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RESEARCH TRAINING INSTITUTE: PRINCIPLES AND METHODS OF APPLIED RESEARCH FOR JUNIOR COLLEGE RESEARCHERS. FINAL REPORT.

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This report describes two 4-week research training institutes (July 1966), supported by USOE funds, and designed to increase the competence of junior college research directors and staff. Organized by the California Junior College Association (and the University of California Extension Division), the institutes were held concurrently at the Berkeley and Los Angeles campuses. Fifty trainees from 11 states took part in day-long sessions covering research methodology and design, statistical analysis, computer technology, and the writing of research reports. The report discusses the process of recruiting trainees, characteristics of the trainee groups, and the purposes and program of the institute. Strengths noted in the evaluation include (1) timeliness of the training, (2) advantages of the intense review, (3) merits of the practical focus, (4) competence of the staff, (5) trainees' sense of responsibility, (6) their responsiveness, (7) merits of the projects submitted by the trainees, and (8) an opportunity to improve competence in computer use. Major difficulties stemmed from late approval of the project. Trainees recommended that future institutes be at least four weeks, that instruction allow for differences in their preparation time and experience, and that more time be given to problem-oriented instruction. Each trainee developed a research project to do at his own college in the 1966-67 year. (HH)

FINAL REPORT
Grant No. OEG 4-6-062575-1371

TITLE OF PROGRAM

Research Training Institute

"Principles and Methods of Applied Research for Junior College Researchers"

DATE OF REPORT

November, 1966

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

Title of Program

RESEARCH TRAINING INSTITUTE

"Principles and Methods of Applied Research for Junior College Researchers"

Grant No. OEG 4-6-062575-1371

Program Director

Thomas B. Merson, Director of Research
California Junior College Association

Instructional Dates of Program

July 5 - 30, 1966

The training program reported herein was conducted pursuant to a grant from the Office of Education, U.S. Department of Health, Education, and Welfare. Grantees undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment of the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Institution*

California Junior College Association

City and State

Modesto Junior College
Modesto, California

* Institutes were held at University of California, Berkeley and University of California, Los Angeles.

SECTION I. ORIENTATION OF THE PROGRAM

1. Overview. This report describes two four-week research training institutes, supported by USOE funds, held concurrently July 5-30, 1966. The institutes were designed to increase the research competence of junior college directors of research and other junior college staff who were engaged in institutional research. The institutes were planned, organized and conducted by the Research and Development Committee of the California Junior College Association in cooperation with the Extension Division of the University of California. One institute was held in Griffith Hall, University of California, Berkeley; the other was conducted in Rieber Hall, University of California, Los Angeles.

Fifty trainees were enrolled in the two institutes. They represented junior colleges from New York to Hawaii and from Florida to Michigan. The institutes were intense. Full-day sessions, often with evening meetings, provided (1) a substantial review of research methodology and design; (2) a comprehensive exposure to statistical analysis, including advanced topics; (3) an introduction to computer technology including three weeks of experience in writing computer programs and in operating the range of equipment in a data processing laboratory; and (4) guided experience for each trainee in writing a research project which he planned to complete in his college during the ensuing year.

Practicality characterized the focus of effort throughout the institutes. The majority of the trainees held positions which required them to assume increasing responsibility for research - responsibility for which they were not all fully prepared. Institute instruction was directed as far as possible toward closing the gap between the preparation trainees brought to the institute and the competence they needed to execute their research responsibilities.

For example, research design topics selected were those commonly needed in institutional research. Topics in statistics were explained in such a way as to illustrate the merits of selecting one form of analysis over another in solving various problems. Experience with the computer was designed not to train directors of computer laboratories but to give researchers an appreciation and an understanding of the power of the computer as a research tool. The class as a whole worked through several "type" research problems, and each trainee demonstrated his ability to make application of the content of the institute to research design by repeatedly revising the design of the research project which he brought to the institute from his college.

The evaluation of the institutes by both staff and trainees indicated that in the main the institutes had been well planned and were well executed. The trainees expressed appreciation for the practical, applied emphasis; their major recommendation was that future institutes

would be better if they were oriented even more in this direction. Testimony of the trainees, many of whom were post-doctorate students, was that this institute was one of the most helpful educational experiences they had had in their entire educational career. They uniformly recommended that every effort be made to continue this opportunity in the future; and a common query was, "Will we be eligible to return for another session?"

2. Genesis of the Project. A short resume of events which led to the decision to organize research training institutes may help the reader to better understand the institute organization selected.

Junior colleges across the nation are growing at a phenomenal pace in an effort to extend educational opportunity to the full spectrum of youth and adults. In implementing their open door policy, they encounter critical, refractory problems of organization, instruction, curriculum and guidance largely unknown to colleges which have selective admission. Junior college leaders recognize that these problems are fundamental and complex; their solution can only be obtained through an intensified long-range program of cooperative institutional research. But junior college leaders recognize that there is an inadequate pool of appropriately-trained researchers to launch a statewide or nationwide massive attack on the major problems of junior college development. Institutes were judged to be the best means of providing quick, intensive upgrading for a selected corps of junior college research directors who in turn could share this technical knowledge with other staff in their respective colleges.

California is recognized as the nation's leader in junior college development. The 78 California junior colleges enrolling over a half million students are ideal laboratories for conducting experimental research which will lead to improved practices in this state and in other states which are building their junior colleges upon experience gained in California. It was fitting, therefore, for the California Junior College Association to launch an intensive effort of institutional research directed toward finding ways of improving the effectiveness and efficiency of junior college programs and operation.

The California Junior College Association first established a Research and Development Committee to direct its research efforts. During the Spring, 1965, a study of critical problems was conducted by Dr. Basil Peterson and his report, Critical Problems and Needs of California Junior Colleges, listed 26 major research problems in rank order of priority. This report became the blueprint for planning future action. The Association established an office of research and employed a full-time research director to coordinate cooperative effort and to fully use the combined resources of the 78 California colleges. The CJCA Research and Development Committee set three goals for 1965-66: (1) to establish a continuing research

training program, (2) to provide a clearinghouse for collecting, retrieving and disseminating information about junior college research, and (3) to organize a stable research center which would provide leadership to the total effort of this large system of institutions. The Association turned first to USOE for support of these efforts. The training institutes were approved and funded; an ERIC center was established at University of California, Los Angeles; but the center proposal was reviewed unfavorably.

The Association didn't obtain instantaneous approval of its research training proposal to USOE. The Association learned March 10, 1966 that its initial institute proposal which had been submitted to USOE November 30, 1965 had not been approved. However, Dr. Lee Burchinal encouraged CJCA to submit a new proposal even at that late date, and the proposal submitted to USOE March 24, 1966 was expeditiously processed by USOE staff. Notice of its approval was received April 27, 1966. But herein lies the source of many problems encountered in the institutes - the interval between project approval, April 27, and the start of the institutes, July 5, was minimal to announce the institutes, identify qualified trainees who could attend, screen applications, notify those accepted and complete arrangements for sessions on two separate university campuses. Surprisingly, deadlines were met in all instances. However, critical as the element of limited time was, it affected the institutes less than the change of emphasis required by USOE for approval of the second proposal. These points will be discussed later in this report.

3. Recruitment. On April 27, 1966, announcements and application forms[1] were sent to the presidents of all junior colleges in the western states and to junior colleges with enrollments over 2,000 students in other states. When insufficient applications had been received on the application deadline date, an S.O.S. memorandum was mailed to California junior colleges. Applications were processed, acceptance and rejection letters were sent to applicants, a list of alternates was compiled and further instructions were sent to accepted trainees. Table 1 summarizes these activities.

1. See Appendix

Table 1 - Selection of Trainees, Junior College Research Training Institutes, July 1966

	California	Other Western States	Eastern States	Total
Announcements mailed	80	61	97	238
Applications received	37	9	13	59
Other inquiries received*	20	0	2	22
Appointments rejected by trainee	4	2	3	9
Trainees enrolled	33	7	10	50
Trainees completing institute	30	7	10	47

*These are conservative figures. Many phone inquiries were not recorded.

The limited time provided for applicants to rearrange summer plans undoubtedly was a factor in limiting the applications; furthermore, several applicants who were accepted had to decline appointment because they could not change plans as they had hoped when they submitted their application. As part of the screening process, some applicants were requested to clarify and amplify their applications; these were temporarily placed on the list of alternates.

The institute announcement stated: "To qualify for enrollment, an applicant should: (1) be currently engaged in, or preparing to engage in, some form of junior college research; or (2) be participating in, or preparing to participate in, some innovative junior college program; or (3) be in a position of junior college leadership."

The announcement continued. "Selection of applicants will be based on the following factors: (1) Level of responsibility for research; (2) Potential for exercising leadership in research; (3) Level of interest in research of the applicant and his college; (4) Level, range and recency of formal preparation in research; (5) Extent, kind and recency of research experience."

The high percentage of applicant approval was possible because the application required the college president to endorse the applicant and to verify his research responsibilities. Essentially, the applicant was the nominee of the college president. For a time it was announced that no more than two trainees would be accepted from any one junior college. Eventually this restriction was rescinded and three trainees were enrolled from each of two colleges.

4. Trainees.[2] The fifty trainees enrolled in the two institutes came from junior colleges in eleven states as follows: Arizona 2, California 33, Florida 2, Hawaii 1, Idaho 1, Michigan 1, Missouri 4, New York 3, Oregon 1, Washington 1, Wyoming 1. Seventeen trainees,

2. See Appendix for Rosters of trainees at Berkeley and Los Angeles.

34 percent of the total, were from states other than California. The wide range of positions held by trainees are shown below in Table 2.

Table 2. Positions Held by Institute Trainees

Position	Number UCB	Number UCLA	Total
College President	0	1	1
Assistant to the President	1	2	3
Director of Institutional Research	6	5	11
Research Assistant	2	0	2
Director Data Processing	2	0	2
Instructor Data Processing	1	0	1
Dean of Instruction	1	1	2
Assistant Dean of Instruction	1	2	3
Dean of Admissions - Registrar	0	2	2
Director of Publications	0	1	1
A.V. Coordinator and Study Skills Consultant	0	1	1
Dean of Students	3	0	3
Coordinator of Counseling	1	0	1
Director Occupational Services	1	0	1
Research Counselor	0	1	1
Counselor	3	3	6
Counselor-Instructor	2	1	3
Departmental Chairman	0	1	1
Instructor-Professor	1	4	5
Totals	25	25	50

Further comment regarding trainee selection and qualifications will be made in Section III, Evaluation. At this point it may be in order to note the wide range and variety of preparation of the trainees. Approximately half the group had previously completed five or more courses in statistics and research; several trainees were experts in computer operation; some trainees had minimal preparation in research methodology, statistical analysis or computer technology. Few trainees, however, had substantial preparation and experience in all fields - research, statistics and the computer. It should also be noted that selection criteria gave preference to those with the greatest gap between assigned research responsibility and previous preparation.

Preparation of institute trainees is summarized in Table 3.

Table 3. Range of Educational, Research and Computer Preparation of Institute Trainees

Preparation	Numbers		
	UCB	UCLA	Total
Highest Degree			
Doctorate	1	3	4
Doctoral Candidate	4	4	8
Masters	18	18	36
Bachelors	2	0	2
Previous Courses Completed in Research and Statistics			
10 or more	2	4	6
5 - 9	9	9	18
1 - 4	13	10	23
None	1	2	3
Computer Training and Experience			
Major*	4	4	8
Minor**	12	9	21
Negligible (or none)***	9	12	21

* Major: Director of computer operations.
** Minor: One or more formal courses and/or personal experience with computer equipment and/or programming.
*** Negligible: Only casual and/or indirect acquaintance.

SECTION II. DESCRIPTION OF THE PROGRAM

1. Objectives. The goal of the institutes was to prepare junior college staff who would increase and expand research-based improvements of educational services in junior-community colleges. Specific objectives of the institute were:

(1) To develop a corps of competent junior college researchers who would return to their respective colleges and lead others in research dealing with crucial junior college problems.

(2) To familiarize selected junior college researchers with a variety of research designs, techniques and methods which are applicable to a wide range of applied research problems.

(3) To familiarize the institute enrollees with the computer as an essential research tool, and to encourage each enrollee to increase his proficiency in its use and application.

(4) To increase the versatility of trainees by confronting them with a variety of research problems representative of the problems they must solve, if they improve the effectiveness of community-junior college education.

(5) To increase understanding of research methods and procedures by providing guided experience in their specific application to one or more significant problems of junior college operation.

(6) To provide opportunity for research leaders to exchange and pool ideas about promising research approaches to complex and refractory problems which each is facing in his own college.

2. Organizational Differences Between Institutes. Although the objectives, general content and scheme of organization of the northern and southern institutes were similar, no effort was made to keep them identical. The remaining sections of this report will note any differences which seem significant.

3. Schedule. The daily schedule of both institutes was:

8:30 - 10:30	Sequential topics of principles and methods of research design and analysis.
10:45 - 12:00	Application of research principles and methods to critical junior college problems.
1:00 - 3:00	Group divided between (a) design and analysis laboratory and (b) computer laboratory.
Afternoon and evenings	Special sessions and independent study (group and individual).

4. Curriculum. (Program) The major components of the institute programs described separately below included research methodology and statistical analysis; applications of methodology and analysis to critical problems; computer laboratory; design-analysis laboratory; special student projects; and coaching in statistics.

A. Principles of Research Methodology and Statistical Analysis. The principal lecture component of the institutes dealt with the organization, principles and methodology of research; and with an explanation of elementary and advanced topics of statistics and statistical analysis as essential research tools. Relationships of research design and statistical treatment were emphasized throughout. By this means the trainees' knowledge of research design became cumulative as the institute progressed.

Topical outlines of the basic lectures of both institutes are included in the Appendix. It will be noted that discussion of a substantial number of relatively advanced topics was included in both institutes. Considering the short time span of the institutes, it is a credit to both the staff and trainees that such comprehensive coverage was possible. This effort, though strenuous to both students and staff, contributed measurably to the success of the institutes as a refresher experience for more advanced students, and as a reference framework for those with more limited previous preparation.

B. Applications of Research Methodology and Statistical Analysis to Critical Junior College Problems. In the usual daily routine, the lecture presentation of principles was followed by illustrations of and group participation in discussion of applications of the day's topical principles to common junior college research problems. The nature of this activity varied from topic to topic, from day to day, and from institute to institute. Illustrative types of activity were:

(1) Analysis, by the group, of selected illustrations of experimental (and other types of) research designs.

(2) Critiques, by the group, of statements of research problems presented by individual trainees.

(3) Working through actual problems of statistical analysis and inference to clarify understanding, to illustrate variations in approach, and to evaluate appropriateness of competitive statistical options.

(4) Review of assigned (homework) problems as a means of assessing strengths and weaknesses of a variety of solutions, and as a means of evaluating trainee understanding.

These exercises were among the most helpful experiences for the trainees. They did, however, impose a heavy burden on the staff to prepare because to be most helpful to the trainees they had to be limited to concepts presented to date in the institute, they had to recognize the wide range of preparation of the trainees, and they had to have "clean" answers in order to provide vivid illustrations of the principles under consideration at the time.

C. Computer Laboratory. Arrangements were made for full use of the computer laboratories at Merritt College, Oakland, and at Los Angeles Valley College. The computer laboratory directors at each of these colleges organized a program of experiences which was designed to give the institute trainees a maximum exposure to the capabilities of data processing equipment, and maximum opportunity to operate these machines.

The laboratories were used during 15 of the 19 days the institutes were in session. The institute trainees were divided into equal-sized groups; each group alternated on a day-to-day basis between the computer laboratory and the design-analysis laboratory.

Instruction covered (1) learning the capabilities of all the basic equipment and practicing in their operation, (2) learning to write and writing computer programs of increasing complexity and testing these programs for machine acceptance, and (3) observing the capabilities of the machines in handling research data when the machines were programmed for selected statistical processes being reviewed in the lecture section of the institutes. The computer laboratory directors assigned a substantial amount of out-of-class exercises. At the southern institute the students purchased and used a programmed-learning text.

D. Design-Analysis Laboratory and Student Projects. The design-analysis laboratory was organized primarily for the purpose of providing consultation to individual students as each developed an acceptable research design for the project brought to the institute from their respective colleges. Institute staff met with students individually and in small groups by appointment several times during the institute to discuss sequentially (1) problem statement, (2) design, (3) data collection, (4) analysis, (5) application, and (6) subsequent extension. During the institute the trainees drafted and redrafted their project proposal, perfecting the design by incorporating information learned as the institute progressed.

In the northern institute, in addition to the conferences between individual trainees and staff, groups of six to eight trainees met together with the staff periodically throughout the institute to critique the research plans presented by individual trainees. In the southern institute, the three last days of the institute (July 27, 28, 29) were allocated to presentation of individual trainee projects to the entire group. The exchange of ideas within these groups were judged by the trainees to be one of the most valuable and helpful opportunities of the institutes.

E. Coaching in Statistics. From an analysis of trainee applications, it became apparent early that the wide range of background of trainee preparation in statistics would create teaching

problems for the staff and learning problems for the trainees. The staff recommended that the funds budgeted for a research assistant be used to secure a person who would coach small groups of trainees in evening sessions on elementary statistics. In the southern institute these sessions were attended by from six to twelve trainees; many attended regularly. For some reason, in the northern institute, trainees did not avail themselves of this service. Consequently during the last seven days of the northern institute, the trainees were divided into advanced and elementary groups and instruction for these groups was modified to better suit their respective educational needs.

F. Session Summaries. Each day one of the trainees in each institute assumed responsibility for preparing a diary of the day's instruction. These were duplicated and distributed to the trainees. Each day, also, tape recordings were made of the lecture sessions. These tapes were available for subsequent review and study by the trainees, and they form a permanent record of the institutes.

Near the conclusion of the institutes, each trainee prepared a final draft of the research project which he had developed during the institute. These were duplicated and each trainee received a complete set of project proposals. Insofar as the trainees had brought these projects to the institute from their respective colleges, it is anticipated that most of the projects will be undertaken during 1965-66.

A collection of representative diaries and projects will be sent to USOE as a supplement to this report.

G. Deviations of the Curriculum (Program) from the Plan Submitted in the Proposal. Both northern and southern institutes followed closely the plan outlined in the proposal. Variations were no greater than those which would normally occur in different sections of the same course in normal college operation. The Director was continually impressed with the determination of both staff and trainees to cover the full scope of content outlined in the proposal.

When the proposal was written, the Director didn't have firm information about the availability of computer laboratories and computer staff. When both of these proved to be available, responsibility for both lecture content and laboratory experience in computer technology was shifted to the director of the computer laboratory. This change was more one of schedule change than emphasis change, but it did result in giving more attention to computer technology than could be assured when the proposal was written.

5. Staff. Staff for the institutes were:

University of California, Berkeley
- Donald P. Hoyt, Coordinator, Research Services, American College Testing Program
- Frank C. Pearce, Director of Research, Modesto Junior College
- Wilson T. Price, Coordinator, Data Processing, Merritt College

University of California, Los Angeles
- L. Joseph Lins, Coordinator of Institutional Studies, University of Wisconsin
- Robert L. Poorman, Associate Dean of Instruction, Bakersfield College
- George Jaffray, Associate Professor of Mathematics, Los Angeles Valley College
- Ben K. Gold, Counselor, Los Angeles City College

Thomas B. Merson, Director of Research, California Junior College Association, served as project director and divided his time between the two institutes.

Mr. Price, Mr. Jaffray and Dr. Gold had not been appointed when the proposal was written. Dr. Lins replaced Dr. Knoell.

The proposal contemplated using two consultants from the behavioral sciences. This was not done for two reasons. Staff at both institutes were concerned that the schedule was already heavy and they prevailed upon the Director to "save" these two days. The Director readily agreed with this modification because he had searched unsuccessfully for educational psychologists and sociologists who had an interest in and time for preparing an appropriate presentation to the institute.

SECTION III. EVALUATION OF THE PROGRAM

1. Overview. Information on which to evaluate the institutes is available from: (1) the trainee applications, (2) rating forms completed by the trainees at the close of the institute, (3) staff observations and trainee comments, and (4) projects produced by the trainees. These data and generalizations derived from them are summarized below.

A. Trainee Applications. Statements of the trainee applicants and their college presidents submitted on the institute application forms provided an appropriate basis for evaluating the objectives, organization and instructional content planned for the institutes.

Statements in response to two questions -- (1) "Why do you want to participate in this institute?", and (2) "List any specific assistance you want to obtain from the institute." -- indicated a critical gap between the level of preparation of the applicant and the research responsibility assigned to the applicant at his college. The letters from the college presidents which supported the applications provided additional vivid expressions regarding the importance and the timeliness of this opportunity for research training. Selected comments from applicants and presidents which illustrate the type of help they sought from the institutes and the urgency of obtaining this help follow.

From Applicants. "Only last week I was appointed to the newly created position of Director of Institutional Research and Development."

"I expect to return and conduct an in-service training program based upon your institute."

"We serve a metropolitan area of 1.5 million people....Our 38 curricula form only the beginning of our total obligation to this community.....We need to know how best to evaluate our overall program and its development."

"I would especially like instruction in sampling, sample selection, stratification....and which statistics to use for (different) research."

"How unit record machines and computers can be used to expedite Trade-Tech research."

"I am most interested in isolating factors which can be used to predict student success in different programs that a comprehensive college offers."

"I would like to design studies to determine relationships between efficacy of instruction, different instructional methods and prior educational experience and achievement of students."

"I have had no experience with a computer; this is one of my main reasons for applying."

"I want to become acquainted with the application of computer technology to research."

"Our college enrolls about 3,000 day students. New programs and services are being instituted. Unless research procedures are incorporated into these innovations, there will be little possibility of measuring their effectiveness and value."

"I am currently assigned to research and/or implement techniques of objective testing within the Social Sciences Division including educational television."

"I would like to further my knowledge in the use of Fortran."

"I would appreciate elaboration in the techniques and application of partial and multiple correlation analysis and regression analysis. I would further appreciate a review of probability, conditional probability, mutually exclusive events and combinations."

"I want assistance with developing integrated use of computer-based systems for programmed instruction and student response systems.

"My primary interest is in determining how effective was junior college counseling."

"My primary interest is developing a coordinated reporting system which would provide basic data for policy decisions on an on-going basis."

"I have been appointed Director of Research at (our college) for the coming year. Items 7, 11 and 12 suggest both the urgency of my situation and the degree of help I would expect to receive from attending the institute."

"I need to learn the best methods to present research findings to faculty, Board and others with limited understanding of research."

"I need help with experimental design and with common tests of statistical significance particularly to update training which is now some years old."

"Sometimes I feel I am running in the dark. I want to learn of the experiences of others and discuss our problems with them."

"I would like to learn autocoder programming with disc pak applications. Discussion of intra-institutional research."

From Presidents. "Your institute could not have been more timely."

"At a recent Board meeting a new position, Assistant Dean--Research and Development was approved, and Mr. M. was appointed to the position. Your research institute will provide a fine opportunity for Mr. M. to be introduced to this very important area of college administration."

"In the past two years our college has more than doubled its enrollment since changing from a trade school to a comprehensive college. An organized program of research is called for, and although this is recognized by everyone, no funds are available to support a research position. One of our staff (must be) trained in research."

"As we start our new state system of community colleges and convert four old technical schools into comprehensive community colleges, research data on nearly all aspects of community college education is much needed. Comprehensive studies of occupational trends, curriculum feasibility, student characteristics and articulation are urgent."

"Our appointment of a replacement for (our) Assistant Director of Institutional Research is a young man who has authored four textbooks in mathematics. While we feel he will develop into a competent research person, he is sorely lacking in basic research knowledge which we hope he would gain from attending the research institute."

B. Trainee Rating Forms. A rating form[3] was given to each trainee during the last week of the institute requesting reactions to (1) the organization, content and conduct of the institute, (2) alternate plans of organization, (3) ancillary considerations, and (4) generalizations. The covering memorandum asked trainees to give "your candid, considered judgment on each point." The rating form provided opportunity for trainees to rate most items on a three-point scale, and to write comments about each point. Completed forms were returned from 24 trainees at UCLA and 16 trainees at UCB. Summaries of trainee comments were forwarded to USOE staff separately. Summaries of the scaled responses are recorded in the following tables.

Table 4 summarizes trainee ratings of selected items of institute content and organization.

3. See Appendix for form, "Trainee Recommendations."

Table 4. Trainee Evaluation of Selected Components of 1966 Junior College Research Training Institutes

Institute Component Evaluated	Number of Trainee Ratings												
	UCLA Rating Response*				UCB Rating Response*				TOTAL Rating Response*				
	1	2	3	4	1	2	3	4	1	2	3	4	T
1. Institute Announcement	11	9	4	0	6	10	0	0	17	19	4	0	40
2. Application Form	11	12	1	0	4	12	0	0	15	24	1	0	40
3. Appointment Notices	14	8	1	1	9	7	0	0	23	15	1	1	40
4. Regulations	11	12	0	1	5	8	2	1	16	20	2	2	40
5. Living Arrangements													
A. Dormitory	7	3	1	13	6	3	1	6	13	6	2	19	40
B. Non-Dormitory	7	7	0	10	3	3	1	9	10	10	1	19	40
6. Meeting Accommodations													
A. Meeting Room	4	11	9	0	6	7	3	0	10	18	12	0	40*
B. Library	12	12	0	0	9	4	2	1	21	16	2	1	40
C. Computer Laboratory	15	8	1	0	4	10	2	0	19	18	3	0	40
7. Institute Schedule													
A. Daily Schedule	10	14	0	0	7	4	5	0	17	18	5	0	40
B. Total Length (4 weeks)	6	12	5	1	7	7	2	0	13	19	7	1	40
C. Dates (July)	9	12	1	2	10	6	3	0	19	18	1	2	40
8. Institute Content													
A. Research Method													
(1) Time	6	11	5	2	8	4	4	0	14	15	9	2	40
(2) Topic	9	10	3	2	12	4	0	0	21	14	3	2	40
(3) Application	10	8	3	3	9	3	3	1	19	11	6	4	40
B. Statistical Analysis													
(1) Time	8	8	7	1	5	11	0	0	13	19	7	1	40
(2) Topic	5	13	5	1	11	5	0	0	16	18	5	1	40
(3) Application	11	6	6	1	9	3	4	0	20	9	10	1	40

Institute Component Evaluated	Number of Trainee Ratings												
	UCLA Rating Response*				UCB Rating Response*				TOTAL Rating Response*				
	1	2	3	4	1	2	3	4	1	2	3	4	T
8. Institute Content (con't)													
C. Computer Technique													
(1) Time	8	9	5	2	5	4	6	1	13	13	11	3	40*
(2) Topic	7	8	7	2	3	8	4	1	10	16	11	3	40*
(3) Application	7	8	6	3	3	4	8	1	10	12	14	4	40*
9. Instruction													
A. Lectures	12	10	2	0	16	0	0	0	28	10	2	0	40
B. Laboratory - Computer	11	7	4	2	6	4	5	1	17	11	9	3	40
Lab. - Analysis-Design	9	7	5	3	10	3	2	1	19	10	7	4	40
C. Individual Conferences	19	4	1	0	13	3	0	0	32	7	1	0	40
D. Group Discussion	7	10	5	2	15	1	0	0	22	11	5	2	40
E. Statistics Tutoring	15	7	1	1	1	3	1	11	16	10	2	12	40
10. Assignments													
A. Computer	6	7	10	1	4	7	4	1	10	14	14	2	40
B. Design-Analysis	11	6	4	3	10	4	1	1	21	10	5	4	40

* Rating Response Scale

1 = Excellent
2 = Satisfactory
3 = Needed Improvement
4 = No Comment
T = 40 responses (UCLA, 23; UCB, 16)

Highlights which can be derived from Table 4 include the following: Institute components rated "Excellent" by half or more of those responding included: (1) appointment notices, library, institute topic, statistical analysis applications, lectures, individual conferences and group discussions. Institute components rated "Needed Improvement" by one-fourth or more of the respondents included: (1) meeting rooms, (2) application forms, and (3) computer technology (time, topics and applications). Three-fourths or more of the trainees responding judged 25 of the 29 component items of the institute to be "Excellent" or "Satisfactory." Further comment on selected items will be made throughout the remainder of this report. Information derived from Parts B, C and D of the Evaluation Form will also be noted in succeeding paragraphs.

C. Staff Observations and Trainee Comments. Members of the staff were unanimous in their enthusiasm over the improvement of the trainees during the institutes. In his concluding remarks to the institute, Dr. Lins stated that he had never worked with a group which had been more dedicated. He cited as one example the use trainees had made of the library. Dr. Lins had brought to the institute four large boxes of selected research documents. He reported that every document had been used by one or more trainee, and that every document was returned at the end of the institute! Dr. Hoyt stated, "This type of institute simply must be continued." Dr. Pearce and Dr. Poorman both noted the improvement in sequential drafts of student projects as the institute progressed. Dr. Merson particularly noted the degree of enthusiasm trainees expressed regarding the opportunities they would have to apply the techniques and knowledge learned at the institutes in their home colleges. The staff has received many letters from students expressing sincere appreciation for the rich and helpful experiences provided in the institutes.

The institute director made a point throughout the institute sessions to get verbal reactions from trainees and staff. Changes in emphasis were sometimes recommended to the staff as a result of these continuing informal evaluations. The director hesitates to identify examples of these evaluations because a few examples cannot accurately describe the obvious satisfaction and enthusiasm of the trainees as a group. Nevertheless, a few examples can portray meaningfully some of the successes and problems.

Trainee comments regarding specific elements of the institutes cannot readily be generalized. In the main, they followed, amplified and clarified the ratings reported in Table 4. The major factor preventing generalization from trainee comment was the wide range of preparation and expectations of the trainees as a group. A few generalizations seem safe: (1) trainees were most appreciative of the efforts of the staff to give each trainee help with his individual project, (2) trainees wished all instruction had been more problem-oriented, and

(3) strong opinion at both ends of the scale prevailed regarding the computer technology portion of the institute.

The overall intensity of the institute program was the subject of one trainee's remark when he said how delighted all were to learn of the recreation opportunities near the dormitory. He reported that trainees found time to use these facilities only the first night. Both staff and trainees recognized the fast pace at which the institutes moved. With minor exceptions, all approved. The staff reluctantly but dutifully concentrated on essential elements of a very wide range of topics. The topics had direct application to junior college research. In this way the institutes provided at least some satisfying experiences for all the trainees. The trainees accommodated to the pace by choosing among alternatives as to where they concentrated their study.

The experiences frequently mentioned with satisfaction by the trainees included the conferences on individual projects with the staff; the skill with which Dr. Hoyt clarified the fine points of research design through application of statistics; the rich knowledge of research literature of Dr. Lins who seemed always to be able to cite helpful references; the individual assistance with research design which Dr. Pearce gave to students day and night; the finesse and firmness by which Dr. Poorman kept attention focused on practical problems; the unusual capacity of Dr. Gold to clarify statistical processes; and the ability of Mr. Price and Mr. Jaffray to convince neophytes that they could master the computer.

Although the trainees were fully aware of the merits of lectures and the efficiency of getting so much information distilled ably by the staff, they almost unanimously stated that somehow more opportunity for student participation should have been provided. They all ranked the "group-solving of problems" and "exchange of experiences" highly. The three final days of the southern institute which was scheduled entirely for student reports was acclaimed unanimously as an institute highlight.

D. Projects Produced by the Trainees. Each trainee was required to bring to the institute a research project for which he would produce a design during the institute and which he could complete at his college during the ensuing year. A list of the titles of these projects is in the Appendix of this report, and a set of trainees' papers has been sent to USOE.

The trainee projects were not in all cases ones which would reflect maximally the instruction of the institutes. For this reason, the staff would have in some cases preferred other project titles. The staff recognized, however, that these were projects assigned to the trainee by his college and each represented an important problem at his college. Consequently, the staff concentrated effort on assisting

each trainee in developing an appropriate project design. In some cases even this had limitations because some aspects of the project had already been agreed to or started before the trainee enrolled in the institute.

The need of the trainees for instruction in research design was uniformly apparent in their initial effort to draft their project plans. As the institute progressed, subsequent drafts were much improved. The trainees themselves recognized their improved competence by noting as they orally presented their final reports many changes they planned as a result of instruction which they had received after the final draft had been written!

E. Subsequent Events. The real test of the worth of the institutes will be determined by the improved research which the trainees produce in their respective colleges. Already evidence is trickling in that their increased competence is being recognized at their home colleges. A few illustrations will indicate the nature of this evidence.

Several trainees have been given increased time for institutional research. Previously, limited time assigned for research has been one of the major deterrents to research production. A surprising proportion of the trainees have reported that they have already launched the project which was developed in the institute. One trainee turned immediately to the task of simulating on the computer several problems which were vexing his college administration. His remarks included testimony as to the value of being able to write a computer program. He stated that without the institute training, he would have had to wait six months for someone else to write these programs for him. News has reached the Institute Director that at least three trainees have been elevated to positions of directors of research at their respective colleges as a result of competence derived from the institutes. It is the Director's opinion that the impact of the institutes measured two or three years hence will reveal a substantial impact of research on the institutions which sent trainees to the institutes, and will further reveal major dividends derived from the financial investment in the institute training program.

2. Program Factors. Evaluation of facets of the program sought by the instructions for this report follow:

A. Objectives. The objectives proved to be sound. They were sufficiently broad to accommodate the wide range of needs represented by the trainees. The presumption that junior college research personnel in the main needed an intensive review also proved correct. The staff and trainees were in agreement, however, that a problem-oriented approach would have been superior. They also agreed that a problem approach with built-in provision

for organizing cooperative follow-through on major problems would have strengthened the institutes. This feature was included in the original proposal to USOE and was not approved.

B. Content Focus. The content proposed was ambitious. The pace of the institutes was intense. All proposed content was covered but trainees reported the pace taxed their endurance, and the pace could not have been profitably maintained beyond four weeks.

Readers who inspect the institute topic outline might erroneously conclude that a disproportionate time was given to statistical analysis to the neglect of research design. Actually, in both institutes discussions of statistics always ended with illustrations of the applicability of the statistical process to appropriate research. In this way, research design received prime attention throughout the institutes. One major difficulty encountered was that trainees with minimal statistical background were "lost" in the discussion of advanced statistical topics. The problem was lessened by tutorial sessions at UCLA, and by dividing the group during the last week at UCB. Future institutes should provide for two levels of statistics instruction throughout the session.

The design-analysis laboratory proved to be a highlight of the institutes. In these sessions students received expert consultation from the staff and help from other trainees in perfecting the design of their individual projects. Trainees would have preferred even more time for group interaction on this portion of the institute program.

The computer laboratory proved to be one of the more difficult phases of the program for the trainees. This was partially anticipated, but in future years some difficulties could be minimized by organizational and planning changes. The computer today is the researchers most important and valuable tool. Its universal availability is, however, of such comparative recency that trainees were less familiar with it than they were with the other major content components of the institute. Ten afternoons is too brief a time for trainees to become proficient in computer use. And researchers are inclined to be perfectionists; they are unhappy with less than complete mastery. A second basic factor which contributed to the difficulties of teaching computer skills in a short time relates to the specialization of this field. Research-training staff almost universally disclaim proficiency in computer technology. Computer staff are more interested in the technology than in the applications. To weld these two into a coordinated team requires more detailed planning than was possible under the tight time schedule of this first institute. In general, trainees stated that although they learned a great deal about computer operation, they would have preferred to have spent more time in using the computer to process

data on selected problems on which they had been working in other sessions of the institute. However, we should withhold judgment about this point because reports filtering in from the trainees indicate by virtue of their exposure to the computer in the institute they are using the computers in their respective colleges to a degree far greater than they previously had.

Institute assignments were largely of three types. The first was a series of simple problems and exercises to test trainees understanding of current topics of statistics and design. These were usually discussed in group sessions and proved to be valuable to both trainees and staff. The second type of assignment was the individual project design. Responsibility for perfecting this paper absorbed any free time trainees had. The value of the institute was perhaps most accurately portrayed by the improvements of these papers as they underwent repeated revision with each revision incorporating new knowledge derived from the institute since the previous draft. The third kind of assignment was the work assigned in association with the computer laboratory. In the main, computer assignments consisted of writing programs of increasing complexity as the institute progressed and testing them in the machines at the next laboratory session.

Several field trips were tentatively discussed but the pace of work of the institutes made it seem inadvisable to take time for this activity.

C. Staff. Without exception, the staff worked diligently. One of the universal commentaries of trainees was commendation of the staff for their willingness and ability to give each trainee all the individual attention he needed. To do this, the staff spent full days either lecturing or consulting. Trainees at UCB who lived in the dormitory continued discussions in the evenings with Dr. Pearce who also stayed in the dormitory. Staff ratios were satisfactory because the staff were willing to give full day's service. Consultants were not used for reasons described earlier. Because the Director divided his time between the two institutes, he felt too much energy and time was expended in travel, and his absence from one institute while he attended the other imposed an additional administrative burden on the staff.

D. Trainees. The process of trainee selection has been described in detail in Section I. In all respects it proved satisfactory. There is strength in the process of having the college president select representatives from his college. It can be argued that the institutes might have been more effective if the trainee groups had been more homogeneous. However, the purpose of the institutes was to upgrade researchers with major research responsibility irrespective of their previous level of preparation.

Effort was made, at the request of USOE, to select trainees from a wide geographical base. One-third of the trainees were from states other than California. The only problems of trainee selection were functions of the late approval of the proposal and consequently the late announcement of the institutes; several qualified applicants could not rearrange their plans. Several trainees spoke about the difficulty caused them by having incomplete information about eligibility of dependents for allowances.

E. Organization. Trainees agreed that the institutes could not have been shorter than four weeks without impairing mastery unless content was reduced. They further agreed that people with major research responsibilities could not be spared by their respective colleges for a period longer than a month. Additionally, they agreed that July was the best four-week period because it fell between end-of-year reports in June and start-of-college planning in August.

Part B of the institute evaluation form completed by trainees at the close of the institutes sought trainee reactions to alternate plans of organization.[4] Responses to these plans, shown in Table 5, indicate a preference for Plans 4, 3 and 1 in that order. We may conclude from these data that: (1) the trainees favor summer institutes as opposed to regular term sessions; (2) they favor institutes similar in content to the one held in 1966; (3) they favor a program which provides for differences in preparation of trainees; (4) they see some advantages in separate two-week sessions, each dealing with a major facet of research; and (5) they favor concentrating attention on research in a selected field such as improvement of instruction.

The daily schedule was judged to be satisfactory. The lecture classrooms were judged by more than one-fourth to be unsatisfactory because of limited blackboard, lack of provision for visual presentations, and the necessity at UCLA to change rooms during the institute. The computer laboratories were judged to be excellent. Living accommodations were judged satisfactory - dormitory and non-dormitory alike.

4. See "Trainee Recommendations" form in Appendix.

Table 5. Preference of Research Institute Trainees with Respect to Proposed Plans of Organizing Future Institutes

Organizational Plans	Number of Trainee Ratings												
	UCLA Rating Response*				UCB Rating Response*				TOTAL Rating Response*				
	1	2	3	4	1	2	3	4	1	2	3	4	T
PLAN 1 - Institutes which would focus attention on designing research in a selected field such as improvement of instruction.	14	5	3	2	8	4	4	0	22	9	7	2	40
PLAN 2 - Institutes held during the regular year (instead of in the summer).	2	7	14	1	3	6	7	0	5	13	21	1	40
PLAN 3 - Separate, 2-week consecutive, summer sessions on the computer, research methodology, and statistical analysis where the student would have the option of enrolling in one, two or all three sessions.	14	7	2	1	10	3	3	0	24	10	5	1	40
PLAN 4 - Institutes covering similar content but differing in level (elementary and advanced) with appropriate prerequisites.	16	4	2	2	12	4	0	0	28	8	2	2	40

* Rating Response Scale
1 = Strongly Favor
2 = Acceptable
3 = Unwise
4 = No comment
T = 40 responses (UCLA 23; UCB 16)

F. Budget. The budget proved adequate and the contract was satisfactory after provision was added for payment to cover use of the computer laboratories. There were, however, financial problems which stemmed primarily from four causes: (1) the lateness in approving the project and in negotiating the contract; (2) the lack of clarity of definition of a trainee's dependents; (3) regulations regarding travel reimbursement; and (4) the lateness of receiving the check to pay trainees and staff.

When the contract was received with reduced amounts for instructional materials, orders for these materials were cancelled. By the time all trainees had been approved and it was evident funds for additional instructional materials could be shifted from other categories, it was too late to reorder these materials. A decision was made to adopt local regulations for transportation reimbursement for out-of-state trainees because air coach fare is much less for long distances than mileage allowances. If we had not made this adjustment, fewer trainees from other states could have been accepted. The regulations for preparing the proposal recommended that budget calculations be based on two and one-half dependents per trainee, but regulations defining a dependent were not received until after trainees were notified of their appointment. The check from which trainees and staff were paid arrived during the last week of the session, too late to allow time to write checks for individual participants, even though all of the necessary computations had been made in advance. Recommendations regarding changes in budgetary procedures are noted in Part 6 of this section.

3. Major Strengths and Unique Features. Outstanding features of the institutes have been identified and described previously. Consequently notation at this point will be limited to a succinct listing:

(1) Timeliness. Coming at a time when junior colleges are research-ready, when competent researchers are few, and when increased attention to research is imperative, the institutes were most timely.

(2) Up-grading. The scope of topic coverage which provided an intense review of all of the elementary and most of the advanced topics of research design, statistical analysis and computer technology provided a range of interrelated experiences nowhere else available.

(3) Practicality. Every effort was made to select experiences which had direct practical application to trainee needs. Favorable response by trainees was directly proportional to the degree to which this goal was attained.

(4) Staff. The competence of the staff, especially their consultative effectiveness, won high approbation of trainees.

(5) Trainee Responsibility. Trainees came to the institutes with clear, well-defined purposes. Each had responsibilities at his college which extended beyond his research capacity. Each insisted on developing increased competence at the institutes. The institutes provided necessary flexibility for this range of individual development.

(6) Trainee Responsiveness. The spirit in which every trainee dedicated himself to gain maximum benefit from all the opportunities in the institute could not escape observation. In spite of the intensive program, rapid pace, and high performance expectations of the staff, trainee drive did not falter from opening to closing sessions. One can accurately say trainee morale was very high throughout the sessions.

(7) Projects. The merits of problem-centered instruction were clearly documented by the value trainees derived from study related to their individual projects. Trainees judged the staff to be most effective in individual conferences in the design-analysis laboratory.

(8) Computer Laboratory. The computer laboratory was judged to be both a major strength and a major weakness. It can be regarded a strength because a research institute which disregarded the principal tool of modern researchers could not claim realism.

4. Major Weaknesses and Difficulties. Problems of organizing and conducting these institutes were encountered from beginning to end. On some days it seemed as if no project, however important, was worth the effort this one required. In retrospect, perhaps because the institutes proved to be so successful, those day-to-day problems now seem minimal. However, for purposes of improving the planning of future institutes, some problems are noted below.

Many problems stemmed directly or indirectly from difficulties of clear communication with USOE staff. Processing of the initial training proposal (which was disapproved) consumed several months of precious time. The second proposal, although approved very expeditiously, came so late as to allow only minimal time for recruiting, selecting and notifying trainees. This short notice probably reduced applications from key research personnel and increased appointment refusals of others. Not having an explicit definition of dependents caused appreciable anxiety among applicants. Negotiating the contract at a late date precluded making some desirable changes in instructional plans. Delayed receipt of the first payment produced a new set of anxieties near the close of the institute.

Other problems were related to holding the institutes on University campuses. Without minimizing the compensatory advantages of joint university-junior college sponsorship, or without depreciating the generous helpfulness of university staff, the fact remains that one's adaptability is less away from his home campus.

The difficulties of perfecting a smooth functioning team-teaching instructional operation without opportunity for acquaintance of members of the team, to say nothing of time for detailed planning, are obvious. The ability of the staff to develop effective relationships quickly was most commendable - but it did require effort.

The heterogeneity of the students presented everlasting problems. Fortunately, satisfactory adaptations were usually found. And in spite of this weakness, the merits of the group as it was selected outweigh the disadvantages of the heterogeneity the selection process produced.

The difficulty of providing computer exercises which were directly related to the design and analysis needs of trainees when the trainees needed first to develop an elemental knowledge of computer operation and computer capacity is obvious. Adjustments to this problem were less successful than any other. The fact that the computer laboratory was on a separate campus and that the computer staff didn't have opportunity to intermingle with the other staff all contributed to the problem. Better advanced planning might have reduced this vexing problem.

5. Overall Evaluation. When all the problems, disappointments and failures are weighed against the achievements, successes and inspirations, only one conclusion is appropriate: the institutes were excellent. As one staff member said, "Some means must be found to continue this opportunity."

Those who did not attend the institutes will have difficulty appreciating the depth of coverage of principles of research design, topics of advanced statistics, and the range of exposure to data processing, all of which pointed to practical applied problems. Post-doctorate students compared it favorably with their longer formal preparation.

The director's experiences with NDEA programs has alerted him to the low esteem with which short-term institutes are regarded. In the case of junior colleges, however, because of the press of critical problems which cannot await a 3 - 5 year training program, because of the availability of key junior college research staff only for short periods, because some research training is needed for large numbers, and because of the advantages of bringing together groups with common problems, the institute approach is the preferred approach.

If permission could be obtained to organize similar research training around a group of common problems, and to use the institute as a staging ground for planning a cooperative attack on the problems for which research designs were perfected in the institutes, the program would have no peer. The director sincerely believes in

this way, more effectively and more economically than in any other way, substantial headway could be made toward the solution of the perpetual, refractory, critical problems which face junior colleges as they valiantly try to respond to the plea of society for universal post-high school education.

6. Comments and Recommendations Regarding USOE Administration of the Educational Research Training Program. Recommendations regarding USOE administration of the Educational Research Training Program are not easily separated from considerations of USOE administration of the total research stimulation program. At the outset it should be clearly stated that after Dr. Lee Burchinal attended the California Junior College Research and Development Conference at Asilomar, March 1966, he responded immediately and effectively to assist California junior colleges in their research effort, and specifically to obtain approval of the training grant. The junior colleges are indebted to Dr. Burchinal for this service. Those participating in the training institutes believe the success of the institutes justify Dr. Burchinal's faith in the junior colleges.

The junior college movement represents a great social experiment to determine if appropriate post-high school education can be extended universally. The outcome of this experiment is not assured. Representing as it does a service of such social significance and representing equally the most dynamic frontier in higher education, junior colleges should receive a substantial portion of research funds allocated to higher education. To the contrary, they beg, most unsuccessfully, for crumbs.

From the point of view of numbers of institutions and enrollments, junior colleges constitute a major segment of higher education. The almost 800 junior colleges represent more than one-third of the institutions in higher education. More than one student in four, almost one student in three, starts higher education in a junior college. In California, the more than a half-million junior college students represent more than twice the combined enrollments of all other institutions of higher education in that state. These facts strongly suggest that a much larger percentage of Federal research funds should be allocated to junior colleges.

To correct these obvious basic inequities the following recommendations are offered: (1) To add personnel with junior college experience to USOE staff at policy-making rank; (2) To earmark a reasonable proportion of higher education research funds for junior college research.

A second basic weakness of USOE practice of administering research funds relates to the process of allocating funds on the basis of proposals submitted to Washington, D.C. Institutions which have large staffs with responsibility for proposal writing have a decided

advantage over institutions with lesser resources. Furthermore, it is probable that review panels which evaluate junior college proposals may have limited qualifications of experience with junior colleges, and may evaluate junior college proposals by inappropriate criteria. The delays of proposal review are vexing. Furthermore, the proposal system is expensive. The effort of proposal preparation, review and processing must amount to a significant sum, especially when the costs of disapproved proposals are added to those which are approved. Simply stated, there must be a more effective and efficient way of stimulating research in fields of social importance. This leads to an additional recommendation: (3) To allocate more research funds through research centers or regional or state offices with freedom of project choice delegated to these decentralized agencies.

A third basic weakness of administration of USOE research grants is the uncertainty of continued funding. This point is so universally known it needs no amplification. This factor, to a degree at least, may not be entirely controllable by USOE. It leads to recommendation (4), Research stability and efficiency would be enhanced by long-term grants.

Returning now to consideration of the application of these generalizations to the junior college research training institutes, the following points appear pertinent. The original training proposal submitted to USOE by the California Junior College Association was under consideration by USOE for more than three months before it was disapproved. It is the judgment of junior college leaders that the initial (disapproved) proposal embodied many innovations which, upon the advice of USOE staff, were deleted from the subsequent (approved) proposal. Among these strengths were problem-centered instruction, provision for planned implementation of a cooperative, coordinated research action program, and long-range support upon which future developments might have been undertaken without annually repeating support request for basic training. The CJCA Research and Development Committee believes the original proposal was stronger. This, of course, is a subjective judgment which can only be evaluated by a trial institute.

This report is not the appropriate medium through which to elaborate further on these points, nor to add others which might be mentioned.

The Research and Development Committee of the California Junior College Association would welcome an invitation to confer with USOE staff regarding the administration and operation of the USOE research program as it relates to research needs of junior colleges.

In conclusion, in order to put these recommendations in propor perspective, it should be repeated again that the institutes as they were conducted were extremely effective and valuable. The recommendations have been advanced in the spirit that all of us are striving to identify ways to obtain the greatest social benefit from this important new opportunity.

SECTION IV. PROGRAM REPORTS

1. Publicity. Preliminary plans for the institutes were described at the California Junior College Fall and Spring Conferences, at the Conference of California Junior College Research, and at other meetings throughout the year. Information about announcements is reported in Table 1 of this report. A few newspaper reports of the institutes came to the director's attention. A copy of the institute announcement is included in the Appendix.

2. Application Summary.

a. Approximate number of inquiries from prospective trainees (letter or conversation)	81*
b. Number of completed applications received	59
c. Number of first rank applications (Applicants who are well-qualified whether or not they were offered admission)	55-61
d. How many applicants were offered admission	59

3. Trainee Summary.

a. Number of trainees initially accepted in program	50
Number of trainees enrolled at the beginning of program	50
Number of trainees who completed program	47**
b. Categorization of trainees	
(1) Number of trainees who principally are elementary or secondary public school teachers	0
(2) Number of trainees who are principally local public school administrators or supervisors	0
(3) Number of trainees from State education groups	0

* This is a conservative number. All phone and conversation inquiries are not included.

** Three trainees withdrew from the institutes. One was appointed acting president of his college after attending the institute for two days. Another was appointed dean of liberal arts and sciences of his college after attending the institute for one week. These major new responsibilities made their continued attendance impossible. The third person withdrew for personal reasons after three days attendance.

Staff

University of California, Berkeley

Dr. Donald P. Hoyt, Coordinator, Research Services, American College Testing.
Dr. Frank C. Pearce, Director of Research, Modesto Junior College.

University of California, Los Angeles

Dr. John E. Stecklein, Director, Bureau of Institutional Research, University of Minnesota
Dr. Robert L. Poorman, Associate Dean of Instruction, Bakersfield College.

Supplemental Staff

Dr. Thomas B. Merson, Project Director and Director of Research, California Junior College Association.
Two behavioral science consultants, one computer consultant, and one graduate assistant are to be appointed for each institute.

Eligibility and Selection of Trainees

Enrollment in each institute will be limited to 20 to 30 trainees. To qualify for enrollment, an applicant should:

(1) be currently engaged in, or preparing to engage in, some form of junior college research, or

(2) be participating in, or preparing to participate in, some innovative junior college program, or

(3) be in a position of junior college leadership.

Selection of applicants will be based on the following factors:

1. Level of responsibility for research.
2. Potential for exercising leadership in research.
3. Level of interest in research of the applicant and his college.
4. Level, range and recency of formal preparation in research.
5. Extent, kind and recency of research experience.

RESEARCH TRAINING INSTITUTE ANNOUNCEMENT

ANNOUNCING

T W O

RESEARCH TRAINING INSTITUTES

on

Principles and Methods of Applied Research for Junior College Researchers

July 5 - 29, 1966

University of California at Berkeley

and

University of California at Los Angeles

* * * * *

The institutes were planned and are sponsored cooperatively by - - -

THE RESEARCH AND DEVELOPMENT COMMITTEE OF THE CALIFORNIA JUNIOR COLLEGE ASSN.

and

THE EXTENSION DIVISION AND THE JUNIOR COLLEGE LEADERSHIP PROGRAM OF THE UNIVERSITY OF CALIFORNIA AT BERKELEY AND AT LOS ANGELES.

The institutes are supported by a grant (subject to contract negotiations) from the Division of Research Training and Dissemination, United States Office of Education.

Objectives

To prepare junior college staff who will increase and expand research-based improvements of educational services in junior-community colleges.

Specific objectives include:

1. To develop a corps of competent junior college researchers.
2. To familiarize junior college researchers with a variety of research designs, techniques and methods.
3. To increase the versatility of junior college researchers.
4. To provide experience in designing research projects.
5. To provide opportunity for exchanging and pooling ideas about promising approaches to refractory problems.

Topic Outline

1. Nature of Research (1 day)
2. Principles of Research Design (3 days)
3. Tools of Research (15 days)
   a. Instruments for Observation and Measurement (1 day)
   b. Descriptive Statistics (3 days)
   c. Selection of Statistical Method (1 day)
   d. Statistical Inference (5 days)
   e. Data Processing and Computer Operation (5 days)

Daily Schedule

8:30 - 10:30	Sequential topics of principles and methods of research and analysis.
10:45 - 12:00	Application of research principles and methods to critical junior college problems.
1:00 - 3:00	Design, analysis and computer laboratory.
Afternoon and Evening	Independent study.

Special Opportunities

* Each trainee will advance his skill in computer use.
* Each trainee will design a research project, and the design and analysis laboratory will provide opportunity for independent study under staff supervision.

Staff

University of California, Berkeley

Dr. Donald P. Hoyt, Coordinator, Research Services, American College Testing.
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University of California, Los Angeles

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(1) be currently engaged in, or preparing to engage in, some form of junior college research, or

(2) be participating in, or preparing to participate in, some innovative junior college program, or

(3) be in a position of junior college leadership.

Selection of applicants will be based on the following factors:

1. Level of responsibility for research.
2. Potential for exercising leadership in research.
3. Level of interest in research of the applicant and his college.
4. Level, range and recency of formal preparation in research.
5. Extent, kind and recency of research experience.

Stipends

There will be no tuition fee. Stipends of $75.00 per week per trainee, $15.00 per week per dependent, and round-trip travel cost will be provided.

Living Accommodations

Space is reserved for housing and meals in modern University dormitories.

Credit

Four units of University Extension credit are available.

Application Procedure

Applicants must complete an Application Form, obtain a letter from their college president verifying their research responsibilities, and forward these by May 21 to:

Thomas B. Merson, Director of Research
California Junior College Association
Bakersfield College
Bakersfield, California 93305

Further information will be provided on request. Effort will be made to notify applicants of their acceptance by June 10.

Appendix

SUMMER TRAINING INSTITUTE APPLICATION

California Junior College Association

APPLICATION FOR ENROLLMENT

Summer Institute: "Principles and Methods of Applied Research for Junior College Researchers"

Instructions

To the President -

Please give an Application Form and an Announcement to persons in your college who are interested and who might qualify for a research traineeship. Ask those who wish to apply to forward the Application by May 21 to:

Thomas B. Merson
C J C A Director of Research
Bakersfield College
Bakersfield, California 93305

To the Applicant -

The C J C A Committee on Research and Development believes the institutes described in the attached Announcement will be of significant assistance to anyone who is engaged in junior college institutional research. Enrollment will be limited to 20 - 30 trainees in each institute.

Complete the attached application, ask your college president to write a letter verifying your research responsibilities in your college, and send both to Dr. Merson as soon as possible. Effort will be made to notify candidates of approval before June 10.

CALIFORNIA JUNIOR COLLEGE ASSOCIATION 4/27/66
Committee on Research and Development

Application for Enrollment, CJCA Research Institute - July 5-29, 1966

1. Applicant
   Name _____
   Title _____
   College _____

2. Approval of College President

   _____
   (signature)

3. Institute (check preference)

   ☐ University of California at Los Angeles
   ☐ University of California at Berkeley

4. Education (List all post-high school education)

Institution	Attendance Dates	Degree	Major	Minor

5. Professional Experience (List most recent position first)

Institution	Dates	Position	Fields

6. Research Training (List any course you have completed in (1) research and research methodology, (2) statistics and probability, and (3) educational measurement.)

Course	Approx. Date	Institution

7. Research Responsibility. Describe your present responsibility for institutional research; or your assured future responsibility for research; or your supervisory responsibility; or your participation in innovative programs. (See Announcement for qualifications.) Attach a letter from your college president verifying this responsibility.

8. Research Experience. List titles, approximate dates, where done, and a brief description of any research you have conducted.

9. Special Interest and Competence. Why do you want to participate in this Institute? What special competence will you bring to the Institute?

10. Computer Programming and Use. What experience have you had with computer programming or computer use? (This will help us arrange computer laboratory opportunities.)

11. Assistance You Want from the Institute. List specific assistance you want to obtain from the Institute which might prepare you to conduct institutional research more effectively. (Your answer will help us plan institute content and organization.)

12. Primary Research Interest. What is your primary research interest? During the institute, each trainee will design a research project; what will be your topic? Why do you choose this topic?

13. Special Qualifications of your College. It is assumed that each trainee will return to his college to conduct or supervise research. Describe previous institutional research conducted at your college. Describe plans of your college for future institutional research.

14. Comments. Please add any other information which would strengthen your application. Please also suggest ways in which the institute could be made most helpful to you.

R O S T E R

Appendix

CALIFORNIA JUNIOR COLLEGE ASSOCIATION
RESEARCH TRAINING INSTITUTES

July, 1966

University of California at Los Angeles

1. ALDRICH, LOREN J. - - - - Academic Dean, Arizona Western College Yuma, Arizona
2. BRYANT, GIRARD T. - - - - Dir. of Institutional Planning & Research Metro. Area J.C., Kansas City, Missouri
3. CONNOLE, PAUL H.- - - - - Asst. to the President, St. Louis County Junior College Dist., Clayton, Missouri
4. GLEIS, MRS. JEAN - - - - Research Counselor, Los Angeles Trade-Tech. College, Los Angeles, California
5. GOLDER, DONALD T. - - - - Counselor, Glendale College Glendale, California
6. HAIGH, MADELON - - - - - Associate Professor, English, Los Angeles City College, Los Angeles, California
7. HARTMAN, NEAL - - - - - - Counselor, Florissant Valley Community College, St. Louis, Missouri
8. HIRSCH, PETER - - - - - - Asst. Dean of Instr. and Student Personnel Services, Florissant Valley C.C., Missouri
9. HOPKINS, FRANK O. - - - - Dean of Research & Planning, Orange Coast J.C. District, Costa Mesa, California
10. HOSTROP, RICHARD - - - - Registrar, College of the Desert Cathedral City, California
11. JACOBSEN, RICHARD C. - - Dir. of Research and Planning, College of the Sequoias, Visalia, California
12. JANSEN, LUTHER T. - - - - Sociology Instructor, Tacoma Community College, Tacoma, Washington
13. JONES, IVAN L.- - - - - - Chairman, Language Arts Div., Cuesta College, San Luis Obispo, California
14. KELLEY, MRS. M.FRANCES - Asst. Professor, Niagara Co. Community College, Buffalo, New York
15. MACHETANZ, FREDERICK A. - Coord. of Institutional Research, L.A. Valley College, Los Angeles, Calif.
16. MARTIN, PETER B. - - - - Student Counselor, New York City Community College, Brooklyn, N.Y.
17. MOUCK, NORMAN G., JR. - - Chairman, Math. Division, Santa Barbara City College, Santa Barbara, Calif.
18. ROMERO, ISAAC J. - - - - Teacher-Counselor, Citrus College Azusa, California
19. SANDEN, MILTON R. - - - - Administrative Assistant, Bakersfield College, Bakersfield, California
20. SMITH, ROBERT M. - - - - Head Counselor, Laney College Oakland, California

21. SOGOMONIAN, ARAM M. - - - Instructor, San Bernardino Valley College, San Bernardino, California
22. SPENCER, TERREL - - - - - Superintendent-President, Imperial Valley College, El Centro, Calif.
23. VREELAND, RICHARD D. - - A-V Coord. and Consult. of Study Skills L.A. Trade-Tech.College, L.A., Calif.
24. WALLACE, WILLIAM B. - - - Dean of Admissions & Registrar, Phoenix College, Phoenix, Arizona
25. WEISHART, LAWRENCE- - - - Dir. of Publications, College of the Desert, Palm Desert, California

University of California at Berkeley

1. AMSBERRY, DONALD E. - - - Instructor-Counselor, Blue Mt. Community College, Pendleton, Oregon
2. AUGHINBAUGH, LORINE A.- - Coord., Counseling & Admissions, American River J.C., Sacramento, California
3. BESSIRE, JACK D. - - - - Dir. of Research and Planning, Contra Costa College, San Pablo, California
4. BRANDRIFF, ROBERT K.- - - Coord. of Instruction, College of San Mateo, San Mateo, California
5. COTTRELL, EDWARD B. - - - Dir. of Inst. Research, St.Petersburg Junior College, Clearwater, Florida
6. DE NEVERS, MARGARET - - - Counselor, Los Angeles Pierce College Woodland Hills, California
7. DIAMOND, IRWIN P. - - - - Dean of Students, College of Marin Kentfield, California
8. FITCH, MRS. NAOMI - - - - Dir. of Occupational Services, San Joaquin Delta College, Stockton, Calif.
9. FRICKE, ROBERT G. - - - - Admin. Asst. to the President, West Valley College, Campbell, Calif.
10. GRAME, CARL A. - - - - - Instructor - Data Processing, Foothill College, Los Altos Hills, Calif.
11. HOWARD, MRS. CONSTANCE- - Asst. Research Analyst, Modesto Junior College, Modesto, California
12. KINDRED, ALTON R. - - - - Dir. of Data Processing, Manatee Junior College, Bradenton, Florida
13. MARTIN, LAWRENCE W. - - - Acting Dir. of Research, Fresno City College, Fresno, California
14. MIZEL, ROBERT - - - - - - Counselor, Foothill College Los Altos Hills, California
15. MURDOFF, MRS. VIRGINIA- - Dean of Guidance Services, Napa College Napa, California
16. POWERS, MILTON O. - - - - Dir. of Inst. Research, Henry Ford Community College, Dearborn, Michigan
17. ROGERS, E. LANCE - - - - Instructor, City College of San Francisco San Francisco, California

ROSTER (CONTINUED)

18. SAKAGUCHI, MELVYN K. - - Asst. in Research, Community College System, Univ. of Hawaii, Honolulu
19. SNOW, ROBERT H. - - - - - Dean of Instruction, Western Wyoming Community College, Reliance, Wyoming
20. STEVENS, LEE A. - - - - - Asst. Dir. Research & Planning, Foothill College, Los Altos Hills, Calif.
21. TAYLOR, MARTIN D. - - - - Assoc. Dean of Student Personnel, Sierra College, Rocklin, California
22. TREBBE, E. S. - - - - - - Counselor, West Valley College Campbell, California
23. TRIVEDI, MADHUSUDAN C.- - Dir. of Computer Center, Agric. & Tech. College, Alfred, New York
24. VEREGGE, MARVIN L. - - - Counselor-Instructor, Chabot College Hayward, California
25. WOLFE, JAMES R. - - - - - Asst. Dean of Faculty, Boise College Boise, Idaho

LECTURE OUTLINE

CJCA Research Institute
University of California, Los Angeles
July 1966

L. Joseph Lins

Administrative Planning Through Institutional Research

I. The Development of Institutional Research
II. The Scope of Institutional Research
III. Operational Areas of Institutional Research
IV. Organization for Institutional Research

Major Objectives and Written Assignment of the Course

I. Objectives
II. The Research Paper
    A. Characteristics of Research
    B. Research Design
    C. Reporting Research
        1. Points to remember in writing a report
        2. The Report
            a. Preliminary Pages
            b. The Body
                (1) Problem and definition of terms -- Delimination of the problem
                (2) Review of literature
                (3) Procedure and findings
                (4) Summary, generalizations and recommendations
            c. Reference Materials
                (1) Bibliography
                (2) Appendix or Appendices
                (3) Index
        3. Special Considerations in reporting - form and style
    D. Statistics in Reporting
        1. Errors in reporting
        2. Tables and parts of tables
        3. Charts and graphs (arithmetic, index, semilogarithmic)

Research

I. The Nature of Scientific Thinking and Method
    A. The Scientific vs. the Popular Mind
    B. Characteristics of the Scientific Method and Steps in the Process of Scientific Thinking
II. Selection and Definition of the Problem
    A. Discovering and Recognizing Problems
    B. Criteria for Selection of a Problem
III. Survey of Related Information
    A. Purpose of the Survey

B. Sources of Information
   1. Library Resources
   2. Non-published Reports
   3. Exchange of Reports and ERIC
C. The Formulation and Testing of Hypotheses
   1. Characteristics of Hypotheses
   2. Testing Hypotheses
D. Research Methods
   1. Historical
   2. Normative-Survey
      a. Survey testing
      b. Questionnaires
      c. Documentary frequency
      d. Interview
      e. Observational and Anecdotal
      f. Survey Appraisal
   3. Experimental
      a. Types
         (1) One group technique
         (2) Parallel group technique
         (3) Rotation group technique
         (4) Laboratory technique
      b. Mill's Canons
   4. Complex Casual
      a. Causal-Comparative
      b. Correlation - Regression
      c. Case Study
      d. Genetic
E. Analysis and Interpretation of Data
F. Formulation of Generalizations

Statistics

I. Need for Statistics
II. Symbols to be Used
III. Measures of Central Tendency
   A. Mean
   B. Median
   C. Mode
   D. Geometric Mean
   E. Averaging Means
IV. Measures of Variability
   A. Range and Semi-interquartile Range
   B. Average or Mean Deviation
   C. Standard Deviation
V. The Normal Curve
   A. Characteristics, Properties, and Development of
   B. Normalizing Centile Distributions
   C. Normalizing Raw Score Distributions

LECTURE OUTLINE (CONTINUED)
University of California, Los Angeles

VI. Correlation - Zero-order, Multiple, and Partial
  A. Assumptions Underlying and Description of
  B. Characteristics of Data
  C. Types
    1. Pearson-Product-Moment
      a. Deviations from Mean Method
      b. Raw Score (machine) Method
      c. Scattergram Method
      d. Aitkin Method of Multiple (determinants)
      e. Partial
    2. Curvilinear (Eta)
    3. Spearman Rank Order (Rho)
    4. Biserial
    5. Contingency
    6. Tetracloric
    7. Yule's Q
    8. Fourfold
  D. Averaging Correlation Coefficients
VII. Analysis of Variance and Co-variance
VIII. Sampling and Sampling Errors
  A. Types of Sampling (simple, random, stratified, interval, purposive)
  B. Sampling Theory
  C. Standard Error and Confidence Limits (mean, proportion, percentage, correlation coefficient)
  D. Testing Differences between Statistics (mean, percentages, correlation coefficients)
    1. Large and small samples (C.R., t, and F)
    2. Two-tailed and One-tailed tests
    3. Correlated and Non-correlated data
IX. Non-parametric Statistics
  A. Advantages and Disadvantages
  B. Tests
    1. Sign Test and Pascal's Triangle (binomial expansion)
    2. Wilcoxon's Matched Pairs Signed-Ranks Test
    3. The Median Test (Contingency and Chi-Square)

LECTURE OUTLINE

CJCA Research Institute
University of California, Berkeley
July 1966

Donald P. Hoyt

I. Role of Research

II. Levels of Research

III. Principles of Design
- A. Factors jeopardizing internal and external validity (overview)
- B. Pre-experimental designs
  1. One-shot case study
  2. One group Pretest-Posttest
  3. Static Group Comparison
- C. True-experimental designs
  4. Pretest-Posttest Control Group
  5. Solomon Four Group
  6. Posttest only Control Group
- D. Quasi-experimental Designs
  7. Time Series
  8. Non-equivalent control group
  9. Multiple Time Series
  10. Recurrent Institutional Cycle (patched up)

IV. Statistical Techniques
- A. Elementary concepts
  1. Types of measures
  2. Central Tendency
  3. Variability (Standard Deviation)
  4. Standard Scores
  5. Normal Curve
  6. Correlation
- B. Estimation and tests of significance
  1. Standard error for mean, standard deviation, proportion, correlation (z), confidence limits
  2. Tests of significance of difference between means, variances, proportions, correlations
     a. In independent samples
     b. In correlated samples
- C. chi Square (X^2)
  1. Goodness of fit
  2. Tests of independence
  3. Small theoretical frequency in 2 x 2
     a. Yates Correction for Continuity
     b. Fisher Exact Test

LECTURE OUTLINE (CONTINUED)
University of California, Berkeley

D. Other measures of correlation
   1. Rank order correlation coefficient (rho)
   2. Coefficient of Concordance (w)
   3. Contingency coefficient
   4. phi Coefficient
   5. Point biserial
   6. Biserial Coefficients
   7. Correlation Ratios (eta)
E. Regression (linear)
   1. Simple
   2. Multiple
   3. Expectancy tables (theoretical)
F. ANOVA (analysis of variance)
   1. One way
   2. Two way
G. Analysis of covariance)
H. Selected Non-parametric Statistics

Appendix

RESEARCH PROPOSALS PREPARED BY TRAINEES

California Junior College Association Research Training Institute
University of California, Los Angeles
July 1966

Loren J. Aldrich	"An Attempt to Develop Guidelines for Determining Faculty Effort in a Comprehensive Junior College"
Girard T. Bryant	"What Do Metropolitan Area High School Students Expect of Their Junior College"
Paul H. Connole	"Placement of Students in Introductory Classes of English, Mathematics and Social Sciences"
Jean Gleis	"Aptitude Test Factors Affecting Job Performance in Photo Offset"
Madelon Haigh	"Study of the Effects of Differing Methods of Instruction at the Junior College Level Upon Progress of Students who Enter College on Condition"
Neal E. Hartman	"Placement into Freshman English According to Selected Intellective and Non-Intellective Means"
Peter M. Hirsch	"Covariates in the Prediction of Academic Success"
Frank O. Hopkins	"Financing the Orange Coast Junior College District 1966-1975"
Richard W. Hostrop	"The Design of a Library Use Questionnaire"
Richard C. Jacobsen	"A Study to Determine Potential Enrollment Projection Methods"
Luther T. Jansen	"A Proposal for a Study of the Effectiveness of the English Composition 101-A Course at Tacoma Community College"
Ivan L. Jones	"A Historical Analysis of Selected Factors in the Evolution of San Luis Obispo Junior College, 1917-1966"
M. Frances Kelley	"By What Means do Candidates for Teaching Positions in New York State Public Community Colleges Acquire their Jobs?"

RESEARCH PROPOSALS PREPARED BY TRAINEES
University of California, Los Angeles (Continued)

Frederick A. Machetanz	"Proposal for a Three-Year Follow-Up Study of 400 Students who Designate Themselves as Transfer Students on Entrance to Los Angeles Valley College, Fall 1966"
Peter B. Martin	"The Effectiveness of the Strong Vocational Interest Blank to Predict Requests for Curriculum Transfers"
Norman G. Mouck, Jr.	"An Empirical Method for Organizing a Mathematics Course Sequence"
Isaac J. Romero	"To Study the Effectiveness of Instruction as Related to the Size of a Class"
Milton R. Sanden	"An Investigation of Record Keeping Procedures Concerning Personnel Data of Junior College Professional Staff Members"
Robert M. Smith	"A Studyof Declared Transfer Students in Liberal Arts Majors at a Comprehensive Junior College in Terms of their Liklihood of Entering a Vocational Major"
Aram M. Sogomonian	"Conventional vs. TV Instruction"
Terrel Spencer	"The Relationship of Instructor Ratings by Two Supervisors in a Junior College"
Richard D. Vreeland	"Comparative Methods of Administering Objective Tests"
William B. Wallace	"Follow-up Study of Students in Terminal Curricula at Phoenix College"
Lawrence Weishart	"Direct Mail Advertising: Its Effect Upon a Community Services Program"

RESEARCH PROPOSALS PREPARED BY TRAINEES

California Junior College Association Research Training Institute
University of California, Berkeley
July 1966

Donald E. Amsberry	"Effect of Field Experience on Attitudinal Responses of Pre-Teachers"
Lorine A. Aughinbaugh	"Are the Needs of Mobile Students Different?"
Robert K. Brandriff	"Characteristics of Summer Session Students at the College of San Mateo"
Edward B. Cottrell	"An Effective Program of Research for the Community College, through Data Bank and Total Information Systems Operation"
Margaret De Nevers	"The Relationship of Academic Failure to Self-Acceptance"
Naomi Fitch	"The Working Student and His Achievement Level at San Joaquin Delta College"
Robert G. Fricke	"Use of Workbook in History 50 Class"
Carl A. Grame	"The Value of Occupational Information to the Vocational and Technical Student"
Constance Howard	"Reading as a Factor in Typing Speed"
Alton R. Kindred	"Prediction of Success in Data Processing Courses"
Robert D. Mizel	"A Study of the Effect of Instruction in Test Preparation and Test Taking in a Freshman Orientation Class on Test Performance"
Virginia Murdoff	"A Study of Community Opinion Concerning Junior College Functions"
Milton O. Powers	"A Study of Community College Libraries"
E. Lance Rogers	"Some Aspects of the Development of a Computer Program for the Implementation of Program Budgeting"
Melvyn K. Sakaguchi	"A Study Determining the Need for and the Acceptability of Financial Assistance of Community College Students"

RESEARCH PROPOSALS PREPARED BY TRAINEES
University of California, Berkeley (Continued)

Robert H. Snow	"Student Characteristics at Western Wyoming Community College"
Lee A. Stevens	"Student Placement in Mathematics"
Martin D. Taylor	"Initial Classification of Entering Junior College Freshmen into Terminal or Transfer Majors"
E. S. Trebbe	"Predicting Success in English Composition on the Basis of Entrance Test Scores"
Madhusudan C. Trivedi	"Predictions of Academic Success at Alfred Tech. from Pre-Admissions Measures"
Marvin L. Veregge	"The Effect of Teacher Intellectual Commitment on Student Value Formation"
James R. Wolfe	"An Evaluation of the Remedial English Course at Boise College"

Appendix

RESEARCH INSTITUTE EVALUATION FORM

CALIFORNIA JUNIOR COLLEGE ASSOCIATION
Office of Research and Development
Bakersfield College - 1801 Panorama Drive
Bakersfield, California 93305

M E M O R A N D U M

TO: Junior College Research Institute Trainees

FROM: Thomas E. Merson

TOPIC Institute Evaluation

DATE: July 28, 1966

We hope the junior college research training institute has been a worthwhile experience for you. In order that we may plan for improvements in similar institutes in the future, we would value your judgments on items of planning, arrangements, organization and operation of the institute sessions.

The responses which institute trainees provide on the attached form will be summarized in our report on the institutes to USOE. Consequently, we seek your candid, considered judgment on each point. Please feel free to comment upon additional items not directly solicited through the attached form. If you wish, you may write in a separate letter to the institute director about items which are of a personal or confidential nature.

The true worth of the institutes, of course, can be best measured by the degree to which junior college institutional research is improved by the institute trainees. However, planning for next year's institutes cannot await long-term results, hence your judgments now have double significance.

Let me express my personal appreciation to all of you for the professional way in which you have entered into all the activities of the institute. Best wishes for a successful and improved career in institutional research.

CALIFORNIA JUNIOR COLLEGE ASSOCIATION
RESEARCH TRAINING INSTITUTES - JULY 5-29, 1966

UCB ☐
UCLA ☐

Trainee Recommendations

Part A. EVALUATION OF SELECTED COMPONENTS OF 1966 INSTITUTES

Directions: For each aspect of the institute listed below, please record your general evaluation, and amplify this by appropriate comment.

	Evaluation Scale		
	Excellent	Satisfactory	Needed Improvement
1. Institute Announcement Comment:	☐	☐	☐
2. Application Form Comment:	☐	☐	☐
3. Appointment Notices Comment:	☐	☐	☐
4. Regulations Comment:	☐	☐	☐
5. Living Arrangements:			
A. Dormitory	☐	☐	☐
B. Non Dormitory Comment:	☐	☐	☐
6. Meeting Accomodations:			
A. Meeting Room	☐	☐	☐
B. Library	☐	☐	☐
C. Computer Lab. Comment:	☐	☐	☐
7. Institute Schedule:			
A. Daily Schedule	☐	☐	☐
B. Total Length (4 weeks)	☐	☐	☐
C. Dates (July) Comment:	☐	☐	☐
8. Institute Content:			
A. Research Methodology: Time Allotted	☐	☐	☐
Topic Selection	☐	☐	☐
Applications	☐	☐	☐
Comment:			

8. Institute Content (continued):

B. Statistical Analysis: Time Allotted . . . .

Topic Selection . . . .

Applications . . . .

Comment:

C. Computer Technology: Time Allotted . . . .

Topic Selection . . . .

Application . . . .

Comment:

9. Instruction:

A. Lectures . . . .
Comment:

B. Laboratory: Computer . . . .

Analysis and Design . . . .
Comment:

C. Individual Conferences . . . .
Comment:

D. Group Discussions . . . .
Comment:

E. Statistics Tutoring . . . .
Comment:

10. Assignments:

A. Computer . . . .

B. Design and Analysis . . . .
Comment:

11. List aspects of organization, content or instruction which for your purposes were most outstanding.

12. List aspects of organization, content or instruction which if improved would have increased the value of the institute to you.

Part B. ALTERNATE PLANS OF ORGANIZATION

Directions: Several alternate plans for future institutes are being considered. Please rate the relative merits of each. (The plans are not mutually exclusive.)

	Evaluation Scale		
	Strongly favor	Acceptable	Unwise
PLAN 1 - Institutes which would focus attention on designing research in a selected field such as improvement of instruction.			
PLAN 2 - Institutes held during the regular year (instead of in the summer).			
PLAN 3 - Separate, two-week, consecutive, summer sessions on the computer, research methodology, and statistical analysis where the student would have the option of enrolling in one, two or all three sessions.			
PLAN 4 - Institutes covering similar content but differing in level (elementary and advanced) with appropriate prerequisites.			

Part C. CRITICAL ANCILLARY CONSIDERATIONS

1. a) How important is course credit to you?

   b) For what purpose is credit important?

2. How important or valuable was the University library for your institute work?

3. How would you react to requiring all trainees to live in the dormitory?

4. What would you recommend as the maximum and optimum length of future institutes?

Part D. GENERALIZATIONS

Imagine that you had responsibility for writing the proposal to secure support for future research training institutes. List the features in the proposal to which you would ascribe prime importance.