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ABSTRACT

This document contains the first three volumes of the Junior College Research Review. Topics relate to various aspects of the junior college including students, faculty, instructional programs, institutional research, guidance, testing, administration, and facilities. For the remaining volumes of this publication, see JC 720 156 and JC 720 157 below. (RN)

JUNIOR COLLEGE RESEARCH REVIEW

Volumes I - III

February 1967 - June 1969

ERIC Clearinghouse for Junior Colleges

in conjunction with

The American Association of Junior Colleges

EDUCATIONAL RESEARCH INFORMATION CENTER ERIC

Volume 1, Number 1

JUNIOR COLLEGE RESEARCH REVIEW

CLEARINGHOUSE FOR JUNIOR COLLEGE INFORMATION

February, 1967

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

FOLLOW-UPS OF THE JUNIOR COLLEGE TRANSFER STUDENT

The studies included in this review are drawn from those which have been received at the Clearinghouse during the past six months. The Clearinghouse processes only those reports which summarize information — it does not include raw statistical data in its collection except as that data is contained in the research studies themselves.

Sources: To date, twenty-four research reports on success achieved by the junior college transfer student have been received and processed at the Clearinghouse for Junior College Information. Of those studies, ten were produced by junior college counseling centers, four by junior college research offices, and six by staff members. Four are journal articles.

Methodology: Fifteen studies gained requisite data by surveying student achievement records made at transfer institutions, six mailed questionnaires to their graduates, and three surveyed the literature of the field.

Data was reported in tables or graphs along with narrative comments and recommendations. Eight reports included breakdowns of grades earned by major field studies, and two by departments entered at the senior institution. Five studies reported cumulative grade-point averages of all transferring students; ten included breakdowns by names of institutions to which students transferred. Two added other types of personal data.

Outstanding in methodology are studies done at Los Angeles City College (see Bibliography). Each of these research documents defines purposes, spells out procedures, presents findings in tabular form with narrative explanations, and makes summaries.

Findings: The following may be concluded by a survey of the twenty-four studies included in this review:

1) Students who enter junior colleges and transfer eventually to senior institutions typically experience a lower grade-point average during the first semester following transfer.
2) In most cases, the transfer student's marks recover from the loss which occurs during his first semester.
3) Transfers' grade-point averages improve with each successive semester in hich they are enrolled at the senior institution.
4) The studies which surveyed the literature determined that (a) transfer students' marks are lower than the average grades made by students who entered senior institutions as freshmen (natives); (b) the transfer student is less likely than the native to graduate; (c) the transfer student who does graduate takes longer to reach the baccalaureate than does the comparable native student.

These findings tend to corroborate conclusions drawn recently by Medsker[1] and Knoell[2] and to reinforce data reported in research dating to 1928.[3]

Summary: Most follow-up studies received in the Clearinghouse focus on success of the junior college transfer student with success being measured by grade marks earned at four-year colleges and universities. Although a few of these institutional research reports add biographical data on students, most include only grade compilations and comparisons tabulated by subject area and name of transfer institution. In all cases, tables and graphs are clearly presented.

Institutional studies summarized in this

review report information well. They do not, however, lend insight into reasons for success or failure of the transfer student, nor do they attempt to draw inferences, conclusions, or recommendations for modifying junior college offerings in the light of their findings. Research expanded in scope to include attacks on these and other problems associated with junior college transfer students is indicated.

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[1]Leland Medsker, *Junior College: Progress and Prospect* (New York: McGraw-Hill Book Co., 1960).

[2]Dorothy M. Knoell and Leland L. Medsker, *Factors Affecting Performance of Transfer Students from Two- to Four-Year Colleges* (Berkeley: Center for the Study of Higher Education, 1964); and *Articulation between Two-Year and Four-Year Colleges* (Berkeley: Center for the Study of Higher Education, 1964).

[3]H. M. Showman, "Junior College Transfers at the University of California at Los Angeles," *California Quarterly of Secondary Education*, 4:319-322, June 1929.

John E. Roueche

This is the first issue of *Junior College Research Review*, a publication of the Clearinghouse for Junior College Information. The Clearinghouse, located at UCLA, is one of twelve currently operating within the U.S. Office of Education's Educational Research Information Center (ERIC) network. ERIC represents a nationwide effort to assist the field of education by making research information available in various formats. *Junior College Research Review* periodically will summarize studies received at the Junior College Clearinghouse.

This issue of the *Review* is a summary of twenty-four research reports dealing with success of junior college transfer students. Subsequent issues will consider studies of staff, curricula, programs, libraries, community services, and other topics specifically related to the development and evaluation of junior college operations.

Abstracts of all studies included in *Junior College Research Review* may be obtained from the Clearinghouse. Requests should be made by document number. Copies of the complete research reports are available for study at the Clearinghouse on weekdays between 8:00 a.m. and 5:00 p.m. At the present time the Clearinghouse is *not* equipped to furnish complete copies for general distribution.

Our ability to develop the *Review* and other Clearinghouse services depends, in large measure, on your participation. Please send two copies of your research studies on any phase of junior college operations so that we may include them in the Clearinghouse collection. Send them to:

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Arthur M. Cohen
Assistant Professor of
Higher Education

(Miss) Lorraine Mathies
Head, Education-Psychology Library

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Abstracts of reports mentioned in this review may be obtained from the Clearinghouse on request.

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Volume 1, Number 2

JUNIOR COLLEGE RESEARCH REVIEW

CLEARINGHOUSE FOR JUNIOR COLLEGE INFORMATION

March, 1967

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

The Collection and Utilization of Student Biographical Data by Junior Colleges

This is the second issue of *Junior College Research Review*, a publication of the Clearinghouse for Junior College Information. The Clearinghouse, located at UCLA, is one of thirteen currently operating within the U.S. Office of Education's Educational Research Information Center (ERIC).

The reports presented in this issue have been selected from those that have been received during the past six months. The Clearinghouse processes only those reports that summarize and collate information. It does not include collections of raw statistical data in its files, except as that data is part of the research reports themselves. We will be pleased to receive for inclusion in the Clearinghouse collection two copies of your recent research studies on any phase of junior college operations.

Sources: To date, the Clearinghouse for Junior College Information has received and processed seventeen studies of biographical data on groups of junior college students. Of these studies, eight were produced by junior college research offices, four by junior college counseling centers, and five by various junior college staff members.

Methodology: Eight studies secured requisite data by the use of student questionnaires, seven gained data from student records on file in the junior college, and one reviewed the literature of the field. Twelve studies surveyed the total student population and four used random-sampling techniques.

Biographical data was reported graphically and in tabular form. Narrative comments, in conjunction with data collected, were present in twelve studies; four contained none.

The populations studied in these reports vary widely. Six studies surveyed all students enrolled in the junior college, three studied the freshman class, and two studied nursing students. Other studies examined separately the following groups: mature women students, previously disqualified students, students with reduced class loads, foreign language students, data-processing students, and students enrolled in the college's evening division.

Types of data collected and collated: Certain types of data were included in almost all studies, regardless of the populations surveyed. Fifteen studies reported on the ages of students; thirteen reported high schools attended; ten reported sex; nine reported various test scores; nine included information on the educational goals of students; and seven reported information on student residence. Other data collected included the following:

- Previous college attended
- Current and/or previous grade-point average
- Marital status
- Occupation
- Status as veteran
- Place of birth
- Parent's education and occupation
- Reasons for coming to college
- Number of credits earned to date
- Number of children
- Number of hours worked per week
- College major
- Number of credits taken currently
- Transportation to campus
- Race
- Religious preference
- Sources of financial support

Two reports were markedly different from the others. In one of its studies, Orange Coast Junior College used an experimental form of the Educational Testing Service *College Student Questionnaire*. In this study, scales were design to ascertain: satisfaction with the faculty; satisfaction with the student body; sat-

isfaction with administrative regulations; satisfaction with the student's major field; study skills and routine; extracurricular involvement; family independence; and levels of liberalism, social conscience, and cultural sophistication.

San Joaquin Delta College included in its student study (JC 66-0172) questions such as the following:

a) What *one person* influenced you most in your decision to attend a junior college?
b) How well do you think your teachers at the junior college know their subject matter?
c) How adequate is the *range* of courses offered at the junior college as preparation for your occupational objective?
d) Is there any person on the staff of this college to whom you feel particularly responsible and who feels particularly responsible to you?

Both studies could be of significance to their respective junior colleges in that they survey areas having strong implications for program modifications. Both might be of interest to the field because of the broad range of questions they ask.

Findings: Based on the limited number of institutional research studies reviewed here, the following may be concluded:

1. Although studies of students enrolled in particular programs often include recommendations for program modification, institutional studies of total junior college student populations typically do not make recommendations for specific planning.
2. Data collected is often compared with other data similarly obtained in earlier studies made at the same institution.
3. Total student populations are studied more often than are samples of the student body.
4. Institutional study of students' biographical characteristics appears to have as its overriding purpose the compilation of data that might be of use to other groups within and without the junior college.

John E. Roueche

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Abstracts of all studies mentioned in *Junior College Research Review* may be obtained from the Clearinghouse on request. Please order by document number, using the tear sheet provided below.

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JUNIOR COLLEGE RESEARCH REVIEW

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

CURRICULUM STUDIES IN THE JUNIOR COLLEGE

This issue of *Junior College Research Review* is devoted to studies of junior college curricula. Documents reviewed here were selected from those received, indexed, and abstracted at the Clearinghouse for Junior College Information. These studies represent efforts to collect information useful in evaluating or modifying junior college offerings. Other Clearinghouses operating in association with the United States Office of Education's ERIC project process curriculum studies in different specialized areas.

Sources: Twenty-six research reports relating to junior college curriculum development and evaluation are reviewed in this issue. Thirteen of these reports were produced by various junior college staff members; five were sponsored by state departments of education; three were prepared as seminar papers for graduate courses in higher education; and two were the efforts of junior college research offices. Included also are a master's thesis, a doctoral dissertation, and a report by the National Council of Teachers of English.

Methodology: Six of the studies helped develop curricular offerings by defining specific educational objectives. These studies attempted to provide rationales for programs, course content, and curriculum evaluation. In three reports, requisite data were secured by institutional visits, utilizing a structured-interview technique. Seventeen studies surveyed curricular programs at various institutions by means of questionnaires.

Two of the more interesting methodologies were used at Mt. San Antonio College and at Cabrillo College. Mt. San Antonio College developed a college-community occupational and educational survey to study the college's technical education offerings (JC 670-103). A questionnaire, sent to the parents of 29,196 students in grades 5, 7, 11, and 13, sampled parents' educational aspirations for their children. The study resulted in specific recommendations for the continuation and expansion of the technical education offerings in the college.

At Cabrillo College, the construction technology program was evaluated by the use of a questionnaire sent to 335 students and to the employers of students formerly enrolled in the program (JC 660-247). The purpose of the study was well defined and the results of the survey provided a rationale for curriculum revision and specific modifications in course content.

Findings: To date, studies of the junior college curriculum have focused attention on the following problems: (1) institutional and departmental curricular programs developed within the framework of specific educational objectives; (2) status studies of curricular programs at other institutions; (3) specific programs for low-ability students; and (4) feasibility studies to determine the need for new, occupationally oriented curriculum programs.

Western Piedmont Community College produced a *Manual for Course Planning* which emphasizes the need for defining educational objectives as a first step in curriculum development (JC 660-123). The study is valuable because it represents an institutional effort to state learning objectives in terms of desired behavioral outcomes. In the manual, the behaviorally specified learning objectives represent those competencies expected of any student who would receive credit in a course. The document develops the need to state clearly the learning objectives in all curricular areas. Such a process provides the classroom teacher with a sound basis for designing and evaluating a program of study. Related extra-class experiences may also be designed to result in students' achieving specified learning objectives.

An important study of technical education in Michigan community colleges was prepared by Harris and Yencso (JC 660-093). A summary of responses from 1,637 technical students indicated that only 10 percent of all high school graduates entered full-time study in occupationally oriented programs. Reasons for the low student enrollment were summarized as follows: inadequate vocational guidance in high school; lack of student interest; and lack of career information. Poor articulation between high school and college

counselors and teachers was indicated.

English in the Two-Year College (JC 660 224), a document prepared by the National Council of Teachers of English, included specific recommendations for the placement of low-ability students in junior college English programs. The study indicated that students are placed in various levels of composition (multitrack remedial, regular, and honors) by two-thirds (65.8 percent) of the 187 schools surveyed.

Other studies projected feasible curricular offerings in particular institutions. Those documents made recommendations based on indicated needs for new programs.

Summary: Junior college curriculum studies received at the Clearinghouse vary widely in subject matter and methodology. The questionnaire survey is the technique used to gather information in most of the studies reviewed. The common method of data collection in such cases is to mail questionnaires to *all* students who graduated in a given year in a specified curricular area and to analyze the returns. The technique results in a self-selected sample, defined as those who returned the questionnaire. This sample, even if 50 percent of the questionnaires are returned, is biased. Although the survey methods may provide data of some value, a *truly random* sample of only 10 percent of the population with 90 or 95 percent return would produce more valid and meaningful information.

There is little indication that current research in the area of junior college curriculum results in program modification based upon research findings and recommendations. Emphasis should be given to doing research for the purpose of basing educational decisions on specific findings.

John E. Roueche
David M. Sims

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A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

INSTITUTIONAL STUDIES OF JUNIOR COLLEGE STUDENTS

Since it began operation in the summer of 1966, the Clearinghouse for Junior College Information has acquired approximately 1,000 documents, most of which are studies produced by junior college staff members and research offices. The collection includes a few studies done by state agencies, by consulting firms, or by university students and professors, and some journal articles, but the initial thrust of the Clearinghouse has been to bring the fugitive literature of the field under control.

This issue of *Junior College Research Review* presents a methodological critique and some suggestions for strengthening procedures in one area of institutional research.

Typically, studies of junior college students, some of which were summarized in *Junior College Research Review* (Vol. 1, Nos. 1 and 2), present data about students in the same institution in which the study was conducted. In the main, junior colleges confine their research efforts to their own institutions—a fact consistent with their commitment to teach rather than to dissipate their efforts in basic research. Thus, most reports of research in the Clearinghouse collection can be described with the following terms:

Report type:	"institutional research"
Research design:	"comparative study"
Sampling:	"population (no sample)"
Data collection:	"records search"
Analysis:	"interpretation of tables"
Data presentation:	"frequency counts" and "contingency tables"

The report-type term, "institutional research," is assigned because the study is often of relevance only to those involved in the programs of that particular junior college and is not of general interest to the field.

The design term, "comparative study," is assigned because, typically, the groups of subjects of the study are defined at the junior college and those groups do not have precise meaning anywhere else. For instance, students from XYZ junior college are sorted by "major" as defined at XYZ junior college, and the mean grade-point average (g.p.a.) for each group at one or more senior colleges is computed. "Major" is subject to widely varying interpretations—major in the junior college, declared intent to major in the senior institution, inference of major by course pattern, and so on. And interinstitutional comparison of grade-point averages is always a hazardous undertaking.

The sampling term, "population (no sample)," is assigned because the junior college investigator has, for the entire group of his study, the records he intends to use; he need not draw samples, random or otherwise, from that defined population of records (subjects).

The data-collection term, "records search," is assigned because the investigator usually goes to the registrar's grade records and copies out (either by clerical or electronic methods) the records for the subjects of his interest.

The analysis term, "interpretation of tables," is assigned because the document typically presents contingency tables of mean grade-point averages for students in different majors, and concludes: "The mean g.p.a. at the senior college is higher for some majors than it is for others." Variance (standard deviation) of the distributions or measure of association of variables (e.g., *phi*-coefficient) are rarely reported.

The data-presentation terms, "frequency counts," "contingency tables," are assigned because the investigator usually presents his data in those forms.

Researches of the type described above are useful to the individual institution, and are therefore worth continuing, for they lend data which is potentially of some use in program planning. But with a little more care, research could be addressed to questions more varied than "What is the mean g.p.a. of students from XYZ junior college at ABC senior college?"

Three suggestions are presented below:

1) A design term, "normative study," is used to describe studies that report on groups defined in the same way at more than one institution; normative studies permit comparisons between institutions.

At small extra effort, several junior colleges might agree on common coding and collection of data items (variables) in their respective searches. After each junior college has produced a comparative study in this manner, the comparative studies could be assembled to provide normative information.

2) Another question junior colleges may want to ask is: "How well did your training at our junior college prepare you for your present occupation?" This question, generally, must be asked of graduates not in school at the time the data is collected. The method of data collection often used in such studies is to mail questionnaires to all students who graduated in a given year in a given field and then analyze the returns; but this technique produces a self-selected sample—those who return the questionnaire are different, at least in that way, from those who do not. Such a sample, even if 50 percent of the questionnaires are returned, is biased. One gets more trustworthy information if he draws a truly random sample of 100 graduates and pursues nonrespondents until he has a 95 percent response than he gets when he mails 2,000 questionnaires and then simply counts the returns.

3) Junior colleges may want to ask questions about their students other than "How well are they doing (g.p.a.) here?" The records search as a technique of data collection is, in general, inadequate to answer those other types of questions. One study that might be valuable would seek to determine effect. It would ask, for example, "How well did you like *X* program at our junior college last summer?" This question could be asked of students still enrolled in the junior college. One technique for data collection from students still enrolled is presented below:

a) Compile a list of ten questions about the junior college and its programs worded so that a multiple-choice response is appropriate; assign each question a number.

b) Print the questions, one question per card, on the face of IBM cards that have bubbles for mark-sensing.

c) If the enrollment is 1,000, produce 100 cards for each of the ten questions.

d) Punch the question number and a random number into each of the 1,000 cards.

e) Order the 1,000 cards on the random-number field in an IBM card sorter. The questions are thus in random order, and it makes no difference which student gets which card.

f) Require each student to answer one question (mark the mark-sense bubble on one card) as part of his registration procedure.

g) Process mark-sense responses in an IBM 519 reproducing punch with mark-sense attachment.

h) Sort the cards on the question-number field so that all cards bearing the same question are in the same group.

i) Count the responses to each question on an IBM sorter with counter attachment.

Variations on this technique are possible; enough cards can be produced so that each student can answer one, two, or three questions. All cards can carry additional mark-sense bubbles in which the student indicates his sex, age, college status, or other data. Reports can show response to questions by students in categories or in combinations of categories. Because of the random assignment of items to respondents, the statistical assumptions are met which allow tests of significance on differences between group mean responses. Although only a few students have answered any one question, one can infer statistically that the mean response for the sample of students estimates the mean response for the entire population.

These suggestions point to ways that research in the junior colleges can provide more information—and more reliable information—at little extra cost to any junior college. Standardized data collection and random sampling do not force a junior college from its primary interest in its own operation. The results obtained, however, gain meaning for the institution which conducts the study and, just as important, provide data useful to the entire field.

Jack Thomson

Abstracts of all studies mentioned in *Junior College Research Review* may be obtained from the Clearinghouse on request. We will search the collection to fit your specialized need for information.

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IDENTIFIERS

607 VAN NUYS, CALIF., SCHOOL AND COLLEGE ABILITY TEST.

ABSTRACT

800 DURING A 3-SEMESTER PERIOD, STUDENTS WITH SCHOOL AND COLLEGE
801 ABILITY TEST SCORES BELOW THE 17TH PERCENTILE WERE ENROLLED ON
802 A VOLUNTARY BASIS IN SPECIAL CLASSES IN ENGLISH, SPEECH, AND
803 PSYCHOLOGY, PLUS ONE ELECTIVE. CONTROL GROUPS FOR COMPARISON
804 WERE SELECTED RANDOMLY FROM OTHER STUDENTS IN THE SAME SCAT GROUP.
805 MORALE IN THESE "THRESHOLD" CLASSES HAS BEEN REPORTED AS EXCELLENT,
806 THOUGH SOME STUDENTS HAVE SHOWN PATTERNS OF EXCESSIVE ABSENCE.
807 STANDARDIZED ACHIEVEMENT TESTS DO NOT SHOW SIGNIFICANT GAINS, BUT
808 THE AUTHOR NOTES THAT THESE DO NOT VALIDLY MEASURE ACHIEVEMENT OF
809 COURSE OBJECTIVES INVOLVED. BY THE BEGINNING OF THE FOURTH
810 SEMESTER AFTER ENTRANCE, 11.7 PERCENT OF THE "THRESHOLD" GROUP
811 AND 6.5 PERCENT OF THE CONTROL GROUP WERE STILL IN SCHOOL.
812 RELATIVELY FEW OF THE STUDY OR CONTROL GROUP ACHIEVED A 2.0
813 GRADE POINT AVERAGE. STUDENT SATISFACTION WITH THE PROGRAM SEEMS
814 GENERALLY GOOD. MOST WHO COMPLETED THE SEMESTER DID NOT CHANGE
815 THEIR OBJECTIVES, THOUGH THE AUTHOR COMMENTS THAT THOSE WHO DROPPED
816 FROM THE PROGRAM MAY HAVE REEVALUATED THEIR GOALS IN A REALISTIC
817 MANNER. THE AUTHOR CONCLUDES THAT, SINCE ONLY A FEW OF THESE
818 STUDENTS REMAIN IN SCHOOL 3 OR MORE SEMESTERS, THE COLLEGE MUST
819 RECOGNIZE AND SERVE THEIR EDUCATIONAL NEEDS WHILE THEY ARE IN
820 SCHOOL. (WO)
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Copies of Report Resumes for any document in the collection may be obtained on request.

EDUCATIONAL RESEARCH INFORMATION CENTER ERIC

Volume 1, Number 5

JUNIOR COLLEGE RESEARCH REVIEW

CLEARINGHOUSE FOR JUNIOR COLLEGE INFORMATION

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

EXPERIMENTAL PROGRAMS IN THE JUNIOR COLLEGE

Experimental programs and junior colleges with commitments to experimentation are currently expanding in number and scope (JC 660-464). This issue of *Junior College Research Review* examines twenty-nine studies made in attempts to define and validate experimental efforts in junior college curricula and in instructional procedures.

Sources: Sixteen of the documents reviewed here were research reports produced by various junior college staff members; seven were graduate seminar papers; four were position papers given at the Seminar on the Experimental Junior College in Palo Alto, California, in February, 1967; and one document was an Occasional Report from the UCLA Junior College Leadership Program (JC 660-464). A program design, presented at a Regional Conference of the Union for Research and Experimentation in Denver, Colorado, in December, 1966, is also included (JC 670-230).

Methodology: The studies included in this issue vary widely in purpose, content, and findings, but each falls into one of the following general categories: (1) a status study of experimental programs at other institutions; (2) a summary statement of rationale provided and procedures followed in the establishment of an experimental program; (3) an evaluation study of comparative instructional approaches; and (4) a controlled experimental research project.

Eight of the studies surveyed the field and reported on experimental programs in operation in junior colleges. Eight documents summarized institutional efforts and procedures which resulted in experimental programs in particular institutions. Seven documents presented research findings of experimental programs for low-ability junior college students. One document developed a conceptual model for an instructional quality control system (JC 670-211). Another study compared two groups of college students identified as "creative" (JC 670-125). Two studies were evaluation projects to determine the effectiveness of instructional television. Summaries of findings of two experimental programs are included – one determined the effectiveness of large classes in the teaching of writing skills (JC 660-101) and another evaluated a program in engineering and design data processing (JC 660-235).

Review: An experimental approach was used by Williamsport Area Community College in its evaluation of instructor-operated educational television (JC 660-236). The study was designed to measure the effectiveness of television as a method of teaching selected subjects in the electronics technology program. The two-year research period was designed to test the hypothesis that students learning by television would perform at a higher level than would comparable students learning in a face-to-face situation. The research project utilized two experimental groups and a control group. Every eight weeks, experimental groups were rotated between television and live instruction. No significant difference in students' learning of mathematics, slide-rule operation, general physics, and election theory was found.

Golden West College (JC 670-205) developed an audio-tutorial course in liberal-arts biology by following these methodological steps:

1) Defining each goal in measurable terms.
2) Establishing a hierarchy of goals for greatest emphasis in the course.
3) Determining the time to be given each unit, or goal.
4) Arranging units in sequence – weekly where possible.
5) Determining the best way to achieve the objective of each unit without regard to mechanics of budget, schedule, or staffing.
6) Assessing realistically the obstacles to established objectives, and finding ways to achieve the objectives within the limitations always inherent.
7) Recording tapes, writing and preparing workbooks and laboratory materials.
8) Securing from the director of institutional research an identification of the kinds of data which must be assembled to assure adequate evaluation of the program from its inception.

The Golden West report is of particular value because it spells out the steps involved in constructing courses designed to lead to specific, measurable outcomes. The study also provides a suggestion for continuous evaluation.

An experimental study to determine the effectiveness of teaching clinical nursing by closed-circuit television at Bronx Community College (JC 660-237) produced the following findings:

1) Closed-circuit television instruction provides for greater patient safety.
2) There is no measurable student resistance to teaching and learning via closed-circuit television.
3) Instructors are less positively inclined to TV because adapting to a new system of instruction necessitates modifications of teaching techniques.
4) The responses of hospital personnel (doctors, supervisors, head nurses, RN's, LPN's, nurse's aides, and ward clerks) indicates that they did not feel that closed-circuit television jeopardized normal hospital operation.

The Bronx study produced an interesting cost

analysis – teaching all students by closed-circuit television would permit a nursing class of 100 students and 10 clinical instructors to increase student capacity to 150 without increasing the instructional staff. Using a desired 10-1 student-teacher ratio, the instructor salaries saved in a single year would exceed the total cost of the closed-circuit television system.

The findings of an experimental project for low-ability students at Los Angeles City College (JC 660-045) resulted in a specific program alteration. Evidence gained from the experimental program demonstrated that although progress was made in raising the reading level of the students involved in the program, not enough progress could be realized in a semester or a year to enable the student to move into regular college classes with a reasonable chance of success. Since most of the low-ability students did not continue in the college for more than one academic year, it was decided to emphasize those things which would help the student to know himself and his potential better, to help him accept realistic vocational goals, and to help him become a better citizen. Based on specific research findings, the focus of the program for low-ability students was shifted from remediation to general education.

A research study to determine whether large classes are conducive to effective learning in the writing skills was recently completed at Indian River Junior College (JC 660-101). Although there was some variation in student preferences, the results of the pre-test and the post-test show that, given the same quality of instructors, program, and students involved in this experiment, class size up to 56 students is not a significant variable in the learning of writing skills.

Conclusions: Great interest in experimental programs is evidenced by the quantity of documents received on the subject. The Seminar, held at Palo Alto in February, 1967, and the National Conference on the Experimental Junior College, to be held at UCLA in July, 1967, are other indications of current levels of concern.

In his speech at the Seminar, John Lombardi said, "Innovation has become as important a concept among educators today as general education was a generation or so ago. An extension of the concept of innovation is the 'experimental' college or division which embraces a wider field than does innovation" (JC 670-231, p. 1). Yet, in the same paper, Dr. Lombardi emphasized that some colleges which are called "experimental" are experimental in name only, while others which are not considered experimental are, in fact, experimenting constantly.

However, few studies have been received that relate to "institutional experimentation" in the area of instructional improvement. More specifically, there has long been reluctance to examine the proposition that the effectiveness of an educational program must be measured in terms of the results accomplished. In 1963, B. Lamar Johnson found that "few junior colleges have initiated plans of appraisal and may be designated as 'islands of innovation' in evaluation" (JC 660-464, p. 13).

In a recent survey (JC 670-211) to determine the extent to which California junior colleges are attempting to assess the quality of their instructional system in a systematic fashion, the following were concluded:

1) California junior colleges name the improvement of the quality and effectiveness of instruction as the number-one priority item on their list of needs.

2) In no California junior college is the control of that quality a systematic enterprise based on examination of student changes following instruction.

3) In spite of the numbers of statements of need for improved instructional evaluation, little change or innovation in evaluation has taken place or is planned for the near future.

That paper also proposed a model for an instructional quality control system in the junior college – one which could be of value to those institutions choosing to assess results of their endeavors in terms of student change. There is need for more research and "experimentation" in this vital area.

John E. Roueche

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(continued on page 4)

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JC 660-222 _____	JC 670-116 _____	JC 670-208 _____	
JC 660-235 _____	JC 670-119 _____	JC 670-211 _____	
JC 660-236 _____	JC 670-120 _____	JC 670-228 _____	

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EDUCATIONAL RESEARCH INFORMATION CENTER ERIC

CLEARINGHOUSE FOR JUNIOR COLLEGE INFORMATION

JUNIOR COLLEGE RESEARCH REVIEW

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

CLASSROOM TESTING PRACTICES IN THE JUNIOR COLLEGE

For the junior college student, the part of the course which is a vital concern is also the part about which surprisingly little research has been done — the uses, administration, and evaluation of the classroom test. Students know that the test, in large measure, determines the grade. No matter how often they may be told to relax and enjoy a lecture or discussion for its own sake, they cannot obey. The test (or tests) must be faced. Experienced teachers capitalize on this student awareness of the importance of the test as motivation. A faculty axiom states, "When you want to be sure of their attention, mention the test."

Considering its importance, there is need for more information on the function of the classroom test in the junior college. The Clearinghouse has many accounts of the use of tests for screening and placement at registration; and there are follow-up studies of graduates. But there is not yet sufficient information on the testing of course content as a measure of learning.

Although most teachers would undoubtedly agree that they want to retain the right to do their own testing when and as they like, many of them would probably be interested in learning about the experiences of other teachers in situations comparable to their own. This is particularly true for many teachers who face large classes in which machine-graded testing would seem to be more efficient if it could be used to implement the purpose of the course. These teachers would welcome sound innovations separated from rumor and hunch — innovations suggested by their counterparts in other schools and adaptable in similar courses anywhere.

One such experience is recounted by an instructor at Riverside (Calif.) City College (JC 660-494). By the use of regular machine-graded class tests he is able to test comprehension and encourage students to keep up with reading assignments in a political science course. Data processing "remembers" previous performance, and scoring is on a cumulative basis. Item analysis is to him an aid in evaluation of test questions.

Item analysis also proved useful for tests given in eight large lecture classes, as reported in a pilot study by the Research Office of the Orange Coast Junior College District (JC 660-264). Item difficulty and discrimination and the power of incorrect answers to distract students were determined. In addition to the summary table for each course, the study included copies of the detailed reports to instructors.

Continued testing after placement in a program is a recommendation of the *Modesto Multi-occupational Project Research Report No. 3* (JC 670-019). The report also stresses the importance of the apparent or "face value" of a test in terms that the student can understand. Dealing specifically with the California Achievement Test, the report deals generally with testing, noting that there needs to be an obvious relationship between material on the test and the material which is being taught in the classroom.

Time as a factor causing anxiety is noted, with the recommendation that tests be untimed. Careful wording of the test and avoidance of clerical error are also important.

An institution with a continued interest in the test process is, of course, the Educational Testing Service, which reports that the standardized test is used more widely in initial placement than in teaching and evaluating within the classroom. According to a recent survey of 63 junior colleges (JC 660-296), locally constructed essay-type examinations are most popular. The respondents felt that published standardized tests have limited use because they do not relate closely enough to the content of a specific course. Data on the kinds of standardized tests used, the purposes of using each kind of test, the specific tests used, testing needs and problems, and attitudes toward testing are summarized in the report for both public and independent junior colleges. Among the conclusions was the need to support development of new tests to meet newly defined measurable objectives.

A part of the curriculum which has relied more on essays than on quick-score tests is English composition and literature. According to a survey conducted by the National Council of Teachers of English, *English in the Two-Year College* (JC 660-224), an essay examination is used for evaluation of students in 18 percent of the schools at the end of the first semester and in 14.4 percent at the end of the second.[1] However, standardized tests, as part of a departmental final, also aid in evaluation.

In a recent paper given at a professional meeting, Alan C. Purves, of the Educational Testing Service, pointed out the need for precision about what it is that teachers want students to do with literature before it is possible to test for achievement in the course (JC 670-399). He remarked that "the skills of classification, like the skills of recall and recognition, are easy to teach and easier to test," but the more difficult kind of testing is on the next order of behaviors. "Teachers want students to be willing to read good literature and to enjoy the literary experience . . . and curricular statements frequently refer to them as vague hopes rather than as specific outcomes of education in literature." He goes on to say that testing organizations *can* test for the achievements that teachers believe to be important.

Testing for important goals is difficult but worthwhile. Many junior college teachers have surely felt the disappointment of looking at tests which do not reflect the student interest that the teacher had felt was present during class. The brightest-looking, most responsive students missed questions which the instructor had thought were among the easiest, the most obvious, as he had made up the test.

However, once the test is looked upon as a way of measuring objectives clearly stated to the student in advance, the confusion begins to clear. The student has been notified as to course goals and objectives. He has been given specific instructions of what to look for, what is important. He can read with these emphases in view. The instructor recognizes as he constructs the test that not all questions test for the same things. Dif-

ferent questions test reading, attendance, application of terms, response, writing ability.

"Sampling," i.e., giving different questions to different students in order to test learning achieved by the class as a whole, can also be profitably undertaken.[2] Pretests illustrating course emphasis and item format may be helpful. What should *not* be a part of the test process is evaluation of the student's ability to outguess the instructor, though probably the students with the highest grades in college have always possessed that skill to some degree.

It seems likely that certain areas heretofore tested by essay examination alone can be tested by the imaginative construction of machine-scored tests — once the purpose of each part of the test is clearly designated. With tests an important part of the evaluation of both teacher and student and with grades so vital an evidence of success, there seems to be a clear-cut need for more interest in the construction of good tests and for better reporting of test practices in junior college classrooms.

Perhaps a reason for the relatively small number of studies of this problem is that both test and course material are faculty prerogatives, as junior college faculty do not typically report on their procedures. Nonetheless, some of these basic questions must be answered:

> Given the variety of course content and methods of instruction, is meaningful research possible?
>
> How often is testing done? Do some courses or subjects tend to have fewer tests than others?
>
> For what purpose are tests given?
>
> Is the giving of retests for poor performance a general practice?
>
> Are test questions mainly recall of content?
>
> What is the policy for allowing students to make up a test missed because of excused absence?
>
> How might experts in test construction aid teachers in designing more effective tests?
>
> Do tests really assess achievement of course goals?

These are potentially fruitful areas for research in the junior college.

Thelma C. Altshuler

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A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

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RESEARCH STUDIES OF THE JUNIOR COLLEGE DROPOUT

This issue of *Junior College Research Review* is devoted to research on students who drop out or withdraw from junior colleges before completing programs in which they were enrolled. Documents reviewed here were selected from materials received and processed at the Clearinghouse for Junior College Information. The Clearinghouse collects and disseminates research findings relevant to junior college operations. Other Clearinghouses operating in association with the United States Office of Education's ERIC project process research documents in different subject areas.

Sources and Methodology: Sixteen research reports relating to junior college dropouts are reviewed in this issue. All but one of these documents were produced as junior college institutional research studies. The methodological approach in most of these studies involved a survey of dropouts by means of a questionnaire.

Nine of the reports surveyed dropouts and determined reasons for student withdrawal from college. These reports did not make recommendations for program modifications based on specific findings. The remaining seven documents not only determined reasons for student attrition, but actually made specific recommendations for curricular and/or instructional modifications. In short, these research projects were designed and conducted for the purpose of reducing the dropout rate.

Review: Mira Costa College designed a research project so that "steps can be taken to provide methods for reducing the number of dropouts" (JC 670-408). This study attempted to determine the characteristics of those students who withdrew from Mira Costa College and to ascertain their reasons for withdrawing. A structured questionnaire was mailed to all students who dropped out during the fall semesters of 1963, 1964, and 1965. In addition, college records were surveyed to discern information regarding parental occupation and educational background.

This follow-up study revealed that the dropout rate was directly related to the unrealistic image of college life held by entering students. When these dropouts were compared with full-time freshmen on the American College Test composite, it was found that 50 percent of the dropouts were capable of succeeding in college in terms of ability, grades, and general achievement level. As a result of the study, Mira Costa College planned to increase emphasis on counseling so that each incoming student would be made aware of the relationship between his college goals and his aptitudes, interests, and prior high school and/or college record.

In its survey of students who withdrew during the spring semester of the 1965-66 school year, Orange Coast College found the college career of the withdrawing student terminated principally because of the following reasons: (1) finances, (2) health, (3) personal problems, and (4) academic deficiencies (JC 670-388). At Orange Coast, 94 percent of the students who terminated their college careers by dropping out indicated that they were planning to return to college. Of this figure, 58 percent planned to return to junior college.

Shasta College conducted a dropout survey for the purpose of determining what guidance practices, if any, should be modified or instituted to reduce the dropout rate (JC 670-005). The students participating in the Shasta study did not reveal any particular characteristic which would identify them as being different from other students attending the college. No evidence was brought to light which would support the view that probationary status and/or overall grade-point average have any significant influence on the dropout rate. No accurate generalization could be made from this study to indicate why students drop out of the college, but in most instances the reasons given by the respondents were those over which the college has little control. Recommendations of modifications needed in the guidance program concluded the report.

Riverside City College conducted an experiment to determine the effect of three different "drop policies" on the retention of students (JC 660-490). During the 1962-63 school year, the period during which all courses could be dropped without penalty (i.e., course would not appear on permanent record) was six weeks from the beginning of the semester. Courses dropped after the sixth week were assigned WS, WD, or WF grades by the instructors, depending upon the student's progress in the individual course up to the time of withdrawal.

For the 1963-64 school year the six-week drop period was retained, but students who dropped individual courses after the sixth week were normally given F grades in that course. Under certain circumstances, instructors were permitted to assign WS, WD, or WF grades.

During the 1964-65 school year some of the courses had a three-week drop period while others had an eight-week drop period. Dropping a class

after either deadline would result in a WF grade for the course except under special circumstances.

The study did not consider the merits of each plan except in terms of the effect on student drop-out rates. Retention of students was best under the six-week drop period that did not penalize students (mandatory F or WF grade) for dropping courses or being dropped by the instructor after the drop period. The study recommended that Riverside City College adopt the 1962-63 drop policy as the college's official statement regarding withdrawals, for the following reasons:

1. There was a higher percent retention of students who completed the semester.
2. There were fewer W and F grades given in 1962-63 than in the other two years.
3. There were fewer "No Penalty Drops" during 1962-63 than in the other two years.

South Georgia College is another institution which, as a result of research findings, developed a program to reduce student attrition (JC 670-432). In 1963, the college established a policy that permitted students with marginal academic potential, as measured by their Scholastic Aptitude Test (SAT) scores and/or high school averages (HSA's), to attend summer school on a trial basis. These on-trial students who could meet certain minimum grade requirements in summer school thus became eligible to enter classes in the fall quarter as regular students. Follow-up studies of the students who did well enough in the summer-on-trial program to be admitted to regular classes indicated, however, that only a small proportion persisted through even their freshman year. Much time, effort, and money were spent on students who seldom succeeded in regular college classes.

Using *The College Inventory of Academic Adjustment* (available from Consulting Psychologists Press, Inc., 577 College Avenue, Palo Alto, Calif.), a study was conducted to determine whether there were significant *nonintellective* differences between on-trial students who did well enough in their summer programs to be admitted to the regular fall classes and who persisted through the freshman year, as compared to the on-trial students who did well enough in their programs to be admitted to regular classes but who did *not* persist through the freshman year. The findings of that investigation indicated that, although there were no significant differences between the persisters and the others on the usual intellective predictors of academic performance (e.g., HSA, SAT), there were relevant nonintellective differences. More important, those differences appeared very early in the students' college careers.

The study recommended that in the future *The College Inventory of Academic Adjustment* be given very early in the fall quarter to students who succeed in summer-on-trial programs. This recommendation would enable student personnel workers at South Georgia College to identify probable dropouts and offer them counseling before the students withdrew from the college. The study suggested that such a procedure would lessen the high rate of attrition which had been characteristic of summer-on-trial students in their freshman year.

That vocational courses serve as "dumping grounds" for students who cannot hope to pursue a "college" curriculum is a commonly held opinion which may be based on fact according to practices in some institutions. However, although the evidence concerning characteristics of vocational students is sketchy, a recent investigation at the School of Education, University of California, Berkeley (JC 660-271), found that students enrolled in vocational programs are *not* simply individuals who have been unsuccessful in other courses or students who have been judged unable to complete an academic course of study. In brief, vocational students are typically not "dropouts" of more sophisticated curricula. They are different from those junior college students who enroll in nonvocational programs. The findings of this study have broad implications for junior college counseling programs.

Summary: Thornton indicates that data from issues of the *Junior College Directory* show that over 50 percent of freshmen students leave at the end of the first year in college. While some of these students transfer to other colleges at the end of one or two semesters, it is generally known that as many as 10 percent drop out between fall registration and Christmas vacation (James W. Thornton, Jr., *The Community Junior College*, 2nd Ed., John Wiley & Sons, pp. 155-156).

Although most community junior colleges are concerned about the high proportion of entering students who withdraw without completing their objectives, relatively few studies are reported that relate to the *reasons* for dropouts or withdrawals or that suggest procedures by means of which attrition rates may be reduced.

From the research reviewed here, the following may be concluded:

1. Academic ability scores (HSA's and S.AT scores) appear to be of no value in predicting junior college dropouts.
2. There are certain nonintellective differences between students who persist and those who drop out. These differences can be used to identify potential dropouts and should be given special consideration by student personnel workers.

While most of the studies focus attention on reasons for student attrition, little research has been implemented that evaluates the accomplishments of students who leave the junior college prior to earning a degree or completing a program of instruction. This group, representing the overwhelming majority of junior college students, has not yet been the subject of major junior college institutional research efforts.

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THE JUNIOR COLLEGE REMEDIAL PROGRAM

Most states have legislation that requires public junior colleges to admit high school graduates and all other persons over eighteen who can profit from the instruction. This "open door" admission policy results in many problems, not the least of which are those that relate to subject offerings and instruction. The wide divergence among entering students (in terms of previous educational experiences) requires particular concern and attention as to the types and kinds of subject matter which junior colleges should offer.

One of the least-publicized functions of the junior college is that of remedial instruction. This issue of *Junior College Research Review* examines twenty studies made in efforts to evaluate remedial programs.

Sources and Methodology: Fourteen of the studies reviewed were produced in a junior college. There were also four seminar papers, a journal article and a report from a State Department of Education. Eleven of the documents reported on the results of experimental programs for remedial students. Five were follow-up studies of students enrolled in remedial programs while four documents surveyed remedial programs at the state or national level.

In addition to evaluating remedial programs, fourteen of the studies made recommendations for program modifications based on specific research findings. In these cases institutional research served as the vehicle for curricular change.

Review: For the past decade junior colleges have been wrestling with the problem of how best to meet the needs of students with low ability. Having expressed genuine concern about the need for providing courses and curricula for students with low ability, the Curriculum Commission of the American Association of Junior Colleges in 1962 authorized a national investigation of the practices which junior colleges followed regarding the curricular offerings for students with low ability (JC 670-265). The study also surveyed the views of junior college administrators regarding possible solutions. On the basis of that investigation, the following conclusions were made:

1) Ninety-one percent of the junior colleges followed an "open door" policy for all high school graduates and for all persons eighteen and over who could profit from the instruction.
2) Junior colleges indicated that an increasing proportion of their full-time student body were students with low ability.
3) The remedial function is accepted by junior college administrators as a legitimate function of these institutions. Junior college administrators consistently supported a policy of educational opportunity for all.

A statewide survey of "Remedial English Instruction in California Public Junior Colleges" found that remedial English classes in the California public junior colleges were not sufficiently effective (JC 660-186). This study noted various factors that contributed to ineffectual remedial English classes including: (a) vague objectives; (b) outdated and superficial course outlines; (c) questionable placement procedures; (d) inadequately trained and/or unenthusiastic teachers; (e) high percentage of student failures; and (f) insufficient experimentation.

The California study concluded with strong recommendations emphasizing that remedial English instruction must be improved on the basis of research findings rather than on intuitive bases. Specific recommendations included:

1) *Teachers' Experience, Training and Preferences*

   No inexperienced teacher, unless he has received training for remedial work, should be assigned to teach a remedial class his first year. It is ironic that inexperienced teachers are often considered to be unprepared to serve on major committees, yet they are given some of the most difficult teaching assignments. No teacher should be assigned to teach a remedial English class who prefers not to do so, or who is only somewhat interested. It is sheer folly to expect unenthusiastic teachers to motivate students who are noted for their lack of motivation. Teachers must motivate students toward a desire to learn, and teachers cannot do this if they themselves are not enthusiastic.

2) *Objectives*

   Objectives should be meaningful and stated with clarity and completeness. To insure this, teachers should study current literature on how to prepare objectives. Before formulating any statements about objectives, teachers should ask themselves these questions:

   a) Does the statement describe what the learner will be doing when he is demonstrating that he has reached the objective?

b) Does the statement describe the important conditions under which the learner will be expected to demonstrate his competence?

c) Does the statement indicate how the learner will be evaluated?

d) Does the statement describe *at least* the lower limits of acceptable performance?

3) *Additional Research*

There is need to know more about the remedial English student, proper placement procedures, and methods and materials to use in order that the current mélange of indecisions and courses organized in haphazard fashion be avoided. More research on a mass basis must be conducted so that the findings stated here might be corroborated or refuted. More research would also put teachers in a position to operate on positive, informed bases. It makes more sense to research our way into improving the study of remedial English than to guess or argue our way into it (JC 660-186).

The study was significant in that it represented a statewide effort to improve a specific remedial program. The recommendations concluding the report strongly suggested areas of improvement, especially in light of the fact that 70 percent of the entering freshmen in California public junior colleges failed to qualify for English 1A (or equivalent transfer course). Simply stated, many students failed to complete the remedial course and dropped out before entering specific curricular programs.

That junior college remedial programs fail to remediate was also evidenced by a recent study made at Los Angeles City College (JC 660-045). The college found that most of its low-ability students did not persist in college for more than one year. The remedial courses were not remediating; thus, the emphasis was shifted to general education. Based on specific research findings, emphasis and content of the remedial program were changed.

A programmed method of instruction in English A (a remedial course) was recently introduced in the San Diego Junior Colleges (JC 670-412). A pilot study was conducted to gain some indication of the relative performance of students receiving programmed instruction. The general plan was to administer final examinations to experimental and control groups and to analyze the results.

The study sample was selected from students enrolled in English A at Mesa College during the Fall, 1966, semester. The experimental group consisted of 58 students receiving programmed instruction, and a matched control group of 58 enrollees not taught by the programmed method. The final examinations were chosen to serve as dependent variables. One type of test was designed primarily for the programmed group while another test was selected for its appropriateness for the group not taught by the programmed method. At the end of the semester each group took both tests and the results were compared by applying significance tests to observed differences in the means. The results of this study supported the hypothesis that students in English A receiving programmed instruction would obtain significantly higher scores on the final examinations than those enrollees not taught by the programmed method.

At Pasadena City College a creative problem-solving approach to learning was used in a remedial course to assist students in preparing for college transfer courses (JC 660-381). This was done by attempting to discover ar develop potential by remedying deficiencies in personal-social development, logical reasoning, and critical and creative thinking.

The course was established according to an empirical model, with specific objectives, procedures, and evaluation included. The classification of teaching objectives and learning activities into a taxonomy, supported by current research, and evaluation at each level of the taxonomy in operationally stated criteria, furnished a model for curriculum development.

Summary: Since the mid 1950's there has been evidence of a growing concern in junior colleges with the low-ability student. Rapidly increasing enrollments in recent years have served to emphasize the problem. Indeed, discussion has ensued as to whether or not the junior college has an obligation to provide special education for the low achiever. With pressures from society to lengthen the educational experience of all students, the low-ability student has become conspicuous in junior colleges.

In keeping with their commitment to the "open door," junior college administrators have recognized the problem and created remedial programs. On the basis of current research, the following may be concluded:

1) Students in low-ability groups are primarily identified by test scores (SAT and SCAT) in the 12-10 percentile range and below.

2) Various devices are used to keep the students in the low-ability groups together for the duration of their experiences at the junior college.

3) Academic courses offered generally show an emphasis on communications skills—English and speech, for example—along with auxiliary work in remedial reading.

4) Special attention is given in all reports to the selection of teachers for the low achiever. It is generally recognized that such assignments require special teaching traits including broad understanding of students' problems and certain communicative abilities not common to all in the teaching profession.

Results coming from remedial programs which have been in existence for a number of years reflect a less than optimistic view as to the students' subsequent educational accomplishments. There are many reasons for this, the primary ones being a lack of certainty as to what the programs' basic goal should be: Is it to remediate the student for advanced college work? Is it to help the student achieve vocational competence? Is it merely to expose the low achiever to the benefits of general education? Is it some sort of general "holding" action? At this time no definite answers are available and perhaps none should be expected. One thing is certain: research is needed to evaluate these programs, no matter what the objectives might be.

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TIME FOR INSTRUCTIONAL RESEARCH

With the community junior college's emphasis on instruction, one would assume that the literature would be rich with research on instructional treatments and their differential effects. This is not the case. There is some comfort, however, in the relative absence of such research at other educational levels and institutions. The relative lack of research on instructional methodologies, specifically at the college level, is clearly illustrated in the chapter by McKeachie in Gage's *Handbook of Research on Teaching.*[1]

Although the author (McKeachie) cites some 228 different articles, studies, and experiments since 1913, he states: "Thus the simple principle that knowledge of results facilitates learning is one of the few generalizations clearly supported by research on college teaching." [2] It is also interesting to note that whatever the other generalizations making up the "few" might be, they are not identified in this excellent review and analysis of instructional research literature.

Throughout the chapter comments are included which suggest that the approval and recognition needs of the instructor may have an important bearing on the conduct of instructional research and its interpretations. This is clearly identified in his closing paragraph, which states, "Enjoyment of teaching is important not only for the enthusiasm which the professor communicates to his students but also for his interest in continued improvement. There are important values which are likely to be lost if teaching becomes so routinized and depersonalized that it is no longer fun. The motivated teacher can respond to feedback from his students so as to achieve better and better approximations to optimal solutions to the problems of teaching. As additional information from research accumulates, as better conceptualizations emerge, he should be able to do an even better job." [3] This paragraph emphasizes a strong concern for the instructor and an indication that better ideas and research findings will help him.

The relative paucity of studies on instructional effectiveness is surprising when one considers that schools in general, and the community junior college in particular, are primary laboratories of formal human learning. There are a number of possible explanations. There is, for example, a general assumption that research is badly needed but that someone else is, can, or should do it. Too, instructors are often reluctant to "do research" because the conditions for "good" research cannot be met and their data will be cannibalized by critics.

Schools are, however, much like hospitals—both being characterized by the diagnosis, treatment, and evaluation of human needs, one for health and the other for education. Schools differ from hospitals in that every student gets essentially the same treatment method (lecture/textbook), and treatment failures are explained largely on the basis of student (patient) inadequacies. This is a little like saying that our treatments are fine but we keep getting the wrong patients (students). If medical men had failed to persistently study and evaluate their treatments for disease, "bleeding" could have persisted as a standard treatment routine.

Review: The Clearinghouse collection includes a few documents which consider instructional treatments. Some of these (JC 670-312, JC 670-314, JC 670-315, JC 670-316) are excellent discursive reports on major innovative activities but do not include any specific information on comparative student learning. Other papers report correlations between selected "predictor variables" and course grades, but the conclusions generally recommend changing prerequisites, admissions requirements, or the introduction of a new or modified course content. One of these (JC 660-045) does, however, conclude that there was "an implication that these students might profit from learning by oral communication—lectures, discussions, audio-visuals, etc." The statement that a different instructional treatment might produce different results is one of a few apparent recognitions that learning might be improved by improving instructional methodologies.

In one report on Closed-Circuit Television (JC 660-002) the development of a plan for studying its value in producing learning in comparison to other techniques occurred too late to gather useful data on student learning. Although an experimental design (control group) was established, the data collected and reported concerned only student reactions.

Another study of CCTV (JC 660-236) demonstrated that while students reacted somewhat negatively to CCTV in comparison to a live instructor, they learned just as much. Still another study on CCTV (seemingly the most popular medium of research) stated, "In conclusion this study has demonstrated that one clinical instructor using closed-circuit TV and audio equipment can teach *fifteen* students (nursing) just as effectively as his counterpart, using more conventional methods of instruction, can teach *ten* students (JC 660-261)." The importance of examining student learning needs emphasis. The institution's purpose, after all, is to produce learning and, hopefully, in a well-defined direction.

Most of the research studies are reasonably designed and interpreted. One investigates the relative success of teaching writing to larger (56 students) and smaller (28 students) classes (JC 660-101). It concluded that, "...class size up to 56 does not seem to be a significant variable in the learning of writing skills." This finding generally confirms the conclusion of McKeachie,[4] who states, "To sum up: large lecture classes are not generally inferior to smaller lecture classes if one uses traditional achievement tests as a criterion."

Another potentially valuable study, (JC 660-219) conducted over a period of several years, started with a sound research design but grew more and more complex each term, making evaluation more and more difficult. During the first year, the investigator found that the School Mathematics Study Group Programmed First Course in Algebra (Revised Form H) used by students in independent study produced achievement equal to that obtained from using a standard text with teacher-led discussion and lecture approaches. From that point forward, however, evaluation devices were changed, treatments modified, and data collection procedures varied until, in the words of the author, "The lack of design in this experiment was obvious — making it difficult to locate data after the facts which could be used to analyze what difference there was between the two methods of instruction." Here, educators (the author of that report and his colleagues) are shown to be honestly critical of an important piece of research. The staff admitted that with a sample of students, an interested and supportive faculty, and a desire to test, evaluate, and improve instruction, their results must be viewed with skepticism because of research design limitations. Rather than being criticized, educators with this exceptional caliber of courage and conviction should be recognized and encouraged.

One study (JC 670-292) utilized three different approaches in teaching a two-hour unit of one course. The results *suggested* that lectures, in teaching students about data-processing equipment, were about as effective as letting them get "hands on" experience with the equipment and possibly better than using overhead transparencies. This particular study was designed and conducted by an instructor with multiple sections of the same course, and suggests what instructors with multiple sections may accomplish.

Future Direction: In any review of research, one can hardly resist feeling a bit disappointed at junior colleges' limited efforts and results in evaluating their instructional diagnosis and treatments. Yet, there are numerous reasons to feel optimistic about the future. The Office of Education is funding more research with more rigid requirements. Faculty members are showing increasing concern and activity in studying the effectiveness of their practices in achieving learning. Private foundations supporting instructional research seems increasingly likely. A simple tabulation, by year of publication, of the materials cited in McKeachie's review shows 30 studies before 1940, only 13 from the Forties, 61 in the first five years of the Fifties, 106 from 1955 to 1959, and 17 in 1960 alone. While McKeachie did not choose articles to reflect their quantity by year or period, his work does suggest that efforts to study instructional approaches are increasing. Perhaps this growing activity reflects awareness and acceptance of the idea that research on the effectiveness of instruction is as fundamental to education as the assessment of prescriptions are to medicine.

And beyond these general "signs" of interest, it is increasingly evident that most sectors of the community are becoming concerned with the consequences of formal education. The evolution of human values, attitudes, capabilities, etc., is a complex process. Educational institutions, quite correctly, cannot be held solely responsible for crime, mental illness, and immorality — but then, neither can the police, physicians, ministers, or even parents.

Education can, however, be held responsible for utilizing the best possible instructional practices to achieve student learning. To achieve that improvement we must have research data from studies which observe basic design features. For example, there is a widely felt need for research data on the value of programmed materials. Surveys of previous studies help in the interpretation of their potential values and limitations, but what about research by and for the individual college, department, or faculty member?

First, perhaps, research should be encouraged by softening academic appraisals of research designs, and by enhancing appreciation of research efforts. The assessment of the values of programmed material in one unit of one course in one college, for example, produces information of value to those learners, however few. Making the conditions of the study, the data obtained, the statistical treatments used, and the findings known to others, however, allows repetition, replication, and modification until some generalized conclusion about the use of the material in that course can be made. The accumulation of similar data in other courses will eventually permit broader generalization and understandings.

To that end, instructional research should be encouraged that:

a. Compares the effect of specific instructional methods among groups of students differing in prior knowledge, entrance test scores, prior school grades, etc.

b. Compares the relative effect of differing instructional methods on groups of students with similar characteristics.

In addition, junior colleges should:

a. Utilize the counsel and guidance of faculty in mathematics, psychology, statistics, counseling, etc., who may provide helpful suggestions on study design, data collection techniques, data treatment procedures, and appropriate interpretations of findings.

b. Publish such findings or distribute them through the Clearinghouse, noting experimental limitations and cautions about interpretive generalizations.

The use of the professional staff or senior institutions, specialists from the Office of Education, and other external resources will substantially enhance research potential and productivity.

Finally, there is a widely communicated conviction among junior college administrators that they have instruction equal to, if not better than, that in senior colleges and universities. This view is held because "the junior college faculty is not hired to do research." To confirm this opinion, the faculty *should be hired to do research — research on instructional effectiveness,* as opposed to research in an academic discipline.

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FOOTNOTES

[1]W. J. McKeachie, "Research on Teaching at the College and University Level," in N. L. Gage, *Handbook of Research on Teaching* (Chicago: Rand McNally, 1963), Chap. 23, pp. 1118-1172.

[2]*Ibid.*, p. 1155.

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JUNIOR COLLEGE RESEARCH REVIEW

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

Published by the American Association of Junior Colleges

ENTRANCE AND PLACEMENT TESTING

The 1967 Junior College Directory gives the 1966 fall enrollment for junior colleges as 1,464,099; the total number of schools for early 1967 is 837. Each of these students will find his education directed to some degree by standardized tests. Due to the junior college's unique position and the diversity of its curricula, few tests are directly applicable since most published standardized tests were developed for the high school and four-year college (JC 660-269).

Standardized test information relating to junior college students is not widely available. The Clearinghouse for Junior College Information currently has twenty-one documents that deal specifically with test findings. Most of these documents are tabulations of student performance on standardized tests. A few deal with specific uses of standardized tests and relationships between standardized tests and curricular objectives.

Review: Interviews by Educational Testing Service reflect faculty and student interests in standardized tests (JC 660-205). To obtain information concerning faculty and student interest, staff members of sixty-three sampled junior colleges were requested to characterize their faculty and students in one of three categories descriptive of interest in obtaining test information; eager, some interest or little interest. Twenty-one percent of the schools reported students as "eager"; faculty in 56 percent and students in 24 percent of the cases were described as having "some interest"; that faculty and students had "little interest" was reported by 22 percent. Information on 22 percent of the junior colleges was not ascertainable.

Relationships between standardized tests and junior college achievement have been investigated by the American College Testing Program and the Educational Testing Service. American College Testing (ACT) data (JC 660-090), obtained from eighty-five junior colleges, were shown to have a significant positive relationship to freshman grades. A median correlation of .64 was found with overall freshman grades. Median correlations for English, mathematics, social studies, and natural science were .62, .57, .61, and .61, respectively. These data indicate that, on the average, approximately 41 percent of the variance in freshman grades can be accounted for by performance on the ACT. The predictability of ACT varied from school to school and was found to be related to two factors, "Conventionalism," and "High Cost." High proportions of full-time students and faculty members, a long period of establishment, and a traditional academic orientation characterize the factor "Conventionalism." "High Cost" is indicative of high tuition charge. Tests administered at schools high on "Conventionalism" and low on "High Cost" had high predictability. Low "Conventionalism" and high "High Cost" were associated with low predictability.

A sample of 2,423 students who were tested with the Preliminary Scholastic Aptitude Test (PSAT) in 1960 were later studied by Educational Testing Service (JC 660-295). Of the total sample, 608 students spent their first college year at one of sixty-seven two-year institutions, an institution classified as a Type I college (two-year institution) in the Education Directory, 1961-1962. Each student was classified at the end of his first year as in "good standing" or in "academic difficulty," meaning academic probation. In general, there were greater proportions of students in "good standing" who scored high on the PSAT-Verbal; only 32 percent of the students in academic difficulty scored 40 or better.

The College of San Mateo has examined some specific relationships between entrance tests, the *School and College Ability Tests* (SCAT) and *Cooperative English* [Placement] *Tests,* and student achievement (JC 660-083). Using the first two hundred students on test records for the Spring of 1965 as a sample, the following findings were reported: (1) For the percentile range of 95 to 99 (both tests included), there was *no relationship* with grades requiring verbal skill; superior grades were most often obtained by

students in the percentile range of 85 to 95. (2) Failure of students with high verbal aptitude in social science classes was negligible. (3) In a comparison of high verbal aptitude students with "average" students, little difference was noted in the frequency of failure in English 1A and foreign language classes. San Mateo, on the bases of their data, concluded that "verbal aptitude as measured by SCAT and the *Cooperative English* [Placement] *Tests* does not generally predict outstanding performance, especially not in those areas most demanding in verbal skills—namely English and foreign languages."

Little usefulness in predicting English 1 grades from SCAT scores was reported in a study by Los Angeles City College, California. The study (JC 660-055) sampled fifty-eight remedial English and 128 English 1 students. No usefulness was found in predicting remedial English grades. There was a significant positive relationship, a correlation of .52, between remedial English grades and scores on the English Expression: *Cooperative English Tests*. Another standardized test reported as useful with remedial placement as well as all entering students, is the New Purdue Placement Test (JC 670-153).

Often standardized test scores are combined with high school grade-point averages for increased accuracy in predicting college achievement. Garland Junior College, Boston, devised a formula which, for their curriculum, rather accurately predicted first semester grade-point averages for 101 sampled students (JC 660-149). Seventy-three percent of the averages were predicted with an error of .5 of a grade-point average or less. The formula resulted from a correlation study and involves Scholastic Aptitude Verbal and Mathematical scores, each multiplied by an empirically determined constant.

Seldom incorporated by junior colleges is the use of standardized tests for student evaluation. Yuba College, California, uses pre- and post-testing to assess student changes during the two years (JC 670-464). Initially the students are tested with the ACT. The post-test, required for graduation, is the General Education Test. Performance on both tests is recorded in average standard scores for English, mathematics, social studies, natural science and a composite of all subjects. Also listed are percentile rank equivalents of the standard scores for several comparison groups. This organization of data provides information concerning changes in students at Yuba College, how freshmen of a given year compare with the average Yuba freshmen, and how Yuba students compare with a national group and groups at other schools.

Harcum Junior College, Pennsylvania, evaluated a transfer curriculum via a pre- and post-test design (JC 670-512). Academic abilities and achievements of forty-three students were measured with the SCAT and *Sequential Tests of Educational Progress* (STEP). Forms 1A of both tests were administered during freshman orientation week. One month before graduation, alternate forms 1B were administered. A method to improve score reliability in repeated testing situations, based on norms of the tests, was used in recording test performances. After noting percentile changes, compared with test norms, a conclusion of consistent educational progress in a two-year transfer curriculum was made.

Summary: The studies reviewed here represent attempts to use standardized tests for various purposes. As such, they are valuable points of beginning. Generally speaking, however, there are few standardized tests designed to meet the multiple needs of community colleges and a lack of specific data to afford full use of tests that are available. Greater specificity and usage could be obtained with the following: (1) profiles, graphical and statistical, describing test performance of clearly characterized groups; (2) relationships of given tests to designated curricular objectives; (3) methods for formulating or revising objectives on the basis of test results; and (4) designs and data procedures that allow for statistical statements.

Such information would eliminate much ambiguity from standardized testing. If test results are given for clearly characterized groups, the results can be more appropriately generalized to other groups with the same characteristics. Age and sex are needed descriptors, but results are more useful if other demographic and historical descriptions are given. Descriptions could also include performances on tests that measure factors other than the one in question. When a test score is reported as an indication of meeting an objective, often, the relationship between the test items and the objective is not explained, and the test usage is left with little support. This is particularly true of generalized objectives: for example, "to meet the needs of low-achieving students." Lack of objective-test relationships also limits the amount of instructional direction test scores give. Finally, when small differences in test scores are reported, as might be the case in a pre- and post-test situation, the importance of the difference is ambiguous unless statistical significance is reported.

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

THE PREPARATION AND CHARACTERISTICS OF JUNIOR COLLEGE TEACHERS

Much has been written in recent years about the importance of teaching in the community college; however, little research has been completed on those who actually teach in the junior college. This issue of *Junior College Research Review* examines research on the characteristics and educational backgrounds of junior college teachers. Documents reviewed here were selected from materials received and processed at the Clearinghouse for Junior College Information. Through the ERIC publication, *Research in Education*, the Clearinghouse announces research documents relevant to all aspects of the junior college. Other Clearinghouses in the ERIC system process research documents in different subject areas.

Review

The task of preparing superior teachers for junior colleges is described by Gleazer as "formidable, but not insurmountable" (JC 660 468). It is a task, he says, "which must be shared alike by the universities and the junior colleges....The immense academic and research resources of the universities must be pooled with the 'laboratory' resources of the junior college. And this 'mix' is possible only if the junior college administrator pays more than lip service to providing a viable 'climate for teaching,' and only if the university displays more than a fainthearted approach toward developing programs which are rigorous and realistic."

The kind of teacher that hopefully would be produced by such a coalition is a teacher with strong academic and teaching ability combined with strong guidance ability, proficient in teaching general education courses as well as specialized fields. The importance of classroom teaching as the primary responsibility of the junior college instructor was reiterated.

To achieve maximum effectiveness with minimum frustration and disappointment, junior college faculties must be oriented and reoriented to the nature and diverse purposes of junior colleges as "open-door" institutions. Indeed, without the adequate development of such understanding, the faculties may steer the junior colleges on a course away from their stated goals.

Acting on the premise that "teaching is an organic process, an interchange between student and teacher that alters both partners in the relationship," Sarah Lawrence College (JC 670 598) has designed a graduate program to prepare teachers for junior colleges. This program is designed to create situations in which a prospective teacher will examine his own learning values as integral aspects of his graduate education. The program seeks to achieve four objectives:

1. Competence in the discipline the student prepares to teach.
2. Mastery of significant relations between that field and others.
3. Understanding of the developmental needs of students in the early college years.
4. Consideration of ways in which the subject may serve this need.

From interviews with more than 650 teachers, deans, and other junior college personnel (JC 670 130), Garrison concluded that junior college teachers see themselves as student-centered rather than as subject-centered. They tend to accept the variations in ability and purpose, often extreme, among their students and work willingly with such heterogeneous groups.

Desirable teacher characteristics include articulateness, a capacity to explain and put across the point, and a willingness to work with all kinds and levels of student questions. The desirable junior college teacher was described as one who convinces the student not only that he knows what he is talking about but that he is eager to talk about it.

There was a tendency to see the Ph.D. as a respected research degree but representing a degree of narrow specialization not well suited to junior college teaching. Junior college teachers felt the need for more preparation to teach survey courses. A strong baccalaurate followed by a broadly based, academically oriented master's degree with some supervised junior college teaching experience and professional course work clearly related to the nature of junior college teaching and students was proposed as a pattern of junior college teacher preparation.

A Status Study on English Instruction in the Two-Year College by the National Council of Teachers of English and the Conference on College Composition and Communication (JC 660 387) produced the following conclusions:

> The report shows that beset as these junior college English teachers are by innumerable instructional problems, many of them nevertheless retain an aloofness and a disdain for professional studies, studies which could save them from being fumbling amateurs and convert them into proficient

teachers of the poorly prepared. The need for bridging the gap between subject matter respectability and professional training is evident. Too many of these teachers cannot realistically face the need to adjust their subject matter specialty to the conditions peculiar to the two-year college.

A Florida study of public junior college teachers pinpointed a number of facts about the faculty in that state (JC 660 455). Fifty percent of the Florida teachers stated that they had taught in four-year colleges; almost 70 percent indicated that they had one or more years of elementary or secondary school experience. Twelve percent held doctor's degrees. An additional 77 percent held master's degrees. The sources of recruitment in Florida are very similar to those found in national investigations, with approximately one-third of the teachers coming from high school teaching; approximately one-fifth coming from college and university teaching; almost an additional third coming from graduate schools; and smaller numbers coming from business occupations and other related areas.

A statewide survey of the training and work of California public junior college teaching of English (JC 660 020) produced the following data on 785 teachers assigned one or more English courses:

1. Approximately 73 percent of the teachers assigned one or more courses had an M.A. in English, approximately 4 percent had a Ph.D. in English, and approximately 4 percent had neither majored nor minored in English.
2. Approximately 44 percent had taken an advanced course in grammar, and 50 percent had taken an advanced course in composition.
3. Twenty-seven percent had published articles, stories, or books.
4. Seventeen percent had engaged in supervised teaching in junior college, and approximately 4 percent had held internships in junior college.
5. Almost 97 percent of these teachers were considered to be adequately prepared by their Deans of Instruction. However, this finding appears to be definitely contradicted by the fact that approximately 50 percent of these same Deans later indicated that English teachers were not adequately prepared to teach grammar and composition.

This California study concluded that the background and training of California public junior college teachers of English were inadequate. The report recommended that aside from broad experience and knowledge about his subject, the junior college English teacher should be knowledgeable about the junior college and the junior college student.

In support of the thesis that similarities between community college and university teachers outweigh real or imagined differences, data from a study (JC 670 259) of new faculty members in public and private two-year colleges by Siehr were compared with data from a study of new university faculty members by McCall, Jamrich, and Hereford. The two groups were found to be similar in age, marital status, previous professional experience, and in the matching of teaching assignments to the educational qualifications of faculty.

The similarity between the two groups was less marked in the area of educational preparation, where 27 percent of the colleges and university teachers held the doctorate, as compared to only 7.2 percent of the community college personnel.

The study concluded that community college faculties are adequately trained and competent to fulfill their community college roles. An ideal faculty would contain a proper balance of specialists, generalists and student-centered teachers. It was pointed out that there is no empirical evidence to show that junior colleges do not now have such facilities.

Summary

Adequate preparation of junior college teachers requires the cooperation of universities as academic and research centers with junior colleges as laboratories. Classroom teaching, not research, is the primary responsibility of the junior college teacher; hence the narrow specialization of the Ph.D. degree does not constitute the best preparation for him.

Junior college faculty members who have had a basic course in the nature and functions of junior colleges and who are frequently reoriented to junior college objectives are more receptive to the function and purposes of these colleges and probably experience less frustration with "open-door" policies than do other junior college teachers. They see themselves as responsible for students rather than for subjects.

Adequate preparation for junior college teaching includes depth in one or more substantive fields at the undergraduate and graduate levels, professional preparation carefully related to the nature of the junior college and the characteristics of its students, and an internship or other supervised junior college teaching experience.

There is a need to bridge the gap between subject-matter respectability and professional education in the junior college to a greater extent than in the four-year colleges. Junior college teachers have a particular need to be able to adjust their subject-matter specialty to junior college conditions—to reach a diverse body of students where they are.

Junior college teachers characteristically are assigned major responsibilities in fields in which they are qualified. The majority have had teaching experience in elementary or secondary schools and are generally considered to be competent as teachers in their fields. However, the general atmosphere that accompanies a review of teacher preparation and characteristics is one of avoidance. Seldom are attributes discussed that refer directly to classroom behavior. Even when the attribute appears to imply effective classroom behavior, that behavior is not defined. For example, how does a teacher behave who "understands the developmental needs of students in the early college years," or how does a "desirable or competent teacher" behave with students? Less vagueness and a greater demonstration of relatedness to influence on students is needed. For example, what is the teacher's ability in the application of learning principles and theories in the classroom, and what logic does the teacher's instructional procedures follow?

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

A periodical review of research reports received and processed at the Clearinghouse for Junior College Information

RESEARCH ON JUNIOR COLLEGE TEACHERS

Historically, junior colleges have claimed to be "teaching" institutions. Much has been written about the instructional superiority in the two-year college, and these institutions are vitally interested in the improvement of teaching. This is evident by the fact that junior colleges continue to seek membership in accrediting agencies whose prime consideration is the improvement of instruction. In addition, junior college administrators in California have listed instructional improvement as the number-one priority item on their list of needs (JC 660 248). For this issue of *Junior College Research Review* fifteen studies that were designed to improve instruction in the junior college were considered.

Review

St. Johns River Junior College has completed research on student ratings of faculty (JC 670 448). Faculty rating at St. Johns yields data for establishing criteria for faculty selection and improvement, for further faculty studies and evaluation, and for establishing a base for all contractual considerations, including merit pay. By ballot, 80 percent of the faculty voted for student participation in faculty rating for all purposes, including merit pay.

With the help of the Academic Affairs Committee, procedures were set up whereby every student would rate each of his current instructors on four counts: (1) positive personal traits, (2) scholarship, (3) skill of presentation, and (4) accuracy in evaluating students. Provision was made to allow the students to supplement the ratings with written comments. All written comments were typed before they were forwarded to the teacher.

Comparisons were made between the scores achieved by the full-time teaching faculty during the successive years 1964-65 and 1965-66. Fourteen of the fifty instructors rated the first year did not return in the fall of 1965. Ten of these were in the lower half of the ratings, reducing the spread of returning faculty by nearly one-third. Fifteen who were in the lower half did return. All but one of the fifteen improved on the next rating. Interviews with the faculty members who made significant improvement revealed that without exception they took seriously the findings of the ratings, especially the students' comments.

Comparison of divisional ratings resulted in competition based on pride. All but two of the seven divisions changed position in the rank order. Only two divisions failed to improve their point ratings, and these were led by new division heads who did not have the experience of the previous year's comparison.

The following additional results were found:

1. Instructors awarding higher marks could not thereby expect a higher rating by their students.
2. Honor students tended to rate the "high" instructors higher and the "low" ones lower than did the total student population.
3. Few if any differences favored instructors of nine o'clock classes, a preferred hour, over instructors of one o'clock classes.
4. After four years of faculty rating, the faculty coming directly from graduate schools ranked higher than faculty from any other source; faculty from high schools ranked next.
5. Professional education preparation appeared to result in a slightly higher rating.

It was observed that students tended to equate exacting instruction with excellence; students preferred faculty who communicated definite objectives and classes where their status was certain at all times. There was no distinct student concern for the type of instructional method used. The study points out the delicateness of faculty rating by students where faculty morale is involved.

A Florida study (JC 660 065) investigated the professional effectiveness of retired military personnel in public junior colleges. Subject to the limitations of the investigation, the study found that retired military personnel:

1. Do not differ significantly from career teachers in the estimation of administrators.
2. Function in an "average to above average" fashion in the performance of professional duties.
3. Accept favorably the purposes of the junior college, and in certain junior colleges they accept these purposes much better than do career teachers.
4. Are qualified for a variety of teaching areas, depending on the background and experience of the individual, but these individuals are especially well qualified for the science/mathematics area.
5. Are favorably accepted by students and are considered to be average or above average in comparison with career teachers.
6. Would improve their chances of being employed if they attended graduate school before applying for teaching jobs.

7. Experience very little difficulty in making the transition from military life to academic life.

This investigation found that junior college administrators who are primarily responsible for the employment of teachers would offer the following advice to military personnel contemplating a career in junior college teaching: attend graduate school before applying for a teaching position; apply for teaching rather than administrative positions; deemphasize rank and military background; and visit several junior colleges before making a commitment to the junior college field.

An investigation by the Commission on Instruction of the American Association of Junior Colleges (JC 670 558) sought to answer the following questions: (1) What are the techniques currently used to measure effective teaching, and (2) How could it better be measured? Briefly stated, the methods of evaluation most frequently used were: observation in the classroom; years of experience; number of degrees, student accomplishment on tests, student evaluation, intuition, and a follow-up of junior college graduates. With reference to how to better identify and measure good teaching, observation, student evaluation, follow-up of junior college graduates, and faculty participation in the evaluation process were emphasized.

To assist administrators in their efforts to improve the teaching of junior college English, a California study (JC 660 020) offered the following recommendations:

1. Provide teachers with excellent supervision, departmental leadership, and consultant help.

2. Maintain a library of professional books and teaching aids which are easily available in the departmental office.

3. Plan departmental meetings and workshops devoted to the problems involved in the teaching of English.

4. Encourage teachers to attend local, state, and national meetings devoted to the teaching of English.

5. Plan in-service courses or encourage teachers to enroll in graduate courses related to the courses they teach.

In a national survey based upon interviews with more than 650 junior college personnel (JC 670 180), faculty agreed in varying degree, depending on the local situation, with the following four recommendations for professional growth of junior college teachers:

1. Establish the standard teaching load as 12 hours, with student loads dropped proportionately.

2. Expand guidance and counseling programs on a massive scale, and then improve articulation between faculty and guidance departments.

3. Either raise salaries significantly, so that teachers can buy their own time for further graduate work, attendance at professional meetings, or whatever; or provide enough special funds to travel, study, and the like, so that faculty can take advantage of available opportunities.

4. Educate local boards, district boards, state departments, and state legislatures to some of the realities of the teaching situation so that they can be more realistic when they appropriate money and establish regulations for employment of teachers, salary schedules, and similar things.

Summary

Junior colleges claim the virtue of good teaching, as evidenced by their almost universal stress upon teaching rather than upon research as a goal and by their quest for membership in accrediting agencies whose major focus is upon the improvement of instruction.

Faculty ratings by students have stimulated self-improvement where students' ratings and especially students' criticisms have been given serious consideration by faculty. Students' ratings have tended to favor faculty coming directly from graduate schools and with some background in professional education.

Retired military personnel compare favorably with others as junior college teachers and do especially well in science and mathematics. Attendance at a graduate school enhances their status as applicants for junior college teaching positions.

Classroom observations, student accomplishments, ratings by students, and follow-up studies of graduates have proved to be useful measures of teacher effectiveness. Junior college teachers also stress the importance of supervision and departmental leadership. They believe that attendance at in-service workshops and local and national meetings, reduced teaching loads, and better guidance programs would improve their teaching.

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NEEDED RESEARCH IN THE JUNIOR COLLEGE

"More Research Needed" is the concluding recommendation of many journal articles, research reports, conference proceedings, and books that examine the purposes and programs of the community junior college. Currently, however, there is little research available that relates exclusively to the two-year college and its programs. Indeed, a recent nationwide investigation of institutional research in the community junior college (JC 670-765) found that fewer than 20 percent have formally organized programs of institutional research. This issue of *Junior College Research Review* considers not only some problem areas for which research is needed, but also the types of research needed.

Review

Each of the previous issues of the *Research Review* has examined documents and institutional research reports on a given topic. These reviews are indicative of some areas for which research is needed. The following table presents the subjects of selected previous issues of the *Junior College Research Review* and the suggestions for needed research on each respective topic. Volume and number for each issue are included.

Title	Vol.:No.	Needed Research
"Follow-ups of the College Transfer Student"	1:1	Reasons for success or failure of the transfer student
"The Collection and Utilization of Student Biographical Data"	1:2	Determine use of biographical data for instructional planning
"Experimental Programs in the Junior College	1:5	Determine changed student behavior following instruction
"Classroom Testing Practices in the Junior College	2:1	Determine ways to improve classroom testing by instruction
"Research Studies of the Junior College Dropout"	2:2	Reasons for dropouts and procedures to reduce attrition rates
"The Junior College Remedial Program"	2:3	Placement procedures and instructional methods for remedial education
"Time for Instructional Research"	2:4	Compare the effects of various instructional procedures
"Entrance and Placement Testing"	2:5	Relationships of tests to curricular objectives and methods for formulating objectives from test results

A recent statewide investigation in California (JC 660-248) invited 77 public colleges to participate in identifying research problems and needs considered critical by the participating institutions. With 65 colleges responding to the questionnaire (85 percent), a composite ranking was compiled. The ten following research needs were placed at the top of a list of 26: (1) Effectiveness and improvement of instruction; (2) Promotion and dissemination of research and development; (3) Student dropouts; (4) Evaluation of instructional offerings; (5) Financial support; (6) Student characteristics; (7) Preparation of instructors; (8) Realistic student counseling; (9) Faculty loads; and (10) Articulation with four-year colleges. This California study proposed a plan for the California Junior College Association to assist in promoting research and development in California public junior colleges.

A survey-questionnaire study of problems and

needs of junior colleges in the state of Washington (JC 670-839) identified 38 "important" problem areas. Respondents were categorized into four groups: faculty, administrators, presidents, and total, with a high degree of response uniformity noted among the groups. "Long-range planning needs in the community college" was ranked as the item of highest priority. When the subject headings for related groups of items were compared, vocational-technical education was considered the area of major importance.

Research problems in the area of student personnel programs were considered by the 1964 Research Development Conference on Junior College Student Personnel Programs (JC 670-062). Sixty-eight critical needs were identified in four designated research areas: (1) The nature of the junior college climate as it relates to the achievement of student personnel objectives; (2) The significant characteristics of junior college students; (3) Essential elements of an effective guidance program; and (4) The staffing requirements for an effective student personnel organization. The National Committee for Appraisal and Development of Junior College Student Personnel Programs (JC 670-418) reported similar research needs. However, the Committee posed an additional concern, described as an "omnipresent problem." Specifically, research is needed "to establish a methodology for accurately assessing local labor market conditions and for making dependable projections regarding the employment needs of a limited geographical region."

Since research procedures vary in usefulness and validity, a consideration of needed research also entails suggestions for good research procedures and methodology. For institutional research of junior college students, "normative studies" have been suggested (JC 670-474); by using the same definitional variables for institutional research, "normative" studies permit comparisons between individual institutions. It has been suggested, too, that junior colleges could improve their research endeavors by utilizing the assistance of faculty in mathematics, psychology, statistics, and counseling (JC 680-022). These faculty members may provide helpful suggestions on study design, data collection techniques, data treatment procedures and appropriate interpretations of findings. A survey of the use of standardized tests (JC 680-023) resulted in the suggestion that junior colleges use statistical procedures that allow for tests of significance in order to add meaning to differences reported in test results.

Guidelines for good educational research have been outlined by A. S. Barr in the *Encyclopedia of Educational Research*, third edition, and a few critical points are outlined. The first requisite for good research is a "carefully formulated problem." A topic like "student self-concept" is not a statement of a problem from which research can emanate; it must be further refined. Even with well-stated problems there is further need for definitions that direct attention to certain observable phenomena. Consider the term "greater verbal response" in the following sentence, "In this course we want to elicit greater verbal response." This term may better be defined as "an increase in the number of questions asked," "fewer one-word or short-phrase answers," or "an increase in the number of students contributing to class discussions." Depending on the problem formulated further classifications and other definitions are possible.

"Carefully formulated hypotheses" are required for good research. A hypothesis has the value of giving direction for solutions to problems. Its directing function results from the theory and assumptions used for its own formulation. For example, if a researcher were operating on the assumption that learning is facilitated by participation, and if he also believed that physical distance was a factor affecting the frequency and types of verbal communications, he might find direction from the hypothesis that a given classroom arrangement would increase the number of students contributing to discussions.

Careful selection of subjects is a third research need. This includes defining the population to which the research results will pertain and selecting members of that population for data collection. When selecting members, a random sampling technique is one helpful procedure.

Diligent data collection and processing precedes a final need of "carefully formulated inferences." Data collection requires a well-planned procedure and results in something counted, measured, or scaled. It is important that the resultant data be in a form usable for processing. For example, percentage scores are often not appropriate for statistical computations that are designed for statements of significance. They may point general directions or tendencies but must be interpreted with caution.

Carefully formulated inferences point to the stated results of the research. Results must be clearly supported by the procedures and techniques used. When a finding or result is reported, other possible explanations are examined. An inferred result that a given classroom arrangement aided student participation would raise the question "What else can account for the increased participation?" A possible alternative explanation is the duration of time the students and instructor were together. Such alternative explanations can be eliminated when a control group is used in the research design.

Summary

"Needed research" has been used to refer to both problem areas and types of research. As indicated,

stated problem areas are numerous. Specifically formulated problems on which research can be based are rarely found in junior college reports. Some design elements and characteristics for needed research include: (1) normative studies; (2) statements of statistical significance; (3) well-formulated problems; (4) carefully deduced hypotheses; (5) well-defined populations and randomly selected subjects; (6) data collection integrated with processing; and (7) critical examination of results.

More limited and specific problems are worthy of brief comment. Foremost among these might be a critical evaluation of the extent to which two-year colleges achieve their stated functions.

Which experiences in vocational-technical curricula are most directly related to vocational success? What constitutes "vocational success"?

What evidence is available that the lives of students are richer and more productive as a result of general education?

To what extent are students enrolled in programs compatible with their interests, abilities, and preparation? To what extent is talent wasted by poor programming?

By what means may faculty members be stimulated to greater professional involvement? What factors enhance student motivation toward desired ends?

This list of suggested research topics could be extended indefinitely. It does, however, indicate that junior colleges might well engage in the practice.

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SELECTED TEACHER PREPARATION PROGRAMS

Due to the increasing size and scope of junior colleges and their unique role in higher education as "teaching institutions," the task of acquiring the services of well-trained and highly qualified people to teach has become most important. This need was expressed in the Peterson study (JC 660 248), in which one of the most important problems noted was "to formulate the best pattern or patterns for preparing junior college teachers . . . and to determine sources from which they may be procured." A similar call was voiced last year by Garrison (JC 670 130). Edmund Gleazer, Executive Director of the American Association of Junior Colleges, recently noted: ". . . we will have more than 1,000 publicly supported community junior colleges within ten years . . . and 100,000 additional teachers will be required" (JC 680 080).

How will the teachers be selected and prepared? Although there are, as yet, not many deliberately designed programs of junior college teacher preparation, a few colleges and universities have recognized the need and have built accordingly. Through their specially designed teacher preparation programs, those institutions are attempting to help satisfy the demand for instructors and to lend focus to junior college instruction. This issue of the *Junior College Research Review* examines some representative teacher preparation programs.

UNIVERSITY OF CALIFORNIA, LOS ANGELES

The Graduate School of Education, University of California, Los Angeles, has designed two special programs by means of which students are prepared to teach in community junior colleges (JC 680 046).

1) The Student Teaching Program

This plan is for the student who decides while he is enrolled in a UCLA graduate degree program that he wants to teach in junior college. The student enrolls in *The Junior College Curriculum* course for one quarter and, during a second quarter, he is apprenticed to a master teacher for one course in a local junior college. He usually completes the teacher preparation program concurrently with receiving his subject area master's degree.

2) The Internship Program

Admission to UCLA's junior college internship program is dependent upon the student's having a master's degree in hand and an assured position in a California junior college. It was designed especially to attract people who had completed degrees but who had not received any pedagogical preparation along the way. The prospective teacher attends a UCLA summer session for six weeks and returns to that campus for seminars on alternate Saturdays during the intern year. The intern is paid at full rate while teaching in the junior college.

Applicants to the internship program must fulfill all admission requirements for both the UCLA Graduate Division and the Graduate School of Education. When the interns have completed academic prerequisites and submitted personal recommendations, the Educational Placement Office tries in various ways to help them find positions in any of the fifty Southern California junior colleges. If they are employed for the ensuing year, they enroll in the UCLA summer program.

In both preparation sequences, prospective teachers construct the courses they will use as student teachers or as interns. These are not "lesson plans" but sets of specific, measurable objectives, test items, and selected media. Student teachers perform this task once, and interns, several times, during their UCLA training experience.

The UCLA programs are based upon a definitive rationale, which includes the following premises:

1. Teaching is the prime function of the junior college.
2. Teaching is the process of causing learning.
3. Learning is changed ability or tendency to act in particular ways.
4. Both teaching and learning may be assumed to have occurred only when observable changes are demonstrated by the learner.
5. Change may be observed only if there has been determination of student abilities prior to instruction.
6. Specific, measurable objectives must be set so that learning may be appropriately guided.

Program sequences focus on ways of structuring courses and curricula so that the teacher organizes his materials to cause learning and then determines the extent to which learning has actually occurred. It is thought undesirable to infer teaching primarily from tentative expectations or sincere efforts. *One infers teaching only if evidence of learning can be presented.*

The syllabus for the core course in the program, *The Junior College Curriculum* (JC 680 079), serves as both a teaching device and as a model for the syllabi which the trainees subsequently construct as part of their own course work. Each unit of the course has its own objectives, expected outcomes, and media list. The course includes the following units:

1. Building the course
2. The Junior College: Functions, Facilities, Students
3. The Junior College Curriculum
4. Learning

5. Goals and Objectives
6. Classifying Objectives
7. Tests and Assessments
8. Instructional Designs and Media
9. The Assessment of Curriculum and Instruction

The UCLA Junior College Preparation Program is based upon the specific, definitive rationale that regards teaching only as it contributes to learning. That approach differs from the usual one which allows a teacher to lecture, give reading assignments, hope all pupils do well on the examinations, and then cut a curve of grades across his classes. At UCLA the entire curricular pattern is so designed that objectives are specified, media are determined, and assessments are constructed *in advance* — by both the graduate school professor and by the prospective junior college instructor. In his own course building, the trainee performs those functions in conjunction with the program director and then agrees to bring a stated per cent of his classes to specified goals.

This unique concept focuses the teacher's attention on his primary task — that of causing his students to change in desired directions. The teacher-trainee is not evaluated on his classroom performance; nor is he "observed," unless he so requests. He is free to find individual methods of bringing about student performance. He may teach by lecturing, holding class discussions, showing films, playing tapes, being permissive or authoritarian, timid or dogmatic; his success is determined by the extent of learning achieved by all his students.

Within the UCLA Graduate School of Education, the program recruits prospective teachers, conducts selection and testing of candidates, and makes available counseling and placement services. In the field, representatives of the program work directly with junior college faculty members and supervisors in attempts to alter evaluation procedures, modes of recruiting faculty, and research approaches. All efforts are geared to the implementation of the rationale that junior colleges must focus on their prescribed purpose — that of causing learning. The Teacher Preparation Program, aided by the UCLA Junior College Leadership Program, conducts continuing study of the program's effects.

SOUTHERN ILLINOIS UNIVERSITY

Southern Illinois University, Carbondale, in conjunction with the Junior College District of St. Louis and St. Louis County, has planned a teacher-training program for students enrolled in post-high-school semiprofessional occupational or career studies (JC 680 075). The Teaching Internship-Core Program is a Midwest Technical Education Center (MTEC) project and is supported by a grant from the Ford Foundation. The internship-core includes: Intern Teaching; Observation of Master Teachers' Methods; Student Personnel Services Orientation; Organization Orientation; Case Studies; Field Studies; Course Work; Seminars.

Emphasis in the program is placed on the constant improvement of quality teaching. That includes developing better approaches, methods, materials, and systems, and evaluating their effectiveness — in short, instructional research and development. The participants are benefited in the following ways:

1. Opportunity to intern under master teachers.
2. Opportunity to become acquainted with the *modus-operandi* of the rapidly developing new Junior College District of St. Louis and St. Louis County.
3. Opportunity to gain knowledge to become more effective as teachers in two-year post-high-school occupational or career programs.
4. Opportunity to gain from professionals recommendations which will assist in obtaining better positions.
5. Opportunity to gain experience which will assist in professional advancement.
6. Opportunity to gain financial assistance in obtaining a master's degree.

In classes taught by interns, supervisors have the final responsibility for the quality and completeness of instruction as well as for the accuracy of grades assigned to students enrolled in the classes. The intern is responsible to his supervisor for the preparation, presentation, and evaluation of the classes to which he is assigned. Because of the scope of the Internship-Core Program, teaching assignments are two-fifths the normal teaching load and include two different courses in which occupational or career program students enroll.

A master teacher of the junior college district is selected to work with each intern. The functions of the master teacher include the following:

1. Provide the director of the Ford Project with a proposal and schedule designed to develop the intern's competencies as a teacher. Proposals include specific course preparations, presentations, and evaluations.
2. Counsel intern regarding teaching assignments and problems associated with the internship-core.
3. Assist intern in establishing the contacts necessary during the internship-core period.
4. Evaluate intern performance and potential.
5. Coordinate intern JCD Organization Orientation.
6. Coordinate intern JCD Student Personnel Services Orientation.
7. Coordinate intern Field Assignments.

The program also helps the intern to gain a better understanding of the philosophy, organization, and functions of student personnel services. The time allocation for that activity is the equivalent of one-half day each week. Interns use part of that time for research activities in the student personnel services area.

All participants in the program complete two courses relating to post-high-school technical programs. A number of the seminars center on the internship-core activities. Others center on a dialogue with leaders in fields affecting post-high-school occupational or career curricula.

Internal performance and potential are evaluated for the purpose of assisting interns in their professional development and providing data for improving the Internship-Core Program. Evaluators may include: Supervisor of intern; Students taught by intern; Dean of Instruction; Dean of Student Personnel Services; Field Assignment Supervisors; Seminar leaders; Associate Director, Ford Project-Southern Illinois University; Selection Committee (Case Studies).

Interns are requested to contribute to the evaluation of the Internship-Core Program by providing summaries and critiques of their experiences.

UNIVERSITY OF SOUTH FLORIDA

A cooperative project involving five institutions of higher education (seven campuses) has recently been completed in the Tampa Bay area of Florida. The Florida College Teaching Project (JC 670 622), a pilot project for improving college teaching, was supported by a grant from the Office of Education. The grant enabled the University of South Florida, Tampa, and four junior colleges — St. Petersburg Junior College, Florida College, Manatee Junior College, and Polk Junior College — to:

1. Discover and confirm through experience an effective program for improving college teaching, particularly among younger faculty members.
2. Determine fresh and creative ways for making students responsible for their own learning, with findings that can be reported to the professions.
3. Develop means of evaluating both teacher and student growth during the course of the project.

An important aspect of the project was its cooperative nature. It involved several institutions differing in size, character, and objectives, and included teachers from each of several basic disciplines. One objective was to demonstrate that the improvement of teaching can, and preferably should, be a cooperative venture in which each participant gets to visit, know, stimulate, and criticize his conferees in other institutions.

The selection of the participants, six from each institution, was made by members of a committee with the advice of other institutional administrators. The criteria for selection of participants included the following:

1. They should be relatively inexperienced in college teaching.
2. They should preferably be "average" teachers.

The two-year project was divided procedurally into two more or less separate experiments by years. Each year consisted of two phases: (1) the preparatory phase during the Fall term and (2) the operational phase during the Winter-Spring term.

The Project was a success in meeting its major objectives. The most significant outcome of the Project, however, was the wish to continue it. In what is probably the first non-grant-financed interinstitutional organization of its kind anywhere, the group did organize itself as *The Tampa Bay Council for Improving College Teaching*. Significantly, it is directed and operated by classroom teachers, with strong and enthusiastic backing of administrators. It seeks to lend powerful support to the cause of major concern in higher education — the need to examine and improve the function of teaching.

APPALACHIAN STATE UNIVERSITY

Appalachian State University, in Boone, North Carolina, has had a master's degree program for preparing junior college teachers since 195 It currently includes a full major in the teaching field, a minor in education and psychology (developed specifically for junior college teachers), and a supervised teaching practicum (JC 680 078).

The graduate major consists of at least thirty-six quarter hours and the minor consists of at least six quarter hours, with room for three to twelve quarter hours of electives in either the major, a field related to the major, or in professional education.

The distinguishing feature of the program is the orientation it provides in the philosophy, objectives, and nature of the two-year college. Those enrolled in the program are required to take an education course called "Instruction Program in the Two-Year College." In addition, they take either the "Seminar on the Two-Year College" or the "Practicum Seminar on Teaching in the Two-Year College," which is open only to teaching assistants.

The practicum seminar is supervised by an experienced teacher of academic subjects. Each department assigns a staff adviser to the teaching assistant. The supervisor, staff adviser, another member of the department, and the department chairman observe the teaching assistant, hold conferences with him, and write evaluations of his teaching.

Conclusion

Special programs for preparing junior college teachers are not yet widely employed. Most community college teachers enter the profession having been prepared in secondary school programs or, as is often the case, with no specialized preparation at all. Community junior colleges, in order to fulfill their unique functions in American education, should be able to select their instructors from a pool of carefully prepared people. As community colleges grow in stature and importance, it is likely that more programs to prepare their instructors will be constructed within universities, with universities and junior colleges participating jointly, or by the colleges themselves.

Richard Davis Howe

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

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THE JUNIOR COLLEGE PRESIDENT

New junior colleges are opening at the rate of more than one per week. One hundred and thirty community colleges were organized in the three-year period 1963-1966, and more than two hundred new ones will be opened in the next three to four years. National projections indicate there will be more than one thousand public junior colleges in operation within ten years (JC 680 074). The most spectacular development has been in public institutions, but private junior colleges have also expanded their role in higher education (JC 660 041).

One of the most important factors in determining whether American junior colleges will measure up to the expectations held for them is the quality of their administrative leadership. The W. K. Kellogg Foundation recognized that concern in 1960 and extended grants to ten major universities for the establishment of special graduate programs to prepare men and women for junior college administrative positions. Even with such substantial assistance from the Foundation, there continues to be a shortage of qualified personnel to fill the rapidly multiplying number of chief administrative positions in junior colleges.

This issue of *Junior College Research Review* examines research on the junior college president. The documents reviewed were selected from materials received and processed at the ERIC Clearinghouse for Junior College Information. All of the materials reviewed here have been announced and abstracted in the official ERIC publication, *Research in Education.*

Review

The junior college president is the key to innovation (JC 680 081). A national survey of the chief administrative officers in 233 public junior colleges in the United States found that the personal attitude of the chief administrative officer toward experimental (innovative) programs was the most significant single factor in the process of adoption or rejection of such programs. The questionnaire included in the study provided data on the following staff utilization programs, defined by the author as "innovative": (1) team teaching; (2) class size variations; (3) teacher aides; (4) language laboratories; and (5) television instruction. In each of the first four programs a higher correlation was noted between nonadoption and the attitude of the chief administrator than between nonadoption and some situational concern, such as lack of funds, shortage of staff, or lack of space. In one case, for example, failure to introduce televised instruction resulted from lack of funds, not from weak administrative support.

The mean age of the chief administrators of public junior colleges is 50.3 years (JC 680 062). In his nationwide study of public junior college chief administrators, Roberts found that 96 percent of the chief administrators had earned graduate degrees. Of the total group 52.8 percent had master's degrees and 44.1 percent had earned doctorates. Of the chief administrators who had doctorates, 64.6 percent had the Ed.D. while 35.4 percent had the Ph.D.

Of the 333 chief administrators surveyed, 50.4 percent came to their junior college positions from within the junior college field; in fact, all but .9 percent from *public* junior colleges. Another 15.9 percent came to their positions from four-year colleges and universities. A total of 66.3 percent of the chief administrators arrived from institutions of higher education.

The primary sources of the chief administrators investigated in the study were: (1) public junior colleges, (2) public and private secondary schools, and (3) public and private four-year colleges and universities. Chief administrators from those sources comprised 91.9 percent of the total group surveyed.

In the investigation, 63.7 percent of the chief administrators reported that the field of specialization of their highest degree was in some area of professional education other than higher education. Higher education, including junior college administration, was reported as a major field by 8.4 percent of the chief administrators.

Roberts found that, in some states, there was pronounced provincialism in the selection of chief

administrators. In California, for example, 73.8 percent of the chief administrators came to their positions from public junior colleges within the State — 36.1 percent of them from within their own institutions. Of the other sixteen states investigated, only Mississippi (69.2 percent), Kansas (61.6 percent), and Texas (58.6 percent) selected more than half of their public junior college chief administrators from within their own junior college system; other states draw from other sources. In Iowa, for example, 85.7 percent of the reporting chief administrators came directly from elementary or secondary school positions. The percentage of those coming directly from positions in four-year colleges or universities was greatest in Maryland (41.7 percent) and Florida (29.4 percent). Assuming that an earned doctorate and previous administrative experience in a junior college or four-year college are the two measurable background characteristics most desirable in a chief administrator, the men with these qualifications are most likely to be found in large institutions in California, Florida, Maryland, New York, and Washington (JC 680 062).

A study conducted by Johnston used questionnaire returns from administrators in 167 private junior colleges to project national needs for private junior college administrators (JC 660 067). For the period 1963-1975, 1,077 key administrative vacancies (including 352 for presidents) were predicted. At the time of the study, more than half of the administrators of private junior colleges were over 53 years of age; fewer than 22 percent had doctoral degrees, 61 percent had master's degrees, and almost 26 percent had no graduate degrees. Turnover in independent colleges was less frequent than in church-related institutions, and chief administrators who changed colleges tended to remain in the same geographical area. Johnston concluded that the educational background of private junior college administrators was lower than should be expected and that private colleges faced great difficulty in competing with other public institutions, business, and industry for high-level administrators.

Finding qualified chief administrators during the next decade will pose problems for both existing and new junior colleges. In a 1965 nationwide study of junior college administrative needs, Schultz predicted that 1,403 new presidents will be needed by the nation's junior colleges, both public and private, during the period 1965-1966 through 1979-1980 — an average of almost one hundred new presidents each year (JC 660 041). The investigator found that a "new breed" of junior college presidents was beginning to emerge. Those assuming the role of president in 1964-1965 differed from their predecessors in several ways: (1) They possessed a higher degree of educational attainment; (2) More of the newly appointed presidents had administrative experience in higher education; (3) More of them had junior college experience; (4) They were slightly older at the time of their appointment than their predecessors had been. Schultz strongly recommended the establishment of in-service training programs to assist and upgrade administrators in the junior college field.

In a nationwide survey, Luskin (JC 680 074) explored the views of junior college presidents who came from backgrounds other than the junior college (i.e., such cognate fields as higher education, secondary or elementary administration, business and industry, governmental service, and graduate school) and examined those views to determine the feasibility of offering a workshop at the University of California, Los Angeles, in the summer of 1968 for such presidents. Luskin identified "human relations" (i.e., relations with faculty, administrators, etc.) as the problem or issue that proved most difficult for 48.5 percent of the newly appointed presidents. "Business operations and finance" was identified as a major problem by 15.4 percent of the respondents. The problems most difficult for the wives of newly appointed junior college presidents were identified by Luskin as follows: (1) starting some type of faculty association; (2) understanding protocol; (3) human relations; and (4) too little time to be a wife (JC 680 074).

Summary

It appears that the president is the key to change in the junior college. Because he is more influential than any other person, it is almost axiomatic that "if the president wants something to happen, it will." The president is the educational leader of the junior college and the relative success of any program can often be traced directly to the president's interest in it. The fact that the president, more than anyone else, is the "change agent" in the junior college is well documented. Ultimately, he is responsible for all aspects of his institution.

While there has been much discussion about the relative "youth" of junior college presidents, available research indicates that chief administrative officers of the 1960's are actually older than were their predecessors of previous decades. Junior college presidents are better educated and better prepared than ever before, with more years of actual experience in higher education prior to their appointment.

With the tremendously increasing numbers of new two-year colleges, boards of trustees will be hard pressed to find experienced junior college chief administrators. The Luskin study (JC 680 074) indicated that increasing numbers of junior college presidents are coming to their positions from areas outside higher education. Such individuals need every opportunity to learn about the philosophy and programs of the junior college. Workshops for newly appointed presidents appear to be a most feasible way to meet this in-service requirement. While few today would agree that the "junior college is merely the lengthened shadow of its president," available research indicates that he may be the key to instructional quality in any junior college.

John E. Roueche

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GUIDANCE AND COUNSELING

Public community colleges are multi-purpose institutions. Most are required by law to maintain an "open door" admissions policy. As a result, junior college student bodies are notably heterogeneous in range and type of ability, in high school achievement, in vocational goals, in motivation, and in age. Effective guidance and counseling programs seem to be essential if the institutions are to make good on their claim of "providing educational opportunities to all people."

This issue of *Junior College Research Review* examines research-related documents that focus on the efficacy of junior college guidance and counseling. Documents reviewed here were selected from materials received and processed at the ERIC Clearinghouse for Junior College Information and all have been indexed and abstracted in *Research in Education.*

Review

In the summer of 1965, Phoenix College (Arizona) offered a pilot program of group counseling for prospective freshman (ED 013 071). Student volunteers were obtained through newspaper publicity and the promotional efforts of high school counselors who informed graduating seniors of the availability of the counseling program.

Of the 267 counselees accepted into the program, 45 were assigned to a control (non-counseled) group. The remaining students were divided into 22 experimental (counseled groups) averaging 12 students each. Experimental groups met for two hours daily for three days within a one-week period or twice weekly over a four-week period. The first meeting was devoted to interpretation of vocational interest tests, American College Test (ACT) scores, and the predication of first semester grades. Other meetings were education centered, focusing on such topics as: school policies, curricular offerings, and registration procedures. Students were encouraged to identify and investigate curricula most likely to be compatible with their measured interests, aptitudes, and academic potential. Other meetings explored vocational and career information.

To assess counseling effectiveness, the control (non-counseled) and experimental (counseled) groups were compared by grade point averages, semester hours earned, and dropout rates. Counseled groups achieved at significantly higher levels than the control group on all criteria except for semester hours earned.

At the end of one semester, the non-counseled group incurred a dropout rate about three times greater than the counseled group. Mean grade point averages of students surviving after one semester were also significantly in favor of the counseled group. Data collected after two semesters of attendance substantiated the findings of the one semester.

San Bernardino Valley College and ten of its surrounding high schools entered into a cooperative venture entitled, "Project Accent," to develop a program of counseling and instruction in auto mechanics, applied electronics, and office occupations training in Grades 11 through 14 (ED 013 074). The program was designed primarily to reduce the enormous student attrition rate in these three vocational areas. Follow-up studies showed that, of the thousands of students who had entered the programs in previous years, only a few hundred had persisted to second-semester courses, and less than five per cent of the original enrollees remained for a year.

"Project Accent" involved a three-part plan to: (1) retrain guidance counselors to increase their understanding of and effectiveness in vocational-technical counseling; (2) revise course outlines for all grade levels in these subject areas to designate information as "essential," "desirable," or "nice to know" with respect to the accomplishment of stated tasks, and (3) improve the image of vocational-technical courses through such activities as field trips, contests and distribution of free materials.

To retrain guidance counselors for "Project Accent," a Laboratory was conceived that would provide . . . a more rational basis for the formation of counselor attitudes about vocational-technical jobs and to insure that enrolling students received accurate information from counselors regarding job and training opportunities in the vocational-technical areas. Specifically, the Laboratory would:

1) expose counselors to real job and task experience as well as to the requirements of the selected vocations;
2) provide visits and field trips to job sites and training facilities where employment and training are available for students in vocational-technical fields so that counselors would be exposed to real induction testing and training situations as with any other candidate for employment;
3) inform counselors concerning job opportunities, job requirements, promotions, salaries and work conditions in the local area, the contacts to be established between the counselors, and community agencies, and employers resulting in improved placement, more realistic counseling, and the development of more positive counselor attitudes toward careers in vocational and technical fields; and
4) schedule counselor visits to vocational schools.

Riverside City College conducted a questionnaire-survey to discern student reactions to its counseling program (ED 014 287). In this study, the majority of the students queried indicated they normally solved their problems without counseling assistance. Students identified educational and vocational planning, academic matters, and grades as areas they considered appropriate concerns for college counselors. Family, personal-social, and emotional problems were not considered appropriate areas for the college counselor.

The Riverside study suggested a need for clarification of the counselor's role and function. The study also recommended increased counselor availability to students and improved communication between students and counselors.

Greenfield Community College (Massachusetts) conducted research to determine, (1) how effective a summer remedial program was in preparing underachieving high school graduates for successful completion of the first semester of a two-year terminal program, and (2) if vocational-personal counseling had an effect on student achievement in that program (ED 010 120). The subjects were forty students who had failed to meet normal college admission requirements.

A seven-week summer remedial program was administered, after which the students were enrolled in regular junior college classes. On the basis of pre- and post-remediation test information, twenty students were selected for counseling. Effects of the program were evaluated in terms of student academic growth — defined primarily as grade point average. Statistical analyses of data indicated that the remedial program helped improve student scores on the Lorge-Thorndike Test of Intelligence, the Davis Reading Test, and the Scholastic Aptitude Test.

Student performance (first semester's grade point average) was not affected by the variable of personal-vocational counseling: non-counseled students persisted and achieved as well as the counseled. The study concluded that traditional prediction barometers (high school grade point averages, recommendations of teachers and counselors, rank in class, and Scholastic Aptitude Test results) cannot be used effectively to ferret out students who are likely to succeed in post-high school, two-year occupational programs.

To determine the value of pre-registration counseling, San Mateo College conducted a study to rate student assessment of (1) his relationship with his counselor, (2) the ap-

propriateness of his choice of major, (3) the suitability of his schedule, and (4) his preparation for registration. 761 students (8.5 per cent of the total student body) were randomly selected from those who registered between the second and fourth weeks of the fall 1967 semester (ED 017 231). These students filled out a questionnaire showing their degree of satisfaction with various aspects of the program; e.g., rapport, advisement, and counseling. Thirty-three counselors also completed the questionnaire to indicate the importance they attached to each segment of their functions. The counselors' rating of importance was compared with the students' ranking of how well the functions were carried out. Students' degrees of satisfaction were correlated with age, choice of major, duration of counseling session, and several other influencing factors.

The greatest flaw in the pre-registration procedures appeared to be a shortage of time for student interviews. The study suggested procedures for alleviating this weakness.

Summary

Public community colleges are and will continue to be "open-door" colleges. The open-door admissions policy can be effective only if students are able to achieve their educational goals. Guidance and counseling services of the two-year college must contribute to the success of that endeavor. At the present time, it cannot be maintained that these services have been even remotely successful in (1) reducing student attrition, (2) providing adequate career information, or (3) placing students in programs where they have a good chance to succeed (ED 013 065). Evaluation of these programs is virtually non-existent; their effects must still be demonstrated.

John E. Roueche

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THE JUNIOR COLLEGE LIBRARY: AN OVERVIEW

Previous issues of *Junior College Research Review* have dealt with a variety of topics in the junior college field—transfer students, experimental programs, dropouts, and testing practices—to name but a few. This issue presents for the first time an analysis of information on community college libraries based upon data gained from twenty documents in the Clearinghouse collection. At the outset it is apparent that these reports must not be construed as being representative of all aspects of junior college library service. However, they are indicative of concerns and issues involving this crucial element in the instructional programs of these institutions.

Review

Several documents are library surveys. One (ED 013 081) is the report of a survey of community college libraries in Michigan in 1965. This study, which was conducted by a research firm under the sponsorship of the Michigan State Library, underlines the urgency for stronger library holdings and services. Personal interviews with librarians as well as deans and presidents of eighteen public community colleges and a questionnaire which was circulated by the State Library were the sources of information. Using the *American Library Association Standards for Junior College Libraries* as a base for evaluation, the study reports a critical lag in the development of book collections at thirteen of the libraries. It is well known that the development of an adequate book collection is dependent upon the availability of funds for the purchase of materials and staff to select and process new acquisitions as well as shelf space to house the collections. Thus it is not surprising that the primary limitations on the improvement of library collections at the majority of the community colleges in Michigan were found to be inadequate budgets for printed materials, a lack of professional library staff, and limited facilities. The principal recommendation of the study proposes a "crash program" in the form of yearly grants for a three year period to those community colleges whose libraries do not meet American Library Association standards.

Comprehensive surveys of public and private higher education on the state level are necessary for long-range planning and have been authorized by several state legislatures. One phase of such reviews often treats the problem of library service. Dr. Erret W. McDiarmid served as consultant in charge of the study of college libraries for the Commonwealth of Virginia. This study (ED 013 081) included three, state-controlled, two-year college libraries. Because they were very new, these junior college libraries had not yet reached acceptable standards. However, it was noted that adequate stack space for a minimum collection of 20,000 volumes, as well as work space for the staff, was not anticipated. In addition, the staffing components were low as were the budget allocations. Dr. McDiarmid recommended a long-range program of supervision and coordination with four-year institutions of higher education in the state.

The survey method is also used in the examination of the library in a specific institution. An example is the "Report of a Brief Survey of the El Camino College Library" (ED 012 614). In this report a Library Study Committee examined such aspects of the library as its organization and administration, budget, collections, staffing, and space allocations. Since the role of the junior college library in the teaching-learning process is the principal reason for its existence, the Committee sought the opinions of teachers, administrators and students on its effectiveness at El Camino College. Responses to an inquiry form were somewhat limited and suggested a rather apathetic attitude among library users. Strengthening the role of the college by uniting the administration and operation of the library and the audio-visual services, under a "Dean of Instructional Resources" was the major recommendation of the Committee.

A variety of techniques have been used in dealing with the availability of learning resources in the instructional programs of community colleges. A case study of the library at Mt. San Jacinto College (ED 012 185) presents the development of an instruction-

al program utilizing the "multi-media" approach. This involves the development of learning objectives in behavioral terms as well as the determination of the appropriate media or tools which enable students to accomplish such goals. The role of the library is great, for it serves as the primary tool in the instructional process. Conference proceedings as the Community College Library Administration Conference held at Wayne State University in 1965 (ED 014 946) and the Junior College Library Conference held at UCLA in 1965 (ED 012 606) stress the relationships of the library to instruction. Faculty-librarian cooperation is emphasized as a basic principle which should undergird the policy of selecting books and other educational media (ED 013 635). Innovation is the underlying theme both of the papers and the panel discussions at these conferences. Equally important, however, is the sharing of new devices and techniques to revitalize the library and its services.

The unprecedented growth of higher education in recent years has brought not only needs for new construction but also demands from educators as well as government officials to ensure the maximum efficient use of existing facilities. Standards to be used in determining space needs in junior colleges are a recent development. In California an extensive utilization study of the classrooms and laboratories, offices and libraries in the three segments of public higher education resulted in the final recommendations for standards and guidelines to be used in planning such facilities for junior colleges (ED 013 079). In the case of junior college libraries, it was found that reasonable approximations of space required for audio-visual and programmed learning facilities were not presently possible. However, the traditional stack areas, space for reading stations, and working space for the staff can be determined by applying the appropriate standards.

Long-range planning is a critical element in the development of institutions of higher education, though often early projections become out-dated. Such was the case with Cerritos Junior College where the original campus was deemed inadequate before it was completed. A revised building and facility report to the Governing Board presented needs and recommendations based upon enrollment projections to 1980. The decision to expand the library facilities led to plans for the development of a Learning Materials Center, the detailed specifications of which are given in document (ED 013 649). The rapid expansion of this and other community colleges prompted a division of the American Association of Junior Colleges to compile a "Bibliography of Facilities Information" (ED 014 293) in 1967.

Planning is essential not only to the development of the total institution but also to its principal components. In recognition of this, the Standards and Criteria Committee of the Association of College and Research Libraries prepared a set of guidelines for junior college administrators who are concerned with establishing new library units. The guidelines were developed by experienced librarians and administrators for the purpose of acquainting the novice with the steps which must be taken. Given in outline form, the guidelines report the appropriate staging of events as well as specifications for the budget, the collections, and buildings (ED 013 061).

The American Library Association Standards for Junior College Libraries, which were completed and published in 1960, were used as the instrument to measure the effectiveness of Henry Ford Community College. In an article entitled "Strengthening the College Library" (ED 015 740), the librarian and chairman of the faculty library committee report the procedures used in this self-study. In brief, a series of questions were developed from the Standards which were used to study and evaluate the collections, policies, facilities, and administrative procedures of the library.

SUMMARY

The studies reported in this issue of *Junior College Research Review* are indicative of certain ways of examining various aspects of community college libraries. Obviously, little research has been done which gives insight into reasons for the success or failure of certain procedures—or for the proficiency or error of certain forms of administration or organization. What are the characteristics of successful library service in junior colleges? The criteria of success which are most often employed in studies of libraries—size of collection and of staff, amount of space, circulation figures and the like—are "Process" criteria. Evaluating libraries on those criteria alone is analogous to assessing the quality of an instructional program by counting the number of advanced degrees held by the faculty. What types of "product" or "outcome" criteria might be employed in efforts to assess the contribution of a library to the total instructional pattern? Given such standards, the measure of success becomes a challenge as yet unexplored.

Lorraine Mathies

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

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ADULT EDUCATION IN THE JUNIOR COLLEGE

One of the functions of the community junior college is the continuing education of adults for which it provides through both daytime and evening classes. Adult programs are well-attended. In fact, California junior colleges enroll more part-time adults than full-time students (ED 014 270).

Employed men and women — and also housewives — attend junior college classes for a variety of reasons. Some are preparing to earn a living; others, to transfer to a senior institution; and others, to advance their general education so that they may live with greater satisfaction. Current junior college adult education programs are giving particular attention to the need for retraining in various occupational fields as automation destroys some positions concurrently with its creation of others.

This issue of *Junior College Research Review* examines research reports that relate to various aspects of adult education in the two-year college. The studies were selected from documents received and processed at the ERIC Clearinghouse for Junior College Information. All of them included here have been announced and abstracted in *Research in Education*. Copies of the reports are available from ERIC Document Reproduction Service.

Review

Modesto Junior College (California) conducted a study to determine the effectiveness of its pre-employment program (New Hope Project) for under-educated adults by tabulating the rates of continuing employment for participants in the project (ED 011 357). Data were gathered by the college employment service and the project training staff, using a Post-Training Report. In a majority of cases, this necessitated a personal interview with the trainee at intervals of three, six and twelve months after training was completed.

Of the students who dropped out before completing the New Hope Project, more than half accepted jobs that related directly to their course-work. The rate of continuing employment for the program was from 55 to 60 percent. While student earning power was significantly improved, job retention was low and turnover high.

Specifically the study found that:

1) The majority of trainees in the program entered employment in a field related to their training and they typically continued in that employment on a full-time basis.

2) Earnings for the average trainee ($1.82 per hour) provided a favorable wage when compared to the earnings of the subculture from which the trainees came.

3) The earnings power of persons trained for a given occupation in the New Hope Project were likely to be as high outside that occupation as within it. Low wages in a number of occupations resulted in low trainee retention. Most important, trainees could find higher wages outside the occupation for which they were trained.

4) The present employment placement services were ineffective in that less than ten percent of all persons employed actually secured their jobs through the local employment agency.

The Modesto study recommended that employers be more involved in trainee evaluations and that experimental studies be undertaken to compare the effectiveness of adult programs that emphasize skills with that of programs that develop basic work habits and attitudes.

Another Modesto Junior College research endeavor examined the dropout patterns of the New Hope Project (ED 011 195). Of the 1006 adult referrals from the Department of Employment, 29 percent dropped out before completion of this training project. Of these, six percent accepted employment and 11 percent dropped for unavoidable problems. Therefore, the actual dropout rate was 12 percent, or 121 dropouts that could have been prevented by program improvement. The study indicated that two-thirds of the total dropouts were students with no prevocational training. The report concluded that, with additional services and staff,

the New Hope Project could prevent at least one-third of all dropouts.

Riverside City College (California) conducted a study of its 225 mature women students attending day classes, to discover problems, if any, pertaining to that group of adults (ED 010 739). For the purposes of the study, a mature woman was defined as being 25 years or older *or* married. Findings suggested that the basic problem encountered by mature women was a lack of time for both home duties and study.

The women queried in the survey had a grade point average of 0.5 higher than that of the total student body. Most participants indicated no serious financial problems. The study recommended that:

1) more classes be scheduled between 10 a.m. and 2 p.m. to encourage mature women to return to college;
2) the college develop a program of instruction in nursery school methods, to provide assistance in child care to qualified women enrolled;
3) the college activate an organization for mature women — to provide them with a sense of identification with the campus;
4) specific scholarships be set aside for mature women students.

Dutchess Community College (New York) conducted a survey of the non-degree-credit courses and programs offered by the 34 public two-year colleges in the State (ED 013 110). Of the 26 respondents, 20 or more indicated that they (1) offered remedial courses designed as preparation for enrollment in certain degree-credit courses, (2) did not offer noncredit enrichment courses for superior high school students, (3) did not offer noncredit courses designed specifically for high school dropouts or other disadvantaged groups, (4) did offer such courses in professional, technical, or vocational fields, with 14 community colleges awarding certificates for successful completion, (5) did not offer courses for special community groups, (6) expected increased demands for noncredit courses to be offered by the community colleges in general and by their colleges in particular, and (7) considered the expected trend desirable.

The study concluded that New York Community Colleges are willing, within limits, to accept responsibility for noncredit courses and programs, that this responsibility is assumed primarily by the college's evening programs, and that administrators regard the offering of a wide range of noncredit courses as a proper and desirable function of two-year colleges. A careful examination of the capacity of these institutions to provide the educational services needed by their communities was strongly recommended.

Regional and national conferences have focused on the role of adult education in the two-year college. At one such meeting (ED 013 624), reports of research indicated that (1) few junior colleges employ adult education administrators and that such positions are relatively new, (2) junior colleges are limited by certain forces that prevent the full realization of their adult education potential. and (3) factors that foster adult education activity include public control, separate organization, statements of guiding principles, clearly identified staff and functions, documentary recognition of the adult education function, budgetir , flexibility, administrative and community support, and career identification for the program director. Weaknesses in adult education programs include (1) administrative conflict, (2) reluctance of administrators to be innovative, (3) emphasis on classes for credit, (4) restriction of adult education programs to evening hours, (5) lack of financing, and (6) lack of specially designed, adequate student personnel services.

The perceptions of characteristics of the "good teacher" differ little between adult and younger students.

Modesto Junior College obtained written descriptions pertaining to teachers from 85 students, seven instructors, and two administrators (ED 010 677). The study found that the attributes of the effective teacher are derived from a single goal — the ability to help the student to develop and maintain self-confidence. The teacher attributes necessary to attain this goal were identified as understanding, flexibility, patience, practicality, sense of humor, creativity, and preparation. The study recognized that while any given instructor could not possess all of the needed characteristics, it did emphasize that a balance of attributes among members of the staff could be achieved. The findings of this research endeavor were used to design an interview schedule that would assist in screening potential teachers as well as in gaining insight about current faculty members of the adult education staff.

Summary

The growing interest in adult and continuing education on the local, state, and national levels appears related to (1) the improving educational level of the general population, (2) the changing and increasingly complex world, (3) increasing leisure, and (4) the rising standard of living (ED 013 624).

Junior colleges are in a unique position to meet the diverse demands of a rapidly-changing society. As shown by the abundance of federally supported

MDTA programs in America's two-year colleges, a major emphasis in the future will be on the training and retraining of adults. Our technological society is going to demand continuing adult education. Greater involvement with local employers is necessary in planning future adult programs.

There is no sound research to suggest that instructors of adults need special attributes or characteristics that are not common to instructors in other areas. There appears, however, to be a problem relating to "credits" for adult education courses and this issue affects the staffing possibilities available to the junior college. If a "credit course" requires an instructor with a master's degree, the adult education program is in real jeopardy.

Junior colleges are going to enroll more and more adult students in the future. More viable programs are needed to accommodate this increased number of students.

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THE ASSESSMENT OF JUNIOR COLLEGE ENVIRONMENTS

The need to know more about institutions of higher education – more than is found in the college catalog – has become evident. Research of a socio-psychological nature aimed at answering the basic question "What is the campus really like?" first appeared in the mid-1950's with the work of C. Robert Pace and George Stern. The description of college environments has since developed to the point where highly sophisticated measurement instruments now exist, and studies dealing with this topic are becoming more abundant. Research of this nature is an excellent form of institutional self-study, producing information valuable for use in planning. Where change is deemed desirable, this information provides the guidelines and charts the directions.

Researchers of campus environments have, for the most part, neglected the junior college. This issue of the Research Review examines the seven research reports, received and processed by the ERIC Clearinghouse for Junior College Information, that devote major attention to the study of junior college environments.

REVIEW

The environment of junior colleges may be viewed from a number of perspectives, some of which are (1) resources (scholarly or financial), (2) curricular offerings, (3) control, (4) size, (5) clientele, (6) faculty-student ratio, (7) student cultures. A unique approach to the study of campus environments incorporates the concept of the "effective campus environment." This is the environment that is perceived by the students and organized into their consciousness with some degree of unanimity of impression, to the exclusion of what is printed in the college catalog, written into objectives, or claimed by faculty and administrators. This concept has been applied in the development of the College and University Environment Scales (CUES), which have been used quite extensively in four-year institutions. A specific study employing the test model of CUES – Junior College Edition (ED 018 204) investigated student and faculty perceptions of the Los Angeles City College environment from both a preferential and an existential viewpoint. The environment was measured along the following four major dimensions, which, through factor analysis, were found to best characterize institutional patterns of public community junior colleges;

Conventional Conformity: describes the college as a community in which persons actively participate in many ways and to varying degrees. Conformity to group mores is evident. The general picture is friendly, socially desirable group participation.

Internalization: indicates an awareness of social, cultural, political, artistic, and philosophical issues and problems. The emphasis is on understanding, rather than solving, the issues and problems, and on adjusting to their presence as a matter of controlling one's own welfare.

Maturation: is concerned primarily with what might be called growth, maturity, responsibility, etc.; it describes a college that definitely serves the function of developing self-direction in its students.

Humanism: describes a student body with interests in discussing and sharing ideas and theories of philosophy, politics, theology, etc. outside the classroom setting. It connotes student cohesiveness with respect to academic interests with correspondingly little attention to social interests.

This in-depth study of institutional dynamics justified the following generalizations regarding the L.A.C.C. environment:

1) L.A.C.C. students describe their college as one where students are expected to do many things for themselves, where more emphasis is placed by both students and faculty on world affairs and cultures than on campus activities, where the instructors are competent and businesslike, although sometimes difficult to approach, and where considerable learning takes place outside the regular classroom program.

2) In describing a college environment they would like to be a part of, L.A.C.C. students portray an "Ideal" college not considerably unlike their perceptions of L.A.C.C.

3) L.A.C.C. faculty, in describing their preferences for a college environment, place stress on competence of instructors, strong guidance and job placement programs, adequate facilities (especially library and laboratory), an atmosphere to stimulate intellectual and cultural activities, and a responsible, mature student body.

The results of preliminary studies using the above-mentioned Junior College Edition of CUES were summarized by Pace (ED 014 972). The findings: (1) the item content of CUES is appropriate for junior colleges; (2) the scores obtained by junior colleges are about what one would expect in comparison with liberal arts colleges and universities; (3) the differences among junior colleges are not nearly as large as among universities or among liberal arts colleges; (4) this relatively greater homogeneity may be a valid judgment about junior colleges in general or it may be peculiar to the Minnesota, Texas, and California schools studies; and (5) while many of the present CUES items do not discriminate well between different junior colleges, one cannot say whether this is a fault of the test items or an accurate reflection of junior college environments.

The American College Testing Program has taken steps toward the development of a different kind of junior college environment assessment instrument, which organizes readily available and easily quantifiable information on two-year colleges into a profile characterizing individual institutions (ED 013 599). Factor analysis of 36 commonly agreed-upon junior college characteristics yielded six loadings:

Cultural Affluence: describes a college with a large number of library books per student, relatively many foreign and out-of-state students, and many faculty members in relation to the number of students. It is privately or religiously controlled, and is relatively well financed. The factor appears to involve facilities, such as the library and the faculty, more than financial wealth.

Technological Specialization: describes a college with a technological emphasis, with many students in technical programs, with many male students, with few students studying such fields as education and secretarial work, and with few out-of-state students. It is a public school that does not emphasize the liberal arts.

Size: describes colleges with large enrollments, large libraries, a heterogeneous curriculum, many part-time students, and a placement service. The college scoring high would probably be an urban-centered, open-door comprehensive college, with a strong emphasis on continuing education. In addition, one might expect an impersonal atmosphere, few personal contacts between students and faculty, several highly organized student subcultures, and a relatively clear status hierarchy of social groups.

Age: represents an old college, with faculty and students who are both full-time, with few working students but relatively many out-of-state students. It has *not* grown, it spends a good deal of money per student, and is a private school. The high-scoring college would probably resemble a small, four-year, liberal arts college. It would likely have many traditions, a resident student body, and an administration that saw its role as acting *in loco parentis*. It would also have a selective admissions policy, although not necessarily one that emphasized academic aptitude.

Transfer Emphasis: emphasizes teacher training, liberal arts, and a heterogeneous environment. Colleges scoring high have many students studying such fields as education, many graduates who go on to four-year colleges, and many faculty members with master's degrees. A common denominator of most of these variables is a requirement for further education beyond junior college and, accordingly, many graduates of high-scoring colleges seek advanced training.

Business Orientation: is characterized by many bright and enterprising students, many faculty Ph.D.'s, high tuition, and high per-capita expenditures.

This instrument makes it possible to describe and compare junior colleges in terms of the factor scores. However, it is doubtful that much of a relationship would exist between the profiles derived therefrom and those obtained by using CUES-Junior College Edition.

Another ACT study (ED 013 082) correlated six environmental factors with junior college student body characteristics (test scores, high school grades, special interests, campus needs, and non-classroom accomplishments). Environmental factors and student characteristics co-varied in interesting and meaningful ways, but most of the correlations were moderate to low. Environmental factor scores in general were found not to be a satisfactory substitute for a detailed description of the student body of a junior college.

Using former junior college students along with a group of students with no junior college experience, a small-scale inquiry (ED 015 742) was taken to compare perceptions of the junior college environment. Ten facets of junior college environments were measured on bi-polar adjectival scales. Differences in perceptions by the two groups of respondents were evident on half of the scales. Of greater importance, however, was the finding that former two-year college students showed great variance in their perceptions of "the Junior College environment." The authors observed that this might be due to great differences among the 13 junior colleges on which the respondents were reporting.

A conscious effort to inform the populace about the philosophy, purposes, and environmental characteristics of the junior college is the way to show a new image, more in line with its true characteristics. To this end, Epperson, in a recent article in the *Journal of the Association of College Admissions Counselors* (ED 016 450), makes a plea to those charged with counseling prospective students to convey a realistic image of the two-year college. He cites five major problems faced by developing junior colleges that carry significant consequences for students: (1) limited space and equipment; (2) the non-existence of a viable educational community and serious program deficiencies; (3) general unavailability of trained faculty and administrators; (4) difficulties encountered by students transferring to a four-year institution; and (5) the image of junior colleges as second-class institutions, creating prestige prob-

lems for its students. If students are allowed to choose after giving full consideration to strengths and weaknesses of all facets of our diverse system of higher education, those electing the junior college are more likely to hold realistic expectations for their education.

In *Creating the College Climate* (ED 013 625), Stephens College Vice-President James Rice discusses the factors that together produce the ethos called the environment of the institution. The physical make-up of the campus — buildings, their architecture and arrangement — is an important determiner of the campus environment. The plant does not itself cause learning; if, however, architecture and campus organization are not consistent with the objectives of the college their impact can mitigate other aspects of the educational environment.

The author suggests several questions to test the attractiveness of the campus environment: When do students come to the campus and when do they go? What do they do when they are not in classes? Where do students congregate? Where do they go to be alone? Are there places where they can escape to be by themselves outside or to study inside? How is the library used? What are the places on campus that have been given names frequently mentioned in student conversations?

An attractive environment will do much toward keeping students and faculty on campus. This in turn contributes to the "sense of community" so important to an effective learning environment.

Students, faculty, and administrators are the personal element in the college environment. The interaction of persons within the physical setting of the campus creates the distinctive environment of the institution. The kind and quality of the elements and their interaction determine the prevailing atmosphere.

SUMMARY

The assessment of junior college environments has taken two forms: assessment based upon empirically derived data, and assessment based upon philosophic discourse. Both approaches have their place in the literature. However, more stress must be placed upon research findings. With this in mind, researchers are developing new sophisticated instrumentation. A special, revised edition of Junior College CUES is being written which, it is hoped, will better discriminate among junior college environment. This will assist in determining the relative effectiveness of various two-year colleges in attaining their stated objectives.

Research-based planning and decision-making must replace the intuitive approach to administration if the community junior college is to attain the viability required of today's institutions of higher education. However, effective planning and decision-making cannot occur in a vacuum; appropriate data must be at hand. Research-derived information on the dimensions of the junior college environment is now available to facilitate the administrative processes.

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

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MULTI-MEDIA INSTRUCTIONAL PROGRAMS

In the junior college as in schools at other levels of education, replicable instructional media have potential for changing the face of instruction. In the past few years, many different instructional forms have been tried, many types of hardware introduced. This issue of *Junior College Research Review* examines a few of the reports on the use of media received and processed by the Clearinghouse.

REVIEW

The programing boom of the 1950's and 1960's led to the publication of hundreds of printed auto-instructional devices. Many of them were advertised as being "suitable for use in grades 13 and 14." Unfortunately, however, most programs offered for sale did not include data on results obtained in instances where they had been used. Thus the user was required to assume their value — a risky business — or assess it in experiments of his own devising.

In most cases where printed and other forms of programed instruction have been introduced in junior colleges, they have been used to supplement "regular" classroom instruction. However, some courses are being taught by them exclusively. El Camino College has used programs to teach algebra and, more important, has tested their effect (ED 019 053). A series of experiments produced the following result: no significant difference found in student achievement in the course when it was taught by programs whether available teacher time remained the same or was reduced. Accordingly, the college has introduced a uniform testing pattern in its algebra courses and has created large sections in which students learn through the medium of auto-instruction. Experiments with algebra programs at Los Angeles Valley College similarly found no differences in learning achieved by students in "programed" and "live" sections (ED 014 971). In both groups of studies, however, students learning through programs were less inclined to spend time on the texts.

In addition to their being used in mathematics courses, programs have had relatively widespread adoption and testing in the teaching of English Composition. San Diego City College studied the efficacy of a programed text to teach Review English (ED 013 619). Matched classes were generated and comparisons made between students using the program and a control group using a "conventional book." Performance of the experimental group was significantly higher. The General College of the University of Minnesota used post-tests to compare a program designed to teach dictionary use with live instruction (ED 018 212). Students in the programed section made equal or higher scores on all but one of the tests. On the basis of the results, the program was adopted as the medium for instruction in dictionary usage. The General College also studied effects of programed and conventional work-book methods of teaching grammar, sentence structure, punctuation and capitalization (ED 019 072). Pre- and post-tests showed gains being made by all students but there were no significant differences among the groups which could be attributed to differential instructional treatment.

Seemingly contradictory findings have been reported by researchers studying effects of auto-instructional programs. This is not surprising in a field where experimental rigor is difficult to achieve. One problem rests with the designs used. For example, many experiments conducted in junior colleges fail to hold constant the time spent by students in working on the programs or in the comparable control classes. But programs *can* teach; the question is when, how and for whom they can best be used. Audio-tutorial, auto-tutorial and other names are used for instructional approaches which employ workbooks, audio tapes and laboratory equipment in various combinations. The media are viewed, heard and handled by students in individual carrels. Several principles of learning — individual pacing and appropriate practice, for example — are satisfied by the method.

Delta College introduced, tested and expanded an auto-tutorial program in a mathematics unit for nursing students (ED 014 960). The staff developed its own films and audio tapes for use by students in individual learning situations. Golden West College built an audio-tutorial laboratory patterned after the Oakland Community College operation. Initial results were a large decrease in failures and drop

outs and an increase of from one-third to one-half in course content (ED 012 616).

The multi-media approach was also examined in a paper on the changing role of the library (ED 012 185). The author suggested that the first step in using the multi-media approach is in writing specific instructional objectives; the second step is in determining which media best bring students to accomplish the objectives.

Multi-media instructional designs in use in Oakland Community College, Mount San Jacinto College, Oklahoma Christian and other junior colleges were summarized in a report produced in the College of San Mateo (ED 012 182) with costs, values and potential effects on facilities and patterns of organization being considered. The idea of designing their own instructional sequences by combining various forms of media is apparently appealing to many instructors and instructional leaders in the junior college.

Instructional television is a field of study in itself. It has been introduced in many junior colleges with effects similar to those obtained when it is introduced at other levels of education. Values of the medium include its ability to reproduce faithfully the sound and sight of an instructor and the fact that it does not abide shoddy teacher performance (ED 014 961). It can do many things other than reproduce lectures, however, and its uses have not nearly been exploited. There are problems of a different order, too. As was pointed out in a report published by The Fund for the Advancement of Education (ED 012 622), "A medium as potent and versatile as television is not just going to slip into the classroom like a different shade of blackboard." Despite the vast sums of money that have gone into it, "if something happened tomorrow to wipe out all instructional T.V., American schools and colleges would hardly know it was gone" (*Ibid.*, p. 43). The need now is for research on difficulties associated with introducing the medium, for example, on television's effects on institutional organization and internal lines of influence.

Other reports processed by the Clearinghouse consider uses and effects of miscellaneous types of instructional media. A study produced at Stevens College reviewed the use of amplified telephone communication in two inter-institutional courses (ED 012 621). Virgil Sessions considered the use of video tape in speech classes at Orange Coast College (ED 016 454). Sixteen millimeter films and 8mm film cartridges were used in chemistry classes at El Camino College (ED 015 719) and their relative merits were discussed. Junior colleges are introducing those and other forms and are writing up results.

Although conference reports in the field of junior college education seldom include results of research on learning, some papers stress particular needs pertinent to introducing multi-media instruction. Included among papers delivered at a conference at Lee College was a call by B. Lamar Johnson for all programs to be evaluated in terms of their stated objectives (ED 018 208). Papers printed in the report of a conference sponsored by the UCLA Junior College Leadership Program described several multi-media programs in operation in junior colleges around the country (ED 013 090) and made similar cries for evaluation. The community college presidents' institute in Michigan produced papers on audio-tutorial, gaming, new developments in programed learning and instructional innovation in general (ED 014 299). It is the *response* produced by the system that is important, not the system itself. The meaning of that statement is often overlooked by program designers but it was brought out in a report of a workshop on Iowa Community Junior Colleges (ED 014 300). Other matters discussed in detail in that report include the use of a core program to provide a common experience for all students, the employment of a consultant in planning instruction and the use of electronic data processing for routine tasks. Conference papers are valuable as exercises in information dissemination but they substantiate the contention that research on effects of junior college programs is rarely reported.

SUMMARY

The Clearinghouse collects many reports of the introduction of replicable media in junior college instruction. The lack of a coordinated research thrust on any form of instruction is evident. That lack has serious implications, for, without data on whether or not anyone learned anything from the different media, the introduction of one or another instructional form must be based on other, less valid, criteria. Many observations may clearly be made, particularly: a lecture delivered on television is still basically a lecture, not a new instructional form; programing has a powerful effect on the programer, regardless of the effect it has on the student — a fact which suggests that teachers should write programs; a multi-sensory approach is an attempt to get at the question of what is effectual for which student at what time and, as such, may lead to some fruitful research on learning. Comparing effects of various media produces correlational studies, but what is particularly needed in junior college instruction is careful design of sequences using media in combinations which allow for maximum effect. In addition, more assessment of instructional outcomes, both long and short range, is essential.

Arthur M. Cohen

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

Published by the American Association of Junior Colleges

FACULTY PARTICIPATION IN JUNIOR COLLEGE GOVERNANCE

Faculty participation in institutional governance is one of the most controversial issues facing the contemporary community junior college. According to the American Association of Higher Education Task Force on Faculty Representation and Academic Negotiations, the future pattern of governance in institutions of higher education depends on the manner in which administrators deal with faculty aspirations (ED 018 218).

One author, finding it inconceivable that faculty members should not have a part in the governance of the institution, proclaims that the college should (1) define the roles of its governing board, administration, and faculty; (2) delegate decisions concerning educational policy to the faculty; and (3) open channels of communication through which the faculty can express opinions on matters other than educational policy. Only then will an institution reflect high morale and solid academic achievement (ED 014 268).

This issue of *Junior College Research Review* examines several possible resolutions of the controversy and conflict over faculty participation in junior college governance. Documents herein reviewed were selected from materials received and processed at the ERIC Clearinghouse for Junior College Information. All of the reviewed materials have been announced and abstracted in the official ERIC publication, *Research in Education.*

Review

Democratic operation, according to one writer, is justifiable on purely pragmatic bases, since it harnesses the maximum amount of talent and wisdom, reduces frustration, dissension, and discord, maximizes identification, and creates an atmosphere conducive to effective instruction. Since the degree of operational democracy in a junior college depends on the kind of organizational structure that is established, the adoption of democratic mechanics at the inception of the college limits the possibilities for undemocratic behavior by either autocratic administrators or tyrannical faculty cliques. The ideal democratic system, he feels, is a committee system, where both faculty and administration share all the decision-making processes of the institution (ED 012 172).

The AAHE Task Force also recommends a system of "shared authority" between faculty and administration involving a wide variety of issues. The use of neutral third parties, the application of sanctions, and information-sharing and appeals to reason are three approaches to faculty-administration decision-making, with the greatest reliance placed on the latter. The faculty can be represented by an internal organization such as the academic senate, an external organization such as the American Association of University Professors, or a bargaining agency such as the American Federation of Teachers. The concept of "shared authority" is best implemented by an internal organization. External organizations can coexist with and complement internal organizations, offering information and technical services, and support of sanctions if necessary, but bargaining agencies usually will not develop unless the administration fails to support an effective internal organization. The most effective internal organization, according to the Task Force, is an academic senate that includes faculty and administrators, with the faculty in a clear majority (ED 018 218).

The president of the California Junior College Faculty Association reflects a similar viewpoint. He writes, ". . . to eliminate the divisive effect of internal conflict, the faculty must be represented by a single body [e.g., an academic senate] that is open to the ideas of all representative faculty groups." He further asserts

that the external professional education groups will continue to play an important role in the relationships between faculty as a particular group and faculties in general at the state and national level. His answer to the question of who should speak for junior college professors is twofold: (1) the academic senate at the campus level; and (2) the professional educational organization at the state and national level (ED 017 250).

The 1967 Arizona Junior College Administrative Conference, dealing with the problems of governance, concluded that the governing board, the administration, the faculty, and the students must be involved in this process. The Association underscored the need to cultivate mutual respect between faculty and administration. Power, according to the Association, is now a faculty tool rather than solely a tool of the board and administration (ED 019 930).

In 1967 the AAJC noted that the junior college, evolving out of a publicly controlled secondary school system, does not have the traditional basis for faculty participation in governance that the university has, and that the tremendous expansion by the junior college hinders involvement of the faculty in the decision-making process. Even with this knowledge, however, the AAJC sees as illogical the governance of the junior college as if it were an elementary or secondary school. Members of the junior college faculty are professional people, the report states, and as such will expect to be treated as professionals. The degree to which members of the faculty are treated as "mere employees" will determine how militant and how organized they become (ED 012 177).

Some conflict apparently is unavoidable. Epler, studying the nature of conflict as it applies to junior college governance, listed the following as causes of administrative-faculty conflict: stereotyping, differing goals, differing role expectations, lack of data, separate perspectives, inadequate communication, and poor administration. His conclusion is that there are two types of conflict: natural and aggravated. That a faculty often has different goals from the administration is natural, but poor administrative practices, ambiguous goals, lack of data, and insufficient faculty communication only serve to aggravate conflict. Thus, while natural conflict will continue to exist, adept administrators and fair-minded faculty members can reduce aggravated conflict (ED 014 951).

The most frequently mentioned "solution" to the natural conflict between administrators and faculty members is the involvement of the faculty senate in institutional policy-making (ED 018 218, ED 019 930, ED 011 449, ED 013 640, ED 017 250). The California Junior College Association's Committee of Institutional Research has identified the need to define the role of the academic senate as a critical need (ED 011 449). Accordingly, the committee maintains that any definition of the academic senate should include the following:

1. Determination of the role of the academic senate at the policy-making level.
2. Defining the relationship of the academic senate to the administrative staff and board of trustees.
3. Evaluation of the capabilities of the teaching faculty to devote sufficient time to participation in administrative functioning.
4. Defining the relationship between academic freedom and the functions of an academic senate.
5. Determination of the role of the academic senate in a district having multiple colleges.
6. Developing guidelines for cooperation between the instructional and administrative staffs through the effective functioning of the academic senate.
7. Investigation of who speaks for the faculty.

In 1967, San Joaquin Delta College conducted a survey of 78 California junior colleges in an attempt to assess how their faculty senates were involved in institutional governance. An 84 percent response from either the president or vice-president of these institutions revealed that (1) each responding institution had a faculty senate, and approximately half of these made recommendations on all campus matters; (2) most of the senate recommenda-

tions were in the areas affecting their personal lives and working conditions, and secondarily in the areas of instructional improvement, academic freedom, and controversial policy issues; and (3) nearly half of the presidents felt that the role of the academic senate should be policy-advisement and recommendation in areas where the faculty had the capabilities to serve effectively (ED 013 640).

Summary

The conflict that currently exists between faculty members and administrators is an important dynamic that must be attended to by the contemporary community junior college. As one writer has suggested, some conflict is natural and, thus, could not and should not be eliminated. It is clear, however, that increased faculty involvement in institutional governance is necessary to keep unnatural conflict at a minimum, and to encourage constructive resolution of natural conflict.

The most commonly suggested method for including faculty in the governance of their institutions is the creation of a faculty senate wherein faculty members have a recognized means of participation in policy-formation and policy-implementation. In the absence of such an organization, the junior college can expect increasing pressure from external faculty organizations whose interests may or may not be consistent with the goals and philosophy of the institution.

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and
Dale Gaddy

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

Published by the American Association of Junior Colleges

NURSING EDUCATION IN THE JUNIOR COLLEGE

An idea that led to a drastic change in the pattern of education for nurses was developed by Mildred L. Montag in her doctoral dissertation, *The Education of Nursing Technicians* (New York: G. P. Putnam's Sons, 1951). One of the major purposes of the study was to determine whether moving education for nursing into community colleges would attract large numbers of qualified, competent students. Persons who would not or could not spend the time and money for three-year hospital training programs might find a two-year community college program possible and attractive. Conducted for five years, the project that evolved from the idea included a broad, systematic evaluation which established that students would enroll in junior college nursing programs and that graduates were able to carry on the functions commonly associated with the registered nurse.

The Montag study was so convincing that the California Nursing Practice Act was amended in 1957 to permit programs in nursing of not less than two years to operate in California on a five-year trial basis. An evaluation committee of the California Board of Nursing Education and Nurse Registration confirmed that the programs had been successful; and in 1963 the California State Legislature approved the two-year nursing curriculum as a permanent section of the Nursing Practice Act (ED 012 169).

The growth of the associate degree programs has been remarkable. Nationwide, there were 80 associate degree programs in 1962; by 1965 that number had grown to 134 (ED 012 169). In 1966, more than 4,100 students were enrolled in associate degree programs for professional nursing (ED 013 645).

Nursing education in the two-year institution is by no means limited to the associate degree programs. The growth of Licensed Practical Nurse programs in the junior college has been similarly phenomenal. Two-year colleges also provide curricular programs for nursing aides and for practical aides in related health fields (ED 013 645).

This issue of *Junior College Research Review* examines fourteen research reports received and processed by the ERIC Clearinghouse for Junior College Information that devote attention to nursing education endeavors in the junior college.

REVIEW

A grant by the W. K. Kellogg Foundation to Teachers College, Columbia University, and the New York State Education Department led to the establishment of an Associate Degree Nursing Demonstration Center at Bronx Community College (New York). The Center was charged with: (1) the development and evaluation of curricula and teaching methods; (2) the preparation of educational materials and reports; and (3) the provision of services for visiting teachers, administrators, and graduate students seeking information and experience in the field of junior college nursing programs (ED 011 199).

In the area of new teaching techniques, the Demonstration Center attempted to develop objective behavioral evaluation devices to be used in the clinical area. Pre- and post-testing became standard in all learning experiences.

A radical reversal of the use of instructional television was employed by the nursing faculty at Bronx Community College. The teacher became the viewer while the students were physically separated in patients' rooms on a hospital floor. The advantages of tutorial teaching were embodied in a system of electronic transmission that intensified the teacher's role but retained the realism of the on-the-job learning. Simply stated, 15 television cameras in patient rooms were connected to the teaching center. From this center, the nurse instructor could move, electronically and instantly, from one student to another. Via television, the instructor could easily observe student nursing skills and, when indicated, give instruction through a wireless receiver worn in the ear of each student (ED 011 199).

Another study at Bronx Community College involved the assessment of the closed-circuit television technique. The results showed that: (1) closed-circuit television instruction provides for greater patient safety; (2) there is no measurable student resistance to teaching and learning via closed-circuit television; (3) instructors are less positively inclined to television because adapting to a new system of instruction necessitates modifications of teaching techniques; and (4) the responses of hospital personnel indicate that they did not feel that closed-circuit television jeopardized

normal hospital operation. Such a method could permit a nursing class of about 100 students and 10 clinical instructors to increase to a capacity of 150 students without increasing the instructional staff. The instructor salaries saved in only one year would exceed the total cost of the closed-circuit television system (ED 012 596).

Experimentation at Montefiore Hospital, where Bronx students had their clinical practice, called for an increase of 50 per cent in the usual size of student sections taught by the clinical instructor. The findings of the study supported the original hypothesis that "the use of closed-circuit television in the hospital will enable an existing number of nursing instructors to teach an increased number of students effectively while using the same clinical facilities" (ED 011 199).

At Delta College (Michigan) an experimental group of 15 nursing students was instructed via an auto-tutorial method as opposed to the customary lecture technique that was applied to the 16-member control group. The experimental group met for 15 minutes or less per week with their instructor and listened individually to five 30-minute tape recordings. At the conclusion of the unit, both groups were given the same final examination, resulting in a 17 per cent higher rate of performance for the experimental group. As a result, the faculty began producing 8-mm. films demonstrating nursing techniques and complex situations. This technique allows one nursing instructor to teach 15 or more students in the clinical area without loss in quality of instruction (ED 014 960).

Approximately nine months after releasing the preceding report, Delta College served as the host to a workshop entitled "Nursing Education Through Multi-Sensory Approaches." Participants helped prepare materials for use in auto-tutorial and mobile-tutorial laboratories — tape recordings, films, film strips, and study guides pertaining to nursing procedures (e.g., bed making) and other materials to precondition the student to traumatic sights (e.g., an autopsy). It was concluded that such accomplishments as interviewing techniques, motor skills, observation skills, and interpersonal relations can be taught successfully through auto-tutorial means (ED 013 652).

Two studies dealing with the characteristics of nursing students have been processed by the Clearinghouse. Investigating the personal characteristics and prenursing accomplishments (such as high school marks) of 81 students in three nursing classes at San Bernardino Valley College (California), Carlson reported that the major criterion of a nursing program's success is the occupational performance of its graduates (ED 016 459). And in Bowman's survey of the 1959 and 1960 graduates of associate degree nursing programs in 12 California junior colleges, data were presented with regard to employment experience. The latter showed that 180 of the 216 respondents were employed full time as nurses; most were employed as hospital staff nurses; generally, they remained on their first job between nine and 12 months; 71 indicated a lack of preparation for some of the duties assigned to them; and 139 of the respondents planned to continue their careers in nursing (ED 011 758).

A primary concern of any educational program is the recruitment and retention of competent faculty members. Schmidt reported that the ideal qualifications of a nurse educator are a master's degree, with some exposure to associate degree programs in nursing and with an understanding of the community junior college, and the competency to teach and practice in a clinical nursing area. Finding persons with such qualifications is particularly difficult for the community junior college because of (1) a lack of understanding of the objectives and philosophy of the nursing program, (2) opposition from some nurse educators, nursing service administrators, and nurse practitioners, and (3) the ambiguous status of the community junior college (i.e., whether it is an extension of secondary education or a segment of higher education). Nevertheless, by attending various nursing conferences, visiting with students in baccalaureate and master's degree nursing programs, and inviting such students to visit the junior college campus, an adequate number of qualified persons can be recruited. Retention of nurse educators can be enhanced by (1) properly orienting the faculty to the college and to the cooperating hospitals, (2) making secure the appointments of faculty members, (3) showing genuine concern for the faculty members as people, (4) allowing teachers to solve their own problems, (5) encouraging interpersonal and interdepartmental relationships, (6) encouraging faculty members to pursue personal interests beyond their college responsibilities, (7) providing ample opportunities for attendance at professional meetings, and (8) involving the staff in the governance of their institution (ED 014 269).

Examples of other research completed or under way in junior colleges with the associate degree nursing program include: admission scores in relation to personality traits of dropouts and graduates; student attrition rates in relation to admission and selection tools; student achievement levels at the end of each semester in light of specific objectives; controlled experiments in student growth and development; and development of programed instruction and other multi-media devices to better facilitate individual learning patterns (ED 016 462).

SUMMARY

The field of nursing education has expanded rapidly in the 1960's. With an increase in the number of associate degree nursing programs and in the overall enrollment growth of the current decade, junior colleges have become involved with this aspect of public health as never before.

Through the efforts of the W. K. Kellogg Foundation and various individuals, it has become apparent that nursing programs at the junior college level are not only adequate but also attractive to many persons who would not otherwise pursue a nursing career. Innovative instructional techniques employed

in present-day schools of nursing include, primarily, closed-circuit television and auto-tutorial methods. Graduates of nursing schools are, characteristically, employed as full-time hospital staff nurses, remain with their first place of employment for approximately one year, find their academic preparation and their work orientation to be adequate, and plan to remain in the nursing profession.

Recruiting qualified persons as nurse educators is a difficult task, especially for the junior college. This function is made easier, however, by attendance of key administrators at various nursing conferences and by the establishment of official contacts with baccalaureate and master's degree nursing students, and by inviting interested nursing students to the local junior college campus. Retention of competent faculty members is another area of concern to the junior college administrator.

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The latest in the Clearinghouse's Topical Paper series is entitled *Student Activism and the Junior College Administrator: Judicial Guidelines*. The 47-page document describes the student rights movement and selected court cases involving student demonstrations, speeches, and publications. Procedures for administrative action are suggested. A copy will be mailed at no cost to each person who submits his name, address, and zip code on the following form.

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JUNIOR COLLEGE RESEARCH REVIEW

Published by the American Association of Junior Colleges

RESEARCH WITHIN AND WITHOUT THE JUNIOR COLLEGE

WHO IS TALKING TO WHOM?

THE EDUCATIONAL RESEARCHER HAS SOMETHING TO SAY

NOTE:

This is the first expanded issue of the *Junior College Research Review*. Similar issues are planned for next autumn and winter.

Contributions are invited. Research reviews, reports of research projects completed or in progress, and articles in which research is synthesized are particularly solicited.

Manuscripts should be not less than five nor more than 16 typed pages, double-spaced. Submit two copies to the ERIC Clearinghouse for Junior College Information, 96 Powell Library Building, University of California at Los Angeles, Los Angeles, California 90024.

WHO IS TALKING TO WHOM?

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The literature of the junior college as it relates to the community junior college is in the unenviable position of being an institution about which little of substance is written. Although vaguely worded reports, platitudinous public relations releases, and tautological studies of minutiae abound, the *idea* of the community college is rarely examined in the contemporary professional literature. Between 40 and 70 years ago, Bogue, Jordan, Lange, Harper, Koos, and Eels set down guidelines for the development of a nationwide system of junior colleges. Did they say it all? What have been the effects of translating their dreams into one thousand institutions enrolling two million students? Do changed urban and societal conditions suggest a revision of their original intent to broaden the scope of higher education? What *is* the idea of the junior college and how has it been shaped by "community concepts"? These questions are rarely examined in depth by the current generation of college leaders.

The lack of significant dialogue within the profession has led to acute debilities. A most obvious concomitant is that, by leaving the field of institutional criticism unturned, junior college educators have allowed others — laymen, sociologists, and journalists, for example — to define for them how and why they should conduct their affairs. They remain constantly on the defensive. More important, the directions taken by individual colleges and by the institution as a whole remain unarticulated, hence, indeterminate. To be worthy of the name, an "educational" institution must engage in continual interpretation of its role, but the junior college does not enjoy that form of dialogue. And without it, institutional self-respect and directed-

"real" issues in the field.

ness cannot mature. The irresolute institution fails to lead itself, let alone its community. Its practices vacillate, moved by the winds of fashion, not by a coherent philosophy.

A body of writing that appears in the form of theses and dissertations, unpublished reports, journal articles, and books is produced by people concerned with the community junior college as an educational force. Each of these forms of output addresses itself to a different class of problems — although there are considerable overlaps — and each is written by members of different groups within the field. Each has its own intended audience. This literature serves many purposes (even though it rarely addresses itself to encompassing concepts in junior college education). A portion of it is reviewed in this paper.

Dissertations

Dissertations are, of course, prepared by graduate students in universities. Many of the students have had junior college experience and a substantial number are working in the field at the time they complete their degree requirements. Most graduate papers report institutional histories or surveys of practices; most fall short of examining, critiquing, or contributing to the concepts on which the community college is based.

Between 1964 and 1968, 428 dissertations on the junior college were completed [11] or in progress [6].* Fewer than 30 per cent of them can be considered as offering generalized (as opposed to parochial) findings. And in fewer than 10 per cent is the methodology experimental or comparative (as opposed to descriptive). The topical thrust favors studies of student characteristics — usually demographic — and reports of administrative procedures. The methodological emphasis is almost exclusively "survey of existing procedures."

Actually, it is unfair to look to dissertations for serious reportage — neither the writers nor the readers expect it. The dissertation allows a student to demonstrate that he knows how to use the tools of education — literature surveys, statements of problems, methodological considerations, and so forth. It enables him to obtain a graduate degree — he rarely expects (or attempts) to solve a real problem or to add to a body of effective critique. The audience for the papers is restricted to professors on the students' graduate committees. Occasionally a student who writes about a problem of particular interest to a single junior college will have his thesis read by top administrators within that institution. However, it is more likely that his work will be perused only by his professors and by other students who wish to "review the literature" — it does not have to stand in a marketplace of ideas.

Accordingly, it is startling when a dissertation that influences policy is found. Mildred Montag's thesis led to a revolution in the teaching of nursing in the community college [9]. James Wattenbarger's dissertation [14] was the foundation for Florida's plan for the establishment and support of community colleges — a plan that has been followed not only in that state but in many others. But these are the exceptions — the

* Numbers in brackets refer to bibliographical entries at the end of the article.

one half of one per cent of the dissertations that comprise a contribution to intelligent argument in the field of education or to the needed dialogue on the idea of the community college. The others remain exercises in demonstrating knowledge of rudimentary research techniques.

As long as narrowly based surveys and parochial histories satisfy the requirements of graduate committees, they will continue to be written to the exclusion of anything of substance. Even if a student and his committee *did* try to come to grips with contemporary issues, the highly stylized, pseudo-scientific, archaic format in which dissertations must be cast would itself squeeze out any commentary, discussion, or free-wheeling speculation. A literature of policy must be sought elsewhere.

Unpublished Reports

The ERIC Clearinghouse for Junior College Information was established in 1966 particularly to bring under bibliographic control the fugitive literature of the junior college field. Because the Clearinghouse particularly sought research reports and definitive statements produced in junior colleges but not widely circulated, the collection built up rapidly to include more than 1,500 such documents. Presidents' reports, self-studies, articulation agreements, institutional research reports, and similar unpublished materials were acquired, indexed, and abstracted.

Few of these documents qualify as reasoned statements of what the junior college is or could be. Most are blatantly egocentric polemics. Self-studies attempt to convince accreditation teams that single colleges are "meeting needs." Articulation agreements list junior college courses acceptable to the university as though the institutions knew full well what students must have in order to learn. Presidents' reports rarely go beyond clichés interwoven among listings of data arranged to show college growth — a phenomenon usually perceived as a virtue in its own right. There are exceptions, however — John Lombardi's annual reports prepared while he was president of Los Angeles City College stand out in particular [7].

Institutional research deserves special comment. Although a sizable minority of the institutions have a person charged with the conduct of research, his efforts are usually directed toward writing proposals for extramural funding or toward gathering data of use in planning facilities and public relations releases. Most research reports involve the checking of records in order to obtain demographic data about students. Frequently, uncontrolled follow-up will be conducted using homemade designs in an effort to determine numbers of students who transfer to four-year institutions, obtain jobs, and so on [13]. Few actual experiments are conducted, even though where they have been, programs based on their findings have been carefully conducted [12].

Junior college research may be summed up in one word—it is inchoate. An intellective curiosity or skepticism regarding modes of organization, results, or effects of instructional programs is not revealed in the reports processed at the Clearinghouse. The audience for indigenous research is the administration and occasionally the faculty of single institutions. It is not likely that topics treated by — or the methodology of — junior college researchers will change until it is beamed at a wider, more critical audience. Avenues of dissemination are not lacking, but realization of the value of, and the need for, substantive writing is.

Journals

The *Junior College Journal* is by far the most important periodical in the field. With close to 40,000 readers, it far outstrips other professional publications designed to appeal particularly to a junior college audience. In fact, the *Journal* and other American Association of Junior Colleges publications, such as *Occupational Education Bulletin* and *Junior College Research Review*, are about the *only* professional education periodicals that reach the desks of many people within the field.

The *Junior College Journal* is written by and for a broad spectrum of people within the profession. A single issue is likely to include articles by faculty members, administrators, professional association representatives, foundation and governmental officials, and university professors with an interest in the field. During the past two years the *Journal* has carried 69 articles by administrators, 27 by instructors, 21 by association representatives, and nine by state officials. Occasional contributors are counselors, librarians, trustees, and others.

The *Journal*, then, is written by its readers' peers. Because it is beamed at such a wide audience, most topics treated within it are of general, widespread interest. The publication has an appealing format and a good balance in articles — two factors that contribute to its broad appeal. It is an effective reporting mechanism for those who would keep current in quotidian trends.

State department or professional association publications typically include within one cover, public relations, news notes, bibliographies, and, on occasion, short, sound treatments of issues of general concern. Notable in the field are North Carolina's *Open Door*, California's *CJCA News*, and Illinois' *Comprehensive Community College Bulletin*. State publications have shown great improvement in content and format during the past few years and more of them will likely be produced. Even now they represent a valuable publications outlet for educators who would take time to write of matters of concern to people beyond the walls of their own institutions.

Currently the journals are a leading forum for those

who speak of junior college trends, criticism, and self-examination. The reader may be forced to mine a ton of overburden before he reaches a nugget, but his efforts will be rewarded. More junior college faculty and staff members should read — and write for — publications within their field.

From time to time, several professional education journals carry articles of potential interest to a junior college audience. Any volume of *Journal of Higher Education, Educational Record, Chronicle of Higher Education, Educational Forum,* or *Teachers College Record* is likely to include at least one piece written by and intended for junior college practitioners. Those journals, however, do not enjoy wide circulation within junior colleges; they are read by professional educators and affiliates. The junior college community could probably support another substantive journal of its own.

Recent Books

Two or three books per year on junior college education have been published over the past several years. The writers of these books vary in terms of professional positions as much as do the audiences for whom the books are intended. Examination of three works published in 1968 will serve to illustrate.

This Is the Community College

Edmund J. Gleazer, Jr., Executive Director of the American Association of Junior Colleges, wrote *This Is the Community College* (Boston: Houghton-Mifflin Company). Dr. Gleazer is exceptionally well known in the field by virtue of his having headed the major junior college professional association for several years. His book was obviously prepared for an audience that knows little about the institutions as a whole. It was directed toward a lay citizenry with a general concern about community college education and toward people in the profession who had not previously read much about their own institutions.

This Is the Community College reviews the purposes of the institution, the ways in which the college serves a wide variety of people, and the trends in patterns of college organization and financial support. In common with most other writers in the field, Dr. Gleazer starts from the position that opportunity for education beyond the high school must be made available to all. He also recognizes that the community colleges must create unique forms to match the unique tasks it has accepted. These tasks include providing opportunity for continual learning on a dropin/dropout basis, courses that are other than prerequisite to four-year college courses, education that combines the liberal and vocational traditions, and a variety of direct services to the community in which the college is located. He finds the institution "at its best (when) it reaches out to the people who comprise its environment, involves them, identifies with them, is of them and by them" [3:99]. He sees the institution as "an organization not only to achieve educational ends but in that very process to effectuate community improvement" [3:94]. And he finds "courses preparatory to other courses possibly to be taken at some dim future date" to be "a fraud, even if accompanied by the best of intentions" [3:52]. This idea of community outreach is a unifying thread throughout.

If *This Is the Community College* were to be reviewed as a contribution to the knowledge of the serious student of the junior college, it would be found to fall far short. But, if the reader accepts the fact that the book was written for people who have little idea of what the institution is about, it may be seen to have made its own contribution. As AAJC director, Dr. Gleazer receives a substantial number of calls and letters each day by such people and groups; it is for them that the book was written.

Islands of Innovation Expanded

B. Lamar Johnson, Professor of Higher Education at UCLA, recently completed a book designed for a junior college professional audience. *Islands of Innovation Expanded* [5] is a report of a survey of varied procedures in curriculum and instruction in the junior college. It is a compendious, well-documented statement of the arts and practices of innovation.

In spring 1967, Professor Johnson toured the country, visiting 77 junior colleges in 22 states. As a result of his findings on that trip and in subsequent correspondence, conferences, and meetings with representatives of 182 other junior colleges, he compiled his listings of innovations. The practices are categorized by type — audio-tutorial instruction, programmed instruction, the use of tutors in instruction, and so on. Each category includes a review of the way the practice is utilized in the several junior colleges that have adopted it.

Even though the book is devoted to listings of innovations, a thread of a call for evaluation runs throughout. Professor Johnson recognizes that innovation without assessment of effects is an exercise not likely to lead to instructional improvement, for it is one thing to change a practice and quite another to be able to demonstrate that the change has been for the better.

The author's concern is well founded. Although the ERIC collection includes only a small portion of the research on the junior college, it is representative. But the ERIC holdings include only 75 studies of curriculum and instructional techniques and, of those, only 22 are experimental assessments in which effects of an innovation are compared with conventional media. Seven studies treat television and six assess programmed instruction; the others examine computer-assisted instruction, work-study, large-group instruction, films and course scheduling. Hundreds of

innovative practices have led to only a handful of research reports.

Islands of Innovation Expanded was written for a coterie of what may be called "professional innovators." These include a large number of junior college administrators, a large number (but a small percentage) of instructors, a few state and governmental education officials, a very few university professors, and some college trustees — people concerned with up-to-the-moment patterns of curriculum and instruction in the junior college. There is something to be said for an institution's changing modes of instruction on a regular basis, as a person changes the style or cut of his clothes — it keeps everyone excited and always looking forward to next year's fashions. However, one might hope that those who read the book to find out what is going on in other institutions will realize also that Professor Johnson has made a substantive plea for evaluation, experimentation, and assessment of instructional effect.

Community Colleges: A President's View

A third book on the junior college, written by Thomas E. O'Connell, President of Berkshire Community College (Massachusetts), is a curious piece. *Community Colleges: A President's View* [10] can perhaps be understood best by an attempt to discern its potential audience. The title of the first chapter, "What in the World Is a Community College?" offers a clue: the book may have been written for a group of people who had scarcely heard of the institution — perhaps President O'Connell's colleagues and associates in New England higher education. For, although the community college is quite well known and accepted west of the Connecticut River, if this book is an indication, New Englanders are little aware of the institution, the way it is organized, or its potential. The book may be an attempt to redress the imbalance.

Community Colleges: A President's View includes some rather parochial — not to say naive — views of junior college curriculum and instruction. President O'Connell admits that "about one-third [of the students] flunk or quit the first year" and suggests that "the fact that our attrition at Berkshire is high indicates we're not soft" [10:5]. Granted that it is easier for society to accept students' being flunked out of college than it is for it to allow selective admissions policies, the statement relating attrition to the college's being "not soft" is indeed strange. The implication is that if the college flunked out *two*-thirds of its students it would be *twice* as good. And, *reductio ad absurdum*, if it wiped them all out, it would be perfect! The statement is typical of many in the book that can be understood only in the context of a New England audience that perhaps feels (or is presumed by the author to feel) that community colleges are somehow not quite as "good" as the prestigious private institutions with which that section of the country is blessed.

The book is laced with folksy statements that reveal President O'Connell's perceived need to defend the community college against charges that it is somehow less than higher education. He speaks of "crackerjack" teachers who are able to "make real contact" with students [10:71] and of teachers "of real intellectual bite" [10:81]. Unfortunately, he weakens his case by engaging in a bit of academic snobbery himself, as, for example, when he speaks of the attempts of junior college boards to find holders of doctors' degrees to lead their institutions. "The trouble is, though," he says, "that too often insisting on the doctorate means the college is headed by a Doctor of Education. Perhaps I haven't been looking in the right places, but I have not found many Ed.D. holders who are real intellectuals" [10:127]. Who can improve on that gem?

"Community college people," President O'Connell suggests, "... have a paradoxical combination of pride and diffidence" [10:81]. True. Many writers in the field act as though it is still necessary for them to justify to their colleagues, to the world at large, and indeed to themselves, their working in an institution that is a recent American invention without venerable trappings. One commentator summed it up: "The modern junior college is attempting to define its purposes in accord with a desired status of respectability among other institutions offering college work..." [15:209-210], but he was writing more than 40 years ago! Have we advanced so little since 1928?

Junior college administrators seldom write for publication. When they do, this "proud diffidence" frequently comes through. How much longer will the insecurity of the people who work within the colleges force itself so into their writings that they cannot address themselves to substantive issues? How much longer will the concept of the community college fail to be explored by those who should be concerned with it?

Not enough regarding the *idea* of the community junior college may be found in any of the books cited here. Dr. Gleazer makes such far-reaching statements as, "Nor should anyone delude himself that opportunity consists in simply allowing the student to enter; it involves matching the student with a suitable pattern of learning. If that pattern does not exist, then opportunity does not exist, even if the student is on the registrar's official list" [3:131]. That comment, along with others in the chapter entitled, "Future Development: Concern and Caution," could well be expanded into an entire volume.

Similarly, Professor Johnson's pleas for evaluation are much too important to be hidden among reports of innovative practices, for the casual reader is likely to perceive only the media reports. The idea that the community college will persevere only by demonstrating its effects on students and community should be reiterated until it becomes as much a part of faculty

and staff members' thinking as campuses and course scheduling are now. That these matters are mentioned at all is a strength of the books; that they are not explored in depth is a shortcoming.

General Impressions of the Literature

One journal, a hundred dissertations per year, several hundred indigenous reports ranging from "This is the way we do it at our school" to listings of data gathered for no apparent reason, some articles in journals in the field of education, a few books, and beyond that, miscellaneous state department and professional association papers — this is the literature of the American junior college. It is written by administrators, instructors, university professors, professional association directors, and federal and state officials. It is read by members of those same groups in addition to a few concerned graduate students, board members, and lay citizens. It is a literature that is growing along with the growth of the institution itself as a force in American education. Its topics are practices and programs, procedures and public relations. It is written for a variety of audiences, but certain consistencies may be discerned.

1. A general impression of the literature as a whole is its posture of defensiveness. Repeatedly, in articles and books, in reports for circulation within the institutions, and in releases to the general public, a tone of "We are as good as the university" comes through. This is an understandable tendency for people who must gain support for their efforts to establish a new institution. When junior colleges were a recent phenomenon, their leaders had to trumpet their virtues so that finances would be forthcoming. However, continuing that type of writing to the virtual exclusion of internal criticism and genuine assessment of institutional values must prove untoward in the long run.

2. A second characteristic of the writing in the field is that it views *means* almost to the exclusion of *ends*. Processes, techniques, methods of instruction, and modes of organization are well documented. Much less frequently found, even in the research reports that emanate from the institutions, are statements of the *ends* or *effects* of all those efforts. It is well to communicate regarding professional practices — to share the good news, as it were — but to do that exclusively is to march down a dead-end street.

3. There seems to be general acceptance among those who are writing about the institution that the junior college can do all jobs of community education not currently being handled by the secondary schools or the four-year colleges. Writers seem to have few questions regarding the appropriateness of attempting vocational-technical, general, remedial, college-parallel, and many other types of education within the same institution; discussions regard only techniques and patterns of organizing to do those tasks. There are exceptions, however, and such a well-known figure as Clyde Blocker has suggested that "There are some limitations to the ability of any one organization to handle all social problems" [1:274]. Nevertheless, the wide variety of roles assumed by the community college is usually deemed agreeable. Perhaps if it were questioned more often, junior college educators would be less astonished when other agencies arise, compete for funds, and usurp functions assumed to be properly a part of the college ethos.

4. The question of identity still plagues the community college. It may be related to the fact that an institution that has attempted to do everything finds it difficult to achieve recognition for having done anything. Joseph T. Cosand considers that "By 1980 community colleges will have an identity of their own, based upon solid accomplishments" [2:143], but his statement seems to be based more on wishful thinking than on definite trends. Identity is an elusive, illusory characteristic; its attainment is not a product of dreams.

5. Curiously, many commentators who speak of higher education generally examine the junior college more definitively than do the writers within the field itself. Paul Woodring acknowledges that junior college instruction is of generally high calibre [16], but Jencks and Riesman [4] address themselves particularly to the institutions' impact. They conclude that the junior colleges have made it possible for the publicly supported universities to maintain selective admissions policies without fear of public outrage. Is that all the colleges have been good for? Instead of with answers based on careful reasoning and hard research data, the junior college literature responds with apologies and pleas for recognition. The insecure person must constantly pat himself on the back; the enemies of identity for the junior college may be within the institution itself.

Who Is Talking to Whom?

The times demand dialogue in depth. In education, by the time ideas are transformed into practices, they are usually 50 years past due. Accordingly, the idea of the community college must be continually reexamined to be certain that it remains current. It is incongruous that so few writers address the issues, problems, alternatives, effects, impact, and *raisons d'etre* of the institution in other than platitudinous terms. Specificity is needed — both in the examination of underlying concepts and in the reporting of effectual practices. Only then can the requisite dialogue begin.

These are a few of the issues not being discussed in the professional literature: particular relevance; coexistence of "vocational" and "academic" curriculums; the characteristics of faculty and students as they relate to program effects; institutional flexibility and instructional technology; and, of foremost significance for the decades ahead, whether we are to be satisfied

with equality of *opportunity* or whether we seek some degree of predictable *effect*? There is a gap between the idea of the community college and institutional practices; there is an even wider gap among instructors', administrators', counselors', trustees'—and, yes, university professors'—*perceptions* of the idea.

Educational reform and educational revolution depend on a literature not of propaganda but of policy. As one insightful critic put it, "Literature is the intersection of creativity and criticism, the joint domain of passion and reason" [8:316]. McClellan suggests that, although we may be psychologically "ready for an educational revolution," we are unready politically, because "the issues are unarticulated, the forum not made ready" [8:316-317]. The literature of the junior college fails to contribute to that readiness.

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THE EDUCATIONAL RESEARCHER HAS SOMETHING TO SAY

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Although it would be ideal if all junior college administrators, faculty members, and trustees read most of the significant educational research, the truth of the matter is that most probably do not. This is not an indictment of persons associated with junior colleges; rather, it is a statement of belief based on the premises that (1) most junior college professionals do not have — or at least do not take — the time to read available reports, and (2) that the average junior college person has few sources to which he can turn for contemporary reports of research studies.

The daily routines of most administrators and academicians simply leave little time for professional reading. Meeting with a group of militant students, reviewing the annual budget, and preparing lesson plans are only a few tasks that commonly compete for the educator's attention each day. Moreover, other than the *Junior College Journal* and, of late, *Research in Education* (official abstract journal of the ERIC system), there are few publications which the conscientious educator can consult for worthwhile articles or résumés dealing with the junior college. (In fact, these two publications account for less than 700 such reports annually. This is less than one report per year from each existing two-year post-secondary institution in the nation.)

Of those who regularly read research reviews, it may be a safe assumption that most of their reading relates, understandably, to (1) a problem of immediate concern or (2) a subject of continuing interest to them. The focus of the reader's attention is often limited exclusively to one area of research (e.g., a former high school English teacher who, after becoming a junior college instructor, continues to read journals pertaining primarily to secondary English instruction). Few people read research devoted to the broader aspects of the junior college, and even fewer look beyond the junior college field—to other levels of education or to industry or technology—for research that might have implications for the junior college.

In an attempt to illustrate that research designed for problems outside the junior college spectrum does, nonetheless, have implications for the junior college, several persons at the University of California, Los Angeles, Graduate School of Education were interviewed with regard to their respective research activities. Excluded from the number were those who reported directly to the junior college. The following is a summary of a portion of activities as revealed in the informal, unstructured conferences and/or as reported in selected writings of each.

Attitudes toward Teachers

During the past decade, M. C. Wittrock has been involved in the assessment of university students' attitudes toward public school teachers. Among other things, he found that freshmen regard teachers rather highly during the first year of college, but that their opinion of teachers drops drastically during the sophomore year. A somewhat higher opinion is recorded during the junior year and the highest level is noted during the senior year.

These findings were based on three studies. The first [17] was conducted in 1962 and involved administering the Semantic Differential technique to 259 UCLA education students. Five factors were identified for interpretation: (1) general evaluation, including such scales as confident-scared, sensible-foolish, energetic-lethargic, and good-bad; (2) restraint, including such scales as reserved-open, introverted-extroverted, restrained-free, and quiet-talkative; (3) tenacity, including such factors as tenacious-yielding, stubborn-yielding, controlled - spontaneous, and rigid - flexible; (4) predictability, including such factors as sober-frivolous, frank - secretive, predictable - unpredictable, and polite-rude; and (5) stability, including such scales as calm-excitable, objective-subjective, stable-changeable, and unemotional-emotional.

Similar results were found in a second study completed in 1964 [16]. In this instance, the same technique was applied to a broader spectrum of students: 178 freshmen, 90 sophomores, 43 juniors, 9 seniors, and 114 graduate students.

Building on the two preceding studies, Wittrock in 1967 completed a third investigation designed to determine whether other variables also affect the factor structure of student responses [15]. Factors such as roles, expressiveness, tenacity, stability, potency, predictability, and evaluation were analyzed. It was concluded that the Semantic Differential should be used as a technique rather than as a test.

Such studies indicate that perhaps junior college personnel also need to be concerned about students' attitudes toward their former school teachers. Such information could enable deans of students and others involved in student personnel services to know more fully the characteristics of the students enrolled at their particular institutions. Moreover, similar studies could be designed to measure student attitudes toward instructors at the junior college itself.

Outcomes of Higher Education

A questionnaire designed to measure the outcomes of higher education as reflected in the behavior of adults and students is currently being distributed nationally by C. Robert Pace. Additionally it is hoped that the study will give an accurate description of the nature of the school and college experience, the characteristics of the institution, and the backgrounds and characteristics of the various respondents. Eleven activity scales pertaining to personal involvement in contemporary society and culture are: community affairs, national and state politics, art, music, literature, drama, education, science, religion, intercultural affairs, and international affairs. As explained in a recent progress report [6]:

> Each scale contains from nine to twelve items. The internal structure of each scale is the same in that it includes a range of activities — from some that are relatively simple, commonplace, and easy to do to ones that involve increasing amounts of interest, time, and commitment. The number of activities checked in each scale provides a measure of the amount and depth of one's participation and interest. The number of different scales in which one checks more than some minimal number of activities provides a measure of the breadth of one's interest and involvement. Other indexes, cutting across scales, can also be derived — such as the number of different fields in which one has read a book, the extent of one's exposure to contemporary works in the arts, an index of community leadership, political activism, etc. The second section of the questionnaire provides a measure of knowledge about certain major changes that are taking place in American society and a measure of attitude toward such changes. These general measures can be further subdivided by topics such as government, industry, the economy, education, environment, etc. The recognition of change and the readiness to deal with it can thus be compared with the denial of change and resistance against it. A third set of criterion measures consists of personal judgments about the extent to which education contributed to various outcomes, and about other values attached to the college experience.

The questionnaire is being distributed to approximately 100 colleges and universities around the country. The institutions vary widely in enrollment and characteristics. No junior college is included in this survey. The questionnaire was mailed in January 1969 to some 22,000 alumni (classes of 1950) of the selected colleges and universities. It was administered to random samples of upperclassmen during February and March and will be administered to freshmen in September 1969. The data will be processed, analyzed, and reported during the next two to three years.

The implications of such a study for the junior college are obvious. Knowing the characteristics of students at all levels of education is of vital significance to educators as they plan and execute the educational programs of their institutions. This is particularly true in the fastest growing segment of American education: the junior college.

Guidelines for Curriculum Evaluation

On the contention that "it has been found essential to apply high standards of professional judgment in selecting, using, and interpreting tests and it is equally essential to apply high standards of professional judgment in selecting and utilizing curriculum and instructional materials," Louise M. Tyler (along with M. Frances Klein) recently developed guidelines for curriculum evaluation, including specifications, rationale, appropriateness, effectiveness, conditions, and practicality [14]. Such an effort was thought particularly worthwhile in view of the recent merging of electronic organizations and publishers, such as IBM with Science Research Associates, RCA with Random House, and CBS with Holt, Rinehart & Winston. This trend has accelerated the centralization of the development of curriculum and instructional materials. Hence, if the materials developed prove to be inadequate, the damage to students could become widespread. This study points out the need for a technical manual to guide persons in making proper evaluations of curriculum materials.

It has been noted elsewhere [7] that every fourth student enrolled in higher education today is a junior or community college student and that "soon all advanced education may start with the community college." This being the case, the junior college, in particular, should be extremely selective in its choice of curriculum materials. A guide such as proposed by Tyler and Klein should be considered carefully by administrators, department chairmen, and faculty members.

Achievement of Mexican-American Students

The use of the English language and the social context of the school are two factors relating to the low aspirations of Mexican-American students as compared with Anglo pupils, according to a 1968 study conducted by C. Wayne Gordon and three other researchers, Audrey J. Schwartz, Robert Wenkert, and David Nasatir [4].

A survey of more than 3,000 sixth-, ninth-, and twelfth-grade students from predominantly Mexican-American areas of Los Angeles showed that (1) the average achievement of Mexican-American pupils is below the average achievement of Anglo pupils from similar socioeconomic backgrounds and (2) Mexican-American achievement at all grade levels is substantially below the norm (where national standards are available), while Anglo achievement is at least equal to it.

Achievement factors for both groups included family socioeconomic level, family educational level, affectivity orientations, and school level. "None of these factors," according to the report, "adequately explain[s] the difference between Mexican-American

and Anglo test performances, however, for differences between the achievement of Mexican-American and Anglo pupils are substantially reduced only in comparisons of performance within one group of pupils — the junior high school white collar pupils — with controls for either home language or for school context."

The study indicates that the proportion of Anglo pupils who aspire to post-secondary education is almost twice that of Mexican-Americans.

The authors point out that "Even so, in absolute terms, the aspirations of Mexican-Americans are much higher than public stereotype might suggest. Attributing the low achievement of Mexican-Americans to lack of motivation is probably incorrect."

The highest achievers among Mexican-American pupils are those who have been most thoroughly socialized to the dominant American culture, according to this report.

The data, acquired from a questionnaire circulated to each of the pupils and from cumulative school records, were cross-tabulated to compare and to explain differences in the two groups' performances. Also a stepwise multiple regression was computed to find out the strength of the association between the level of the two groups' performances and the association of selected pupils and school factors to that level of performance. The fact that all of the students surveyed were from the same general areas of the city narrowed the range of difference between the two groups. Attention was focused on family background, pupil characteristics, use of the Spanish language, educational materials in the home, educational aspirations, occupational aspirations, and values and attitudes about school, family, strangers, self, and the future.

A general conclusion reached by the authors was that "Achievement results essentially when family values and school contexts are mutually supportive."

Junior college administrators might well be concerned with similar studies at their own institutions. If the junior college is, indeed, the best institution to help solve the problems of minority groups (as some maintain), it should examine its procedures for attracting students and should, if necessary, make adjustments in its recruitment of minority students. Deans of instruction, in particular, might wish to spearhead a study similar to the one described above in order to more ably devise or revise curricula so that minority students can take their place in society among other degree holders. How many minority students take advantage of the "second chance" offered by the junior college?

Testing Teacher Proficiency

A performance test of teaching proficiency has been developed by W. James Popham and Eva L. Baker [8]. It was designed as a means of evaluating teacher success on the basis of pupil growth rather than on the more general basis of classroom observation (where attention often is devoted solely to the instructional means employed by the teacher instead of the ends that the teacher is trying to achieve). The basic assumption of this study was that "the teacher who is the better achiever of given instructional goals will, other factors being relatively equal, be the better achiever of his own goals."

In this instance, a social science performance test was developed, administered, and reported. The 26-page unit consisted of 13 specific objectives, content guidelines, and a set of resources. The 13 teachers selected for the experiment were all regular San Diego City Schools employees; the 13 nonteachers were upper-division female college students from San Diego State College. The twelfth-grade social studies students were regular summer-school students, most of whom were enrolled for the first time in a government class.

The study took place during a one-week period of summer school. Each regular teacher retained half of her class; the other half was assigned to a nonteacher. The division was made on a purely random selection. Instruction was given during the hours of 8 to 12 a.m. At the conclusion of the experiment, a 40-minute test was administered to the pupils.

The data indicated that the regular teachers did not perform better than the nonteachers, although the contrary had been predicted at the outset of the experiment. As explained by the researchers, "Experienced teachers are not experienced at bringing about intentional behavior changes in learners." They hastened to point out that, because teachers have not been trained to be skilled goal achievers and since no premium is placed on such instructional skill either by the general public or by the schools, the finding cited above should not be interpreted as an assault on the teaching profession.

The authors suggest other possible studies, including the following, which could be performed as easily and as meaningfully at the junior college level as at any other level of education: a construct validation effort based on a contrast between (1) instructors who had manifested measurable skill in promoting learner attainment of prespecified objectives and (2) instructors who had not manifested such skill. As phrased by Popham and Baker, "... to the extent that the performance test strategy focuses the attention of educators on the *ends* of instruction (i.e., post-instruction behavior changes in learners), rather than instructional *means* (i.e., teaching procedures) its ultimate impact should clearly be beneficial." This is an issue of great consequence to the junior college — itself a "teaching institution."

Conclusions

All of the matters presented above are related to junior college education. Many are being studied by the Clearinghouse, and, in some instances, designs for further research are being developed. With respect to attitudes toward teachers, the Clearinghouse's topical paper number two* deals with the matter of assessing student attitudes [1]; four steps in the construction of an attitude scale are presented and could easily be used in a study similar to those of Wittrock's and Husek's. Also, the March 1968 issue of the *Junior College Research Review* was a summary of recent research on junior college teachers, including student ratings of their instructors [12].

Several other issues of the *Junior College Research Review* have dealt with some of the areas reported above. For instance, the assessment of junior college environments was treated in the December 1968 issue [5]; in April 1967, attention was devoted to junior college curriculum studies [13]; the November 1967 issue focused on remedial programs at the junior college level [9]; and the topic of entrance and placement testing was reviewed in the January 1968 issue [11].

Additionally, three monographs published by the Clearinghouse in conjunction with the American Association of Junior Colleges deal with at least two of the areas reported here. One, while not discussing minority students *per se*, relates to remedial education — a topic of great significance to all educationally-deprived persons [10]. Two other monographs regard personality characteristics of faculty members [2] and the measurement of faculty performance [3].

No doubt other university schools of education are doing similar studies. They will be reported here as they are received and processed for ERIC.

* Note the list of available Clearinghouse publications presented on pages 13-15.

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

Published by the American Association of Junior Colleges

PLANNING JUNIOR COLLEGE FACILITIES

With new junior colleges opening at the rate of more than one a week (ED 017 249), and with one-fourth to one-third of all existing facilities being inadequate (ED 015 718), the task of planning physical facilities for junior colleges has become increasingly urgent. As enrollments continue to grow, the expansion of existing facilities will continue to receive top priority in the junior college.

Educational planners have a number of sources for information on physical facilities, including the Acoustical Materials Association, the American Institute of Architects, the American Society of Heating, Refrigerating and Air-Conditioning Engineers, the Athletic Institute, the Community College Planning Center, the Educational Facilities Laboratories, the Illuminating Engineering Society, and the School Planning Laboratory. Several professional organizations, such as the American Association of Junior Colleges, the American Council on Education, the National Association of Women Deans and Counselors, and the National Education Association, as well as the U. S. Office of Education, have contributed significantly to this field.

Junior colleges themselves have conducted studies and reported efforts relating to this subject. Most of the reports listed in *Research in Education* have been processed for ERIC by the Clearinghouse on Educational Facilities (Madison, Wisconsin); others have been handled by the Clearinghouse for Junior College Information.

This issue of the *Junior College Research Review* explores a few of the factors to be considered in planning junior college facilities and some of the general guidelines that have been developed. Examples of junior college facilities and certain innovative features have been included. All documents cited in this report have been processed by the Junior College Clearinghouse. Unless otherwise noted in the bibliography, copies of each study may be obtained from the ERIC Document Reproduction Service, as described on page four.

In this review, the term *facility* means "... any specific space ... necessary for the service and operation of the educational program" (ED 022 444). Indoor and outdoor areas, including the buildings and the general site of the campus, are implied in this definition.

Initial Planning

Two of the more comprehensive reports on planning were written or edited by B. Lamar Johnson in 1964. One (ED 011 772) is based on visits to more than 40 newly established junior colleges. It includes general guidelines, six areas of educational administration, and a checklist of key steps to be taken in establishing new junior colleges. The author states that the primary task is defining the institution's goals. The other (ED 014 283) is a report of a national conference jointly sponsored by the University of California, Los Angeles; the American Association of Junior Colleges; and the Commission for Accrediting Junior Colleges of the Western Association of Schools and Colleges. One of the 18 conference papers contains the following guidelines:

1. Plants and facilities must be master-planned.
2. The site, an asset or liability in the selection of plant and facilities, should be selected as objectively and scientifically as possible.
3. The planning of junior college facilities should include the wisest use of the potential contributions and resources of various individuals and groups.
4. Junior college facilities should have an architectural character consistent with the desired image and role of the junior college in the community.
5. Junior college facilities should have an educational character that fits the college's role as the educational and cultural center of the community.
6. Facilities of a junior college must be adaptable to the socioeconomic needs of a community.
7. Facilities must be planned and designed to provide for economical staffing and use.
8. Junior college facilities must be planned and designed for a variety of uses: regular daytime offerings, community service, and part-time and adult programs.

In the same publication, Johnson observes that the time available for planning and starting a junior college is generally too short. At another point, he urges junior colleges to borrow "principles, insights, and procedures ... from varied disciplines and fields of operation entirely outside of education." As an example, Johnson cites Cuyahoga (Ohio) Community College's use of space technology, engineering, and building construction in its establishment.

Researchers at Northern Virginia Technical College found nine major lines of activity and some 300 steps to be accomplished in opening a new junior college (ED 010 020). Under facilities are included: selecting a temporary campus, planning the remodeling of the temporary quarters, taking bids for the construction of a new campus, beginning the construction, inspecting the buildings, and opening the buildings. Of the more than 15,000 man-hours expended by the staff in opening the college, 740 were required for facility planning.

The development of Seattle (Washington) Community College's north and south campuses has been recorded in similar detail in ED 019 051 and ED 019 052, both of which contain educational specifications drawn up by members of 80 to 100 faculty committees aided by a team of consultants. Another publication gives the educational specifications developed by the faculty of Florida's Polk Junior College (ED 010 956).

General rules for planning facilities for new junior colleges can be found in a compilation of ten *Junior College Journal* articles (ED 019 045). Among these are: (1) the involvement of the architect early in the planning process; (2) the establishment by *educators* of the institution's goals and objectives and its needs for facilities, and the creation by *design specialists* of facilities suited to meet such needs; (3) the budgeting of at least .05 per cent of the building costs for analyzing community needs and translating them into educational programs; (4) the selection of a site on the basis of cost, location, size or area, availability of public utilities, and access to major streets; and (5) the consideration in designing a junior college campus of (a) the philosophy, objectives, and specifications of the educational program; (b) the effects of physical environment on learning; and (c) the architectural expression of the junior college's purpose and environment as reflected in the size and location of the buildings, the organization of the campus, the use of construction materials, and the architectural style.

General Construction Guides

Since no two junior colleges can occupy the same site, serve the same population, and have identical educational goals, it is impossible to formulate an ironclad construction guide for all two-year institutions. There are, however, certain common requirements.

Unquestionably, knowledge of state requirements for buildings and site approval are vital to facility planners; otherwise, one might naively select a school site that fails to meet the minimum standards prescribed by law. For example, Wisconsin requires all junior colleges to be constructed on sites of no less than 20 acres — even in urban areas — and Georgia specifies at least 100 acres (ED 022 444). Legal codes are readily available from the respective state capitals. Summaries of relevant regulations, such as one published by the Iowa Department of Public Instruction (ED 018 223), can be obtained from many of the state agencies that control junior colleges.

Merlo's dissertation includes a review of site, space, and construction standards recommended by various authorities and a listing of standards established by each of the 50 states (ED 022 444). He developed a 394-question checklist for evaluating junior college facilities, including: What buildings should be kept apart from the rest of the complex? Should there be certain zones for certain types of buildings (e.g., administrative, instructional, parking) to allow for expansion or addition? What plan (compact, cluster, finger, campus, etc.) is the most desirable for the physical plant of the college? Are enclosed walkways between buildings necessary? What areas on the campus should be fenced? Should building exteriors be illuminated at night?

A selected panel of consultants developed Merlo's checklist by visiting eight sites — three in Michigan (Henry Ford, Kellogg, and Flint) and five in California (El Camino, Mt. San Antonio, Orange Coast, Foothill, and College of San Mateo). The panel concluded that: (1) the minimum full-time enrollment of a comprehensive junior college should be not less than 1,000 students or more than 5,000; (2) the basic buildings should include administrative and guidance centers, classroom and laboratory buildings, a student center, a library, and physical education buildings; (3) the interiors of all buildings should be designed for flexibility, particularly in view of the changing theories of instruction; and (4) each area should have separate heating and air-conditioning controls.

Space Utilization

What steps should be taken by the established junior college in need of additional facilities? Obviously, the college can do one of two things: restrict its enrollment to the current number or add more buildings. According to a study conducted by Educational Facilities Laboratories, colleges could "accommodate 50 per cent more students without new buildings and save $15 million in capital outlay" (ED 015 718). By increased efficiency in the use of space, administrators could alleviate some of the pressures with little facility expansion. The study includes, in workbook form, a room-use survey, a summary of utilization data by kinds of instructional room (by weeks, days, and hours), and a summary of instructional space utilization by size of room.

Innovation and Facility Planning

During the last decade, new techniques of instruction have led to numerous innovative designs in college buildings. Language laboratories, large-group instruction areas, and the deluge of audio-visual materials and techniques have all affected facility design.

Haskell's report (ED 014 970) of forum-type rooms for large-group instruction describes a theoretical model costing about $210,000 and consisting of: 300 student stations equipped with tablet-arm chairs, stereophonic speakers, television receivers, rear-view projection equipment, a television control center, a student-response system, and a speaker's console with tape and record players, AM and FM radio, wireless microphone, and controls for speakers, lights, screen, and projection. The model is designed for a sloping or stepped floor surface.

Dimitry maintains that the "house plan" — a concept dating back to fourteenth century Oxford — could provide junior colleges with orderly growth over a period of years (ED 013 627). For each 1,000 full-time students, an educational house could be built. The houses would be constructed around the campus' focal point, namely administrative offices, library, auditorium and community arts building, college community center, physical education building, and intermediate school district offices. A house itself would include classrooms and most laboratory rooms, faculty offices, guidance and counseling offices, student activities space, student study space, snack bar and cafeteria, and bookstore. As the college's enrollment and resources grow, more houses could be added to the campus. Constructed in a cellular, quadrangular, or circular form, each house would be semi-independent of the parent institution and, in consequence, could alter its curriculum and/or instructional techniques without disrupting the educational program(s) elsewhere on campus.

Summary

Although most of these publications are not strictly research documents, they do give some description of the planning process employed by architects and educators. The process, according to these writers, consists of (1) analyzing the needs for new or additional facilities as determined by the kind of curriculum adopted and the number of students anticipated, and (2) formulating educational specifications with regard to the location, size, and function of each building.

Generally, it may be concluded that there is a trend toward greater simplicity in building design, although the variety of building types has become more diverse (clusters, fingers, etc.). It is commonly agreed that faculty members and architects should both be involved early, if not initially, in the planning process.

If, as prophesied in a special issue of *College and University Business* (October 1967), more than 2,000 additional junior colleges will be built by the end of the twentieth century (ED 017 249), architects and educators must work more wisely and more effectively to select sites and construct facilities to enhance the educational processes in the decades immediately ahead. Junior college personnel and architects should increase their research efforts in: (1) space utilization; (2) site selection and development; (3) the kind and number of facilities needed for the average college; (4) evaluation of existing facilities; (5) management and maintenance of facilities; and (6) incorporation of innovative educational techniques in facilities. Without such data, educational planners cannot hope to provide suitable facilities for tomorrow's junior colleges.

Dale Gaddy

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UCLA JUNIOR COLLEGE RESEARCH REVIEW

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STUDENT PERSONNEL SERVICES IN THE JUNIOR COLLEGE

Since junior colleges by and large subscribe to the open-door philosophy, they have more diversified student bodies (in terms of age differences, academic interests and abilities, etc.) than any other level of education. The administration, faculty, and governing board must necessarily concern themselves with creating and rejuvenating effective student personnel programs if the junior college mission is to be realized.

This issue of the *Junior College Research Review* includes documents that have been received by the ERIC Clearinghouse for Junior College Information and announced in *Research in Education*. All documents cited in the bibliography may be obtained from EDRS, as explained on page four. It should be noted that most of the ERIC documents pertaining to student personnel services have been processed by the ERIC Clearinghouse on Counseling and Personnel Services (University of Michigan, Ann Arbor, Michigan 48104); readers of this *Review* should consult indexes to *Research in Education* and/or write to the counseling and personnel clearinghouse for other materials.

Within the above limitations, the purpose of this *Review* is to present an overview of only those documents received at The Junior College Clearinghouse concerning student personnel services at the junior college level.

REVIEW

Almost without exception, the Clearinghouse documents pertaining to junior college student personnel work are more descriptive than analytical; most are attempts to describe the *functions* of a student personnel program — not the *effects*.

Regarding functions *per se*, a disparity of opinion is reflected in the documents cited herein. One writer advocates no less than 35 functions (ED 012 608); another lists only 12 (ED 022 460). It is generally accepted that a comprehensive student personnel program should include at least these six areas of responsibility: orientation, appraisal, counseling and advising, activities, regulations, and services. The overall administration of the program could be considered an additional area (ED 011 459, ED 013 065, ED 013 636, ED 013 637).

One of the more extensive studies was prepared in 1965 by the Committee on Appraisal and Development of Junior College Student Personnel Programs (a project funded by the Carnegie Corporation). The original report (ED 013 065) is also available in a shorter "reader's version" (ED 011 459). T. R. McConnell, chairman of the committee, states in the preface:

> Now the community college is rapidly becoming the great distributive agency in American education. Here the student can make a fuller and perhaps more accurate inventory of his characteristics; test his aptitudes and interests in the classroom, in the laboratory, or in work-study programs. Here he can revise his vocational and educational plans by bringing them more nearly in line with his reasonable expectations. Here he can establish his identity and at least begin to attain the independence that characterizes individuality and adulthood. The Committee on Appraisal and Development of Junior College Student Personnel Programs believes that the student is likely to do these things effectively only if the college recognizes the process of self-discovery as one of its principal purposes, and if the institution's personnel services are adequate in scope and quality to give the student necessary assistance.

Hence, an effective junior college student personnel program cannot be a replica of an effective secondary or university student personnel program, or even one of another junior college, if it hopes to adequately meet the needs of its own individual students.

ORIENTATION

Before a person can effectively assume the role of a junior college student, he must learn of the existence of the institution, the layout of its physical facilities, and the academic or vocational goal for which it will prepare him. In consequence, the orientation program begins with the dissemination of pre-college information — probably through secondary school counselors.

In a publication edited by Maclean and Washington (ED 025 265), it is noted that a desirable orientation program should include: (1) pre-enrollment interviews, probably during the term before the student's registration, at which time the student meets with a counselor to discuss matters of importance to both, such as the finalization of registration, (2) fall assembly, opening with a coffee hour followed by office visits, open house at the library, laboratories, gymnasium, and a luncheon (in addition to a formal presentation period that includes a preview of the voluntary orientation program), and (3) a voluntary orientation course in which counselors, skilled in group techniques, meet with groups of students once a week to discuss topics originating from the group. Many of the responsibilities in an orientation program could be delegated to sophomore advisers under the leadership of a student personnel staff member. It is suggested that other faculty members and representatives from the community could serve as resource agents for the voluntary orientation program.

Fulco, Nevins, and Shoulders observe that three basic trends in the philosophy and goals of orientation programs are discernible from their review of the literature (1960-67): (1) a shift in emphasis toward more academic-intellectual goals instead of toward making the students "feel at home;" (2) the use of small groups as an integral part of the orientation program; and (3) short-term summer orientation programs to simplify fall registration and reduce confusion among new students. The direction of future orientation programs is difficult to predict at this time.

APPRAISAL

The appraisal function of student personnel services includes the maintenance of records, the measurement of student characteristics and academic growth, the evaluation of students for admission and placement purposes, and the assessment of students' health (ED 011 459). Raines (ED 013 636) points out that "'. . . Records for records sake' represent a sheer waste of staff energy;" he urges effective use of all data. He states that the kind of information collected must be determined by the staff members who will be using it. Contending that the professional counselor should be able to give junior college students *realistic* alternatives to their sometimes less-than-realistic aspirations, Raines adds that such assistance "will not emerge from records limited to a high school transcript and to a hastily completed admissions form nor will it spring forth from an extensive but jumbled mass of seemingly unrelated data."

Granted that applicant appraisal is a necessary function of the junior college student personnel program, what instruments should be used? From their review of the literature, Aiken and Killan (ED 025 265) report that most junior colleges use standardized tests before or immediately after the freshman enters college; that 66 per cent of the colleges in one survey use general ability tests yielding verbal and quantitative scores for guidance purposes; that more than 30 per cent use tests from outside agencies (such as ACT and statewide test programs); and that interest inventories are used in more than half the junior colleges. In conclusion, Aiken and Killan cite several needs in the areas of student appraisal, including (1) the development of norms and of tests designed specifically for the junior college; (2) the development of tests to help students differentiate between the broader curriculums; and (3) the need for more awareness and identification of student values and attitudes.

COUNSELING AND ADVISING

Guidance and counseling are functions that permeate student personnel work. Included in this area are (1) the counseling of students on such matters as personal values, attitudes, interests and abilities, phases of decision making, and vocational plans, (2) the advisement of students about the selection of courses, occupational prerequisites, transfer requirements, study habits, academic progress, and availability of resource agencies, and (3) the consultation with prospective students on educational and occupational services of the institution, as well as on the interpretation of tests and other data (ED 011 459).

An earlier issue of the *Research Review* (September 1968) focused on this aspect of student personnel work and cited practices at five junior colleges in the country (ED 024 368).

ACTIVITIES

Student activities, including social, cultural, and self-government (ED 011 459), must be tempered to certain basic characteristics of the junior college student, as outlined by Raines (ED 013 636):

> The majority of the students hold a highly transitory affiliation with the college and this sense of temporariness conditions their involvement in campus life. Continuity of student leadership is highly tenuous and there are no seasoned upper classmen to provide stability to activities or to perpetuate traditions.
>
> Students who respond most readily to a program of *organized* activities in this setting are usually found among the "collegiate minded" students under 21. At the same time, certain informed and more spontaneous activities will attract some part-time, some adults, some evening, and some married students.

Raines adds that the activities program "must be conceptualized in terms of a variety of important sub-groups within the population."

REGULATIONS

The Carnegie study (ED 011 459) lists the following as regulatory functions: student registration, academic regulation, and social regulation. Student registration — including data processing, the recording of instructors' grades, the providing of transcripts — should, according to this report, be done by the registrar, "but under the supervision of the Chief administrator of student personnel." Academic regulation, it is further maintained, involves the enforcement of probation policies, evaluation of graduation eligibility, and other semi-punitive duties such as processing cases of student infraction of college rules and regulations. The moral and ethical conduct of students falls within the social regulation phase of student personnel work.

SERVICES

Financial aid and graduate placement should be two of the major services within the junior college student personnel program (ED 011 459). Student personnel workers therefore must be involved with student loans, scholarships, part-time jobs, and federal grants. As phrased by Raines: "Even though the cost of attending a community college is usually held to a minimum both by its tuition policy and by its commuter accessibility, many students who attend have very limited financial resources" (ED 013 636).

A comprehensive investigation of the placement function was made by Mohs in conjunction with AAJC's Commission on Student Personnel (ED 014 968). Descriptions of personnel duties and qualifications, types of operational procedures, a collection of typical placement-office forms, sample policy statements, and a reading list are included in this booklet. The author states: "Placement is the capstone of all the advisory services provided the student through his school life and is the culminating and final service within the province of the college."

ADMINISTRATION

Organizationally, the student personnel program should provide for (1) program articulation between high schools, the junior college, and senior colleges, as well as open lines of communication with industrial and commercial enterprises within the community, (2) in-service education for student personnel staff, (3) program evaluation by means of follow-up studies and by student assessments, and (4) adequate staffing, housing, and financing in relation to the college's total mission (ED 011 459). Aiken and Killan (ED 025 265) point out that the function of evaluation must be developed within the staff of the college. This, they write, can be done as follows: "(1) state the purposes of the program — best with faculty and student help; (2) establish the criteria by which the success of the program will be judged; and (3) apply the criteria and interpret the evidence that accumulates . . . ."

RESEARCH NEEDS

Hoyt (ED 013 065) finds three types of needed student personnel research: (1) descriptive studies, including assessment of local labor market and employment conditions; the production of measurement devices suitable for describing the junior college environment; the creation of a comprehensive profile of the entering student at each junior college; the description of activities and the amount of time devoted to each by student personnel staff members; the description of student personnel workers' characteristics; and the description of the process of college selection by junior college students; (2) correlational studies, including factors relating to prestige ratings of various curriculums, faculty acceptance of student personnel workers, student success in given programs, personal and experiential characteristics relating to effectiveness of student personnel functions, and consequences of various student-counselor ratios; and (3) experimental studies, including ways to upgrade the prestige of educational-vocational counseling, to assess the impact of contrived patterns of experience upon value development, and to develop communication patterns between student personnel workers and faculty advisors. Less traditional (but more economical) procedures for contacting students, and student personnel services in terms of stated goals, must be evaluated.

The expected outcomes of such research efforts would be more analytical information on student personnel services and closer examination of the *effects* rather than the *functions* of student personnel programs. Such are the tasks facing student personnel workers in their quest for more effective service.

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