (March 1965), 51-53.
8. "Using Programs to Teach Programming Skills," Business Automation, 11, 7 (July 1964), 32-35.
9. Boulliet, L., "An Example of Computer Use for Mass Processing, Aiming at Maximum Profitability." In Economics of Automatic Data Processing, 259-267.
10. Braudo, M., "Automation with a Provident Fund Employing An ADP Service Center." In Economics of Automatic Data Processing, 248-258.
11. Edwards, Ward, "Optimal Strategies for Seeking Information: Models for Statistics, Choice Reaction Times, and Human Information Processing," Journal Mathematical Psychology, 2, 2 (July 1965), 312-329.
12. Greene, R. H., "Adapting Audit Techniques Under Automation," Auditgram, 41, 11 (November 1965), 12-14.
13. Hiltz, F. F., "Computer Correlation Analysis of Intracellular Neuronal Responses." In Proceedings AFIPS 1965 Fall Joint Computer Conference, Part I, 567-581.
14. Porter, Than R., "Parameter Reading Routine for Statistical Lib Library Programs." Presented at Metropolitan New York ACM Symposium, New York City, March 1966. University Computer Center, New York University, 15 p.

15. Sprowls, R. C., "Economic Analysis of Teleprocessing Service at the Western Data Processing Center." Economics of Automatic Data Processing, 268-276.
16. Thibert, R., "Bookkeeping by Computer, Using an Optical Reading Device." Economics of Automatic Data Processing, 277-281.
17. Zucker, M. S., "LOCS: An EDP Machine Logic and Control Simulator." IEEE Trans., Ec-14, 3 (June 1965), 403-416.
18. Ball, Geoffrey H., and Hall, David, J., "A Clustering Technique for Summarizing Multivariate Data." Behavioral Science, 12, 2 (March 1967), 153-155.
19. Celio, Rinaldo Baldini, "A Study of the Cyclic Use of the Same Central Unit by Many Customers." ICC Bulletin, 6, 1 (January-March 1967), 27-38.
20. "Description of Systems Used for Data Transmission (an ASA Tutorial)." Comm. ACM, 9, 10 (October 1966), 764-770.
21. Maloney, Clifford J., "Multinomial Acceptance Sampling." Proceedings ACM 21st National Conference, 445-452.
22. Menkhaus, Edward J., "Film Stars in Action-Packed File System." Business Automation, 14, 4 (April 1967), 40-44.
23. Shapiro, S., "A Technique to Control Waiting Time in a Queue." IBM Systems Journal, 4, 1 (1965), 53-57.
24. Wendler, Charles Clifford, "Total Systems--Characteristics and Implementation." Systems and Procedures Association, Cleveland, Ohio, 1966, 123 pp.

Subcontractor #3: The Department of Psychological Foundations

Components to be furnished:

- I. A listing of the responsibilities of the department.
- II. A time line of the activities
- III. Summary table of the evaluation training planned.
- IV. Budget estimate and summary.
- V. List of identified evaluation hierarchies and estimate of availability of modules. The components of these modules are keyed to the list of objectives in the conceptual papers.
- VI. A sample training module.

I. The Department of Psychological Foundations of the College of Education, University of Minnesota agrees to the following responsibilities as a subcontractor for the Midwest Educational Training Center.

1. Develop a set of evaluation training modules to achieve the instructional objectives identified in the area of evaluation. The modules will be developed for each of the 12 levels of evaluation skills identified in the conceptual paper by Welch found in Design Document II. The hierarchy of the evaluation skills is reproduced in Part V of this agreement, together with an example of the form and format of a training module. (See Part VI). Current plans call for the development of six of the modules during the first year of the implementation stage, and the remaining six to be developed during the following year. (See schedule in Part V).

2. Provide training and/or retraining in the area of evaluation for two post-doctoral fellows for each of three year of the implementation stage. The training will consist partially of intern or practicum experience in the development of the training modules, collaboration with staff currently working on evaluation problems, and participation in the actual training experience to be provided to others.

3. Provide yearly training opportunities for ten graduate fellows in the area of research and evaluation. Special emphasis will be given to practicum experience in development, training, and actual evaluation experiences. The role expectation for those students is an evaluation specialist. This is listed as Role B in Figure 2.
4. Provide training for 20 evaluation specialists currently functioning in educational institutions. The initial training focus will be on pilot testing and researching the training modules. In subsequent years, the focus will shift toward increased training opportunities. Anticipated numbers of specialists to be trained is 40 per year.
5. Train and/or retrain a total of 100 classroom teachers in the set of skills identified essential for their role. The levels of objectives considered here are specified in Figure 1.
6. Train 20 school administrators or other central office personnel (for example, state department, junior college, large school districts) in the identified research and evaluation skills.

(Note) II. A time line of activity planned for the department is shown in Figure 1. The period shown extends to September 1972. We expect that the cycle will be repeated during subsequent years.

Notice that the initial emphasis is on development but gradually shifting toward more training.

- (Note) III. An overall summary of the evaluation training planned, the target role to be filled, and estimated numbers of trainees is shown in Figure 2.

FIGURE 1

II. TIMELINE OF PACKAGE DEVELOPMENT AND INITIAL TRAINING

(Responsibilities of Psychological Foundations Department, University of Minnesota)

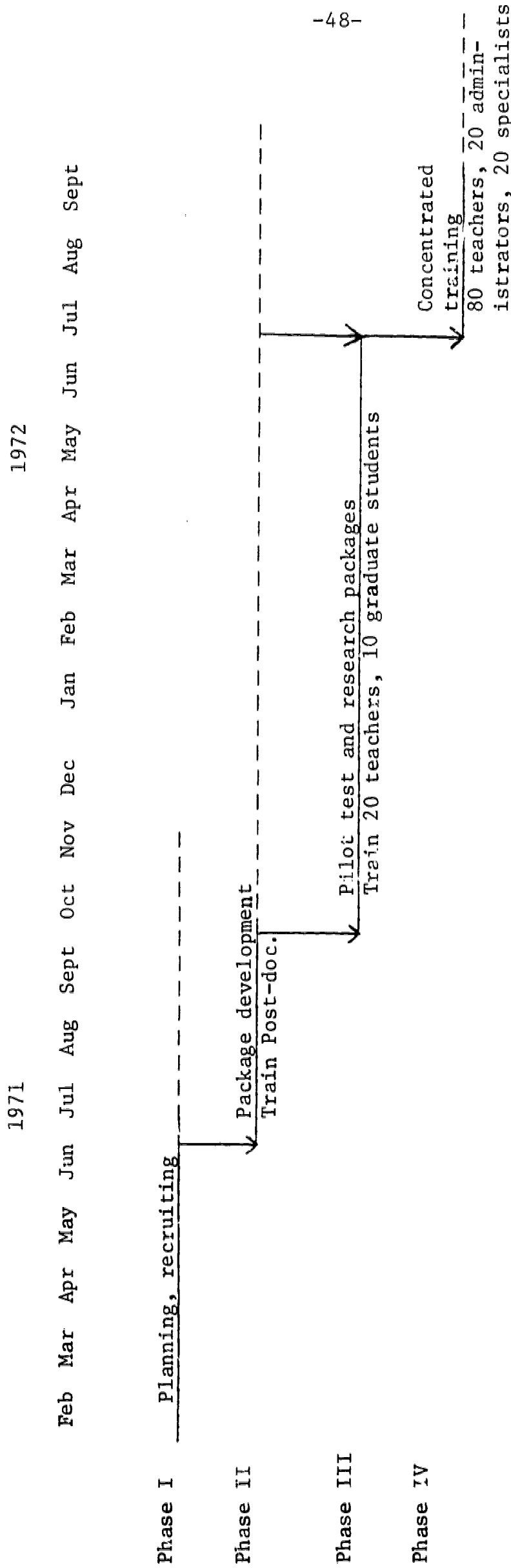


FIGURE 2

III. SUMMARY TABLE OF EVALUATION TRAINING

<u>Objective Levels Required</u>	<u>Evaluation Role</u>	<u>Example</u>	<u>Planned Training Experience</u>	<u>Approximate Numbers</u>
I, II, ... X	A. Theoretician	University professor	Postgraduate Graduate students	2/year 10/year
II, III, ... X	B. Professional	Evaluation specialist State Department	Graduate students Workshops, institutes	20/year
VI, VII, ... XI	C. Semiprofessional	Administrator Teacher	Inservice Institutes	120/year
XI, XII	D. Paraprofessional	Staff, Secretary	None planned at present	None

IV. BUDGET SUMMARY

February - June 30, 1971

Salaries	6,500
Stipends	(See prime contractor budget)
Staff	3,000
Support	2,000
Materials	<u>5,000</u>
Subtotal	16,500

July 1, 1971 - June 30, 1972

Salaries	34,000
Stipends	(See prime contractor budget)
Staff	10,000
Support	10,000
Materials	<u>10,000</u>
Subtotal	64,000

July 1, 1972 - June 30, 1973

Salaries	43,000
Staff	14,000
Support	10,000
Clerical	<u>5,000</u>
Subtotal	72,000

July 1, 1973 - June 30, 1974

Salaries	45,000
Staff	14,000
Support	5,000
Clerical	<u>5,000</u>
Subtotal	69,000

ITEMIZED BUDGET FOR FIRST TWO YEARS

Specific commitments and estimated costs

Feb. 18 - June 30, 1971 (4 months)	Rhetts (c) Johnson (¼) Welch (¼) \$1500 through UMREL	Planning, recruiting	\$ 2,000 <u>2,000</u> \$ 4,000	Travel Materials Misc. Secretary	\$ 2,000 5,000 2,000 <u>1,000</u>
					\$ 10,000
June 30 - Sept. 30, 1971 (3 months)	Rhetts (½) Johnson (c) Welch ¼ (c) Post-doc. (2) Asst. Prof. (1) Terwilliger (½)	Develop training packages	\$ 3,000 2,000 2,000 8,000* <u>4,000</u>	Secretary Materials Misc.	\$ 2,000 5,000 <u>5,000</u>
			\$ 19,000		\$ 12,000
Sept. 30 - June 30, 1972 (9 months)	Welch (¼) Johnson (¼) Rhetts (¼) Asst. Prof. (1) Post-doc. (2) Grad. Students (4)	Pilot training development	\$ 4,000 4,000 3,000 12,000 24,000 <u>12,000</u>	Materials Stipends (20) Staff (2) Misc.	\$ 5,000 5,000* 8,000 <u>5,000</u>
			\$ 59,000		\$ 23,000
		Subtotals	\$ 82,000		\$ 45,000
June 30 - Sept. 30, 1972 (3 months)	Post-doc. (2) Professor (4) Grad. Students (4)	Training	\$ 8,000* 20,000 <u>3,000*</u>	Stipends (120) Staff (2) Misc.	\$ 30,000 6,000 <u>5,000</u>
			\$ 23,000		\$ 41,000
		TOTAL	\$ 105,000		\$ 86,000

* Stipends to UMREL as prime contractor.

VITA

Roger A. Raymond

Education:

- 1949 - 1951 B.A. University of South Dakota (Experimental Psychology)
1953 - 1954 M.A. University of South Dakota (Experimental Psychology)

Other Educational Attendance:

Augustana College
Sioux Falls College
IBM Training Center
CDC Management Education
PRAXIS Corporation

Professional Experience:

- 8/70 - present Southwest State College - Associate Director of the Higher Education Coordinating Committee
6/70 - 7/70 Control Data Corporation - Manager, Advanced Development CDEI
3/69 - 5/70 Control Data Corporation - Manager, Curriculum Development CDI/CT
1955 - 1969 Sioux Falls Public Schools - Teacher Guidance Counselor Research Assistant Testing Coordinator Special Services Assistant
1954 - 1955 Jefferson City College - Instructor, Psychology

Honors:

- 1953 - 1954 Graduate Assistant - Experimental Psychology University of South Dakota
1964 Attendance at USOE sponsored practicum in guidance and counseling. University of South Dakota School of Education

Writing:

- M. A. Thesis - Size Judgments As A Function Of The Ames Monocular Distorted Room

Writing (continued)

- Teaching Algebra to Ninth and Tenth Grade Students with the use of Programmed Materials and Teaching Machines
- A Consideration of Teaching Machines and Programmed Materials with Individualized Student Programs in Small Groups
- Third Grade Reading Instruction as a Function of Team Teaching vs. Single Teacher Method
- Teaching Reading to Sixth Grade Pupils with the use of Science Research Associates Reading Laboratory Materials
- A Consideration of Homogeneous Grouping of Fifth Grade Students

Appendix I
Letters of Support

UNIVERSITY OF *Minnesota*

COLLEGE OF EDUCATION · MINNEAPOLIS, MINNESOTA 55455

Office of the Dean

December 8, 1970

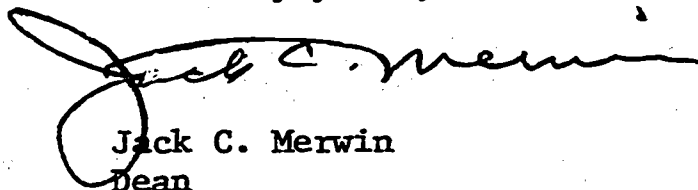
Dr. John C. Egermeier, Chief
Research Training Branch
National Center for Educational
Research and Development
Room 3051
400 Maryland Avenue S.W.
Washington, D.C. 20202

Dear Dr. Egermeier:

I should like to express my strong support to the proposed Midwest Educational Training Center being developed under the auspices of the Upper Midwest Regional Educational Laboratory. The need for training educational development and evaluation personnel is extremely great in the upper midwest region. The proposed Center offers flexibility and the opportunity for training at all levels of the educational profession.

I have closely followed the work of the consortium and pledge the support of the College of Education for this activity. The performance-based model for training development and evaluation personnel proposed is one worthy of continued study and research. Because our College is always receptive to new ideas, we are actively encouraging programs involving a number of different agencies in our attempt to continually improve educational training.

Sincerely yours,



Jack C. Merwin
Dean

JCM/bln

119

UNIVERSITY OF *Minnesota*

STUDENT COUNSELING BUREAU

101 EDDY HALL - MINNEAPOLIS, MINNESOTA 55455

December 11, 1970

Dr. John C. Egermeier
Acting Chief
Research Training Branch
National Center for Education, Research,
and Development
U. S. Office of Education
400 Maryland Avenue Southwest
Washington, D. C. 20202

Dear Dr. Egermeier:

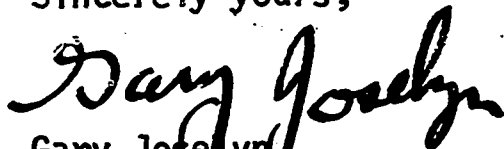
I have been asked to comment on the Midwest Educational Training Center proposal for the formation of a consoritum to train personnel qualified to evaluate educational programs. In my capacity as the school testing consultant with the Minnesota State-Wide Testing Programs I work closely with counselors and administrators in Minnesota School Systems and it is my observation that there is a tremendous need for evaluation personnel. Because of our pupil testing program, schools often turn to us for assistance with problems having to do with measurement and evaluation. Hardly a day passes without a letter or phone call from a school requesting assistance with some school evaluation problem.

I have noticed a dramatic upturn in interest in evaluation on the part of Minnesota schools during the past few years. More than ever before schools are aware of the necessity for good evaluation and ~~we~~ are attempting evaluation projects.

In trying to assist schools with evaluation projects and in attempting to refer them for help elsewhere, I have become very much aware of the real shortage of qualified people who are available for assisting schools. I also know a few school districts which have hired full time evaluators recently and of others who would hire such people if they were available.

I firmly believe that this proposal holds great potential for making an important and needed impact for the improvement of education in Minnesota.

Sincerely yours,



Gary Josephyn
School Testing Consultant

GJ/k

120