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ABSTRACT

This document contains the fifth and sixth volumes of the Junior College Research Review. Subjects covered relate to trends, curriculum, types of students and programs, faculty, measurement, employment, decision making, and educational accounts. For the first four volumes of the Review, see JC 720 155 and JC 720 156 above. (RN)

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TRENDS IN THE STUDY OF JUNIOR COLLEGES: 1970

RATIONALE AND RECOMMENDATIONS FOR FIFTEEN ESSENTIAL RESEARCH PROJECTS

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This report was developed to appraise the current state of inquiry in the junior college field and to suggest specific, potentially fruitful paths of investigation to researchers based in universities, on junior college campuses, and elsewhere. In attending to those objectives we have analyzed the literature on the two-year college with an eye to explicating the general research trends and conceptualizations in the field.*

Premises

Two premises are basic to this report. First, research efforts undertaken on the junior college have long been subordinated and unrelated to the promotional and developmental activities of the field. For example, it has always lacked a coordinating unit that could give direction to research efforts undertaken in the field. Although several research and development centers occasionally study junior colleges as a concomitant of their other projects, no center addresses itself particularly to the two-year college. Studies are prepared by research teams based at universities, regional laboratories, state departments and associations, and within the junior colleges themselves; but each institution or agency devises its own research modes and problems and investigates issues that it deems most important. There is little interaction among these groups and the research and scholarship of the field reflect this state of affairs. One result of all this is quite noticeable: the field has been blessed with only a handful of investigations that could properly be labeled "hallmark" studies.

Second, despite the fact that many people in the junior college view their field as "unique," it is commonplace to observe that the two-year college lacks an identity of its own [39]. Occupying a position somewhere between the secondary schools and the four-year colleges and universities, people within and without the junior college community do not hold consistent or comprehensive concepts regarding the institutional or educational functioning of the two-year college in America. In particular, those who occupy various roles within the institutions and those who speak for its professional associations display a marked lack of unanimity. The two-year college is variously viewed as a stepping stone to higher learning, a technical training institution, a community service agency, a "comprehensive" institution, and a sorting agency for a community's youth. If seen by some as the gateway to universal higher education [41], it is seen by others as a stumbling block for those seeking upward social mobility in American life [35]. In his address to the 1970 annual convention of the American Association of Junior Colleges, Edmund J. Gleazer, Jr., Executive Director of the Association, reflected this uncertainty about institutional identity when he suggested the possibility that junior colleges drop the word "college" and re-identify themselves as "community centers for educational development" [24]

The absence of comprehensive conceptions of the institutional and educational functioning of two-year

*Clyde Blocker and Russell Kropp, members of the Advisory Board to the Clearinghouse, provided extremely useful commentary on the first draft of this paper. Their suggestions are incorporated herein.

The paper was also reviewed by other Advisory Board members including R. Dudley Boyce, Albert A. Canfield, and Robert Hayes, by Roger Yarrington of the American Association of Junior Colleges, and Florence B. Brawer, John Lombardi, and Young Park of the Clearinghouse staff. Our sincere thanks to them all.

colleges makes for inadequate and indistinct analyses of their roles and practices, and consequently frustrates efforts to develop a "common language" for researchers and practitioners to deal with their educational problems. In this sense, researchers in the field have failed in their attempts to guide educational practice; and they have avoided what Medsker [39] has called the pressing need for dealing with the issue of the "identity crisis" in two-year colleges. The upshot of many research efforts has been a babel of investigations that seldom attend to disciplined inquiry and seldom speak to what Cohen [17] calls the "real" issues of the field.

Organization of This Report

Building on the information analysis and model-generating activity of the Clearinghouse, this report proposes a set of fifteen recommendations for research-related efforts in the junior college field. Each recommendation is supported by a rationale rooted in the literature of the field.

The report does not treat developmental activities or pre- and in-service staff training programs, such as those conducted by or under the auspices of university professors, professional associations, and regional educational laboratories. In some cases these same groups are interested in junior college research, but their service activities are not considered here.

The recommendations in the text are divided into two sections: (1) projects that the ERIC Clearinghouse for Junior Colleges at UCLA is presently engaged in or plans to undertake as part of its continuing activity; (2) projects that should be undertaken by other groups in the field.

Two threads of thought permeate the rationales of these recommendations: the notion that research in the field must attempt to come to grips with the problems of institutional identity, and the idea that research efforts in the junior college should be addressed to accounting for the impact of junior colleges on their students, their parent communities, and society at large.

In some cases we have been explicit about the type of research perspective that should be taken in tackling future studies, using the distinctions postulated by Cronbach and Suppes [20] between "conclusion-oriented" and "decision-oriented" research. In conclusion-oriented research, problems are defined by the investigators, who are free to revise their approaches to inquiry while conducting their investigations. In decision-oriented research, problems are defined by the decision-maker—the teacher or administrator—and the researcher is obligated to work within the framework of the decision-maker's problems.

It is important that a contracting agency undertaking any research activity suggested in the recommendations be willing to work in association with groups of junior colleges. All the recommendations in the second category assume that studies will be undertaken *with* two-year colleges and that the junior college itself will not be treated as simply an object of research by remotely placed investigators. At this stage of its development, the junior college field needs formative research more than it needs summative studies. Moreover, as Havelock puts it, *successful linkage between educational research and practice is achieved when user and resource system interact collaboratively, stimulating each other's problem-solving behaviors.* The ERIC Clearinghouse for Junior Colleges is fully committed to the realization of that vital linkage.

(Numbers in the text refer to the bibliography.)

SECTION ONE

Recommendations for projects that the ERIC Clearinghouse for Junior Colleges at UCLA plans to undertake as part of its continuing activity, listed in order of priority.

I. CONCEPTUALIZING RESEARCH DIRECTIONS
II. ANNUAL REVIEW OF JUNIOR COLLEGE RESEARCH
III. IDEAS OF THE JUNIOR COLLEGE MOVEMENT

RECOMMENDATION I: CONCEPTUALIZING RESEARCH DIRECTIONS

The ERIC Clearinghouse for Junior Colleges concerns itself with conceptualizing research directions in the field

The Clearinghouse is in an excellent position to be a research coordinating unit for the junior college field. Since it was organized four years ago, it has been formulating general guidelines on research activity with the aim of firming up a research tradition focused on improved educational practice. More specifically, the Clearinghouse has been engaged in testing models and procedures, conducting small-scale summative studies, and synthesizing concepts that are particularly relevant to the functioning of the two-year college.

These efforts have increased the salience of the Clearinghouse to its user community of practitioners, junior college-based researchers, and professional organizations. They have also made it possible for the Clearinghouse to serve the field effectively as a vital link between educational research and practice. The Clearinghouse feels that its service to the user community can be enlarged by emphasizing the role of the Clearinghouse as a "vital link" between research and practice. In this respect, for example, it seems particularly important for the Clearinghouse to assist in preparing Requests for Proposals (RFP's) for any large-scale investigations to be undertaken in the field.

RECOMMENDATION II: ANNUAL REVIEW OF JUNIOR COLLEGE RESEARCH

An annual review of junior college research should be published by the Clearinghouse

Reviews of the literature and research in the field have been very limited since the emergence of the junior college movement in the twentieth century. Apart from the research reviews in the *Encyclopedia of Educational Research* [39], which are published only every ten years, and the recent review in the *Britannica Review of American Education* [18], digests of the general literature and research in the field have been restricted to annotated bibliographies. These are valuable compendiums of information, but they are not suited to keeping either researchers or practitioners abreast of research developments in the field. For example, internal evidence suggests that the research review in the most recent edition of the *Encyclopedia of Educational Research* was written in 1966 or 1967. The one in the *Britannica Review of American Education* was addressed to a lay audience and not to the field's researchers and practitioners. Annotated bibliographies seem to be used principally for library acquisition and by graduate students preparing for examinations in the field.

The Clearinghouse has attempted to deal with the lack of research reviews in the field through its publication, in conjunction with the American Association of Junior Colleges, of a monthly *Junior College Research Review*. This *Review*, however, was designed to summarize ERIC documents over a wide range of specialized topics with the aim of encouraging practitioners to make use of the ERIC system. Issues of the *Review* do not typically deal with research questions *per se*, although some of the recent "expanded" numbers – such as this one – have been focused on such questions. Nonetheless, the *Review* is mainly a reportorial, not a critical, publication.

An annual review of research should help to clarify research efforts, undertaken within and outside the field, which focus on the junior college; the need for such clarity has been the central theme of this report. An annual review would bring both researchers and practitioners into close contact with the latest scholarship and literature of the field. Since the review necessarily would be a collaborative venture, it should promote a scholarly dialogue on the research problems and issues of the field. Moreover, the review would provide interested professionals with a coherent, authoritative, and searching statement on the state of research in the field. As one consequence, the review would likely generate fruitful investigations by pointing to neglected paths of inquiry.

The proposed review would be similar in some respects to the periodic *Review of Educational Research* published by the American Educational Research Association. It would have three parts. First, the review would include information analyses that describe the educationally significant trends in the literature falling within the junior college field during the report period. Secondly, it would contain a synthesis of the findings and conclusions of pertinent research and scholarship, addressed to practitioners, researchers in the field, and researchers in related fields—syntheses prepared by both practitioners and researchers. The third part would be devoted to substantive critiques of books, lengthy journal articles, and monographs that either deal directly with, or are particularly important to, the junior college field.

RECOMMENDATION III: IDEAS OF THE JUNIOR COLLEGE MOVEMENT

A study should be undertaken to synthesize the ideas of the American junior college movement

Medsker [39] has argued that the major effort of the junior college field in the 1970's is to flesh out an "identity" for the junior college in American society and put to rest the "identity crisis" that has plagued this institution since its emergence. One way to deal with the problem of identity is to subject the historical development of ideas in the junior college movement to careful analysis.

There is a substantial body of "promotional" literature generated from within the junior college movement that attempts to treat the nature and purpose of junior colleges. This literature has been accumulating for more than fifty years and bespeaks a long-standing desire by junior college leaders to pinpoint, in Jencks and Riesman's [31] phrase, "a distinct ideology" to justify to the public a countless array of activities and programs undertaken by the two-year colleges. Much of that literature is ahistorical in outlook and defensive in posture, leaving serious readers with impressions that the junior college movement lacks historical importance and that the junior colleges themselves lack institutional security. Nonetheless, on analysis, that literature may yield some fruitful insights into the historical development and the institutional functioning of junior colleges that could help the field take steps to resolve its "identity crisis." Moreover, an analysis of literature might produce an understanding of the general problem of institutional identity that has arisen in American higher education during the past ten years or so.

SECTION TWO

Recommendations for projects to be undertaken by other agencies, in which the Clearinghouse stands ready to assist as a consultant or steering committee to interested parties. The recommendations in this section are ordered by priority.

IV. FIELD USER INFORMATION SERVICE
V. ASSESSING TEACHING EFFECTIVENESS
VI. ASSESSING CONTENT VALIDITY OF JUNIOR COLLEGE CURRICULUMS
VII. A MODEL OF JUNIOR COLLEGE SCHOOLING
VIII. PROGRAM ASSESSMENT MODELS
IX. EFFECTS OF JUNIOR COLLEGE SCHOOLING ON STUDENTS

X. STUDENT CHARACTERISTICS IN OCCUPATION-CENTERED CURRICULUMS
XI. ASSESSING VERBAL SKILL DEPENDENCY
XII. IMPACT OF JUNIOR COLLEGES ON PARENT COMMUNITIES
XIII. ASSESSING ORGANIZATIONAL CLIMATES
XIV. ATTITUDINAL STUDIES
XV. POLLING COMMUNITY OPINION

RECOMMENDATION IV: FIELD USER INFORMATION SERVICE

A Field User Information Service should be organized for use by junior college practitioners

Putting educational knowledge and expertise into practice is one of the enduring issues of the field. And translating the work of researchers into a plan of action that can be used by a practitioner requires a variety of communication structures. As Cronbach and Suppes noted [20], too often an ill-considered emphasis has been placed on the belief "that practice derives linearly from research findings." That belief tends to overlook the ever-changing and reactive nature of both research and practice in the educational process. Research, development, or dissemination centers simply cannot anticipate all questi s about educational practice. Obviously they cannot treat all topics in which practitioners might express an interest, they cannot synthesize all the knowledge of the field, and they cannot overcome the inevitable time lag that attends any scholarly inquiry.

To bring expertise within the field immediately to bear upon practice in individual junior colleges requires: (1) the individualization of decision-oriented research, and (2) the means whereby practitioners may address their questions about practice to educational experts with facility and with the expectation of receiving speedy responses. These features of information dissemination are not presently available to practitioners in the junior college field except to the extent that staff members of the American Association of Junior Colleges, the ERIC Clearinghouse for Junior Colleges, and other knowledge groups are able to prepare informal responses. However, a Field User Information Service could be organized to attend more formally to those inquiries.

At the heart of the Information Service would be a group of from 50-100 experts in various areas of educational research and practice. (The areas would follow ERIC descriptors.) Each of these educational experts would receive all documents in the ERIC system and other materials related to his area of expertise, which he would use, in turn, as a resource base for responding to practitioners' inquiries. The experts would include, among others, the project directors of the American Association of Junior Colleges and knowledgeable practitioners, professors, and researchers in and outside of the junior college field. The efforts of the group would be coordinated by a professional organization in the junior college field, such as the American Association of Junior Colleges.

The Information Service would be able both to individualize the treatment of practitioners' inquiries and to provide them with speedy replies. Depending on the nature of the inquiry, the replies could suggest either practical solutions that are rooted in research or point to pertinent documents in the ERIC collection and related resource bases.

Implementation of the Information Service would stimulate inquiries from practitioners and consequently foster a greater reliance of educational practice on research. Besides, use of the Information Service by practitioners would alert researchers to the "real" concerns of the field. The long-term effects of such a service might be twofold. On the one hand, the service might promote a badly needed dialogue between researchers and practitioners, and, on the other hand, it might help to narrow the gap between theory and practice in education.

RECOMMENDATION V: ASSESSING TEACHING EFFECTIVENESS

Models should be developed for decision-oriented assessment of teaching effectiveness

Junior colleges are self-defined as "teaching institutions;" indeed, a leading text of the field [54] suggests that either the junior college "teaches excellently, or it fails completely." During the past ten years or so, the need for improving instruction in the two-year college has been the theme of countless symposia and a great deal of prescriptive literature. Yet in a recent monograph summarizing the research and thought on teaching effectiveness and faculty performance, Cohen and Brawer [19] argued that the whole area of teacher evaluation is beclouded with ambiguity and bereft of determinate criteria. They concluded that efforts to evaluate faculty performance and teaching effectiveness will be innocuous until clearly stated definitions and criteria related to teaching effectiveness — and hence faculty performance — are rooted in the variable of student learning.

Research on teaching effectiveness has been promoted in recent years under the rubric of "improving instruction." Several approaches to the topic have been taken within the field. There has been some interest in student evaluation of teachers [7], pre-service assessment of "teaching" personalities [9], the variable of student learning via measurable objectives and defined outcomes [7], and research on instructional treatments. The actual research base is so limited that it would be hazardous to venture any generalizations, but it does point up the pertinence of Cohen and Brawer's arguments about ambiguity and indeterminate criteria. Moreover, little, if any, of this research has affected existing practices of teaching evaluation. Teacher evaluation remains wedded to supervisorial ratings by administrators [19].

It is a truism that evaluation of teaching effectiveness is complex. Accordingly, we suggest the need for holistic models for assessing teaching effectiveness that will attend to several variables. These models will have to serve both as a means for evaluating faculty performance and as a "way into" purposeful instruc-

tional research. To give direction to the formulation of at least one such holistic model, we suggest that it be developed on the following assumptions: (1) that teachers are accountable to their students for intended or planned as well as for unintended or unplanned effects of instruction, and (2) that evaluation of teaching effectiveness is concerned with measuring the efficacy of cognitive and affective transactions between teachers and students.

Some measures to be considered in a model rooted in these assumptions include a reliable and valid evaluation device to be used by students in assessing their teachers as well as dependent and independent measures of student learning that indicate changed cognitive and affective behavior on the part of students.

RECOMMENDATION VI: ASSESSING CONTENT VALIDITY OF JUNIOR COLLEGE CURRICULUMS

Models should be developed for assessing the content validity of junior college curriculums

Curriculum inquiry in the junior college field has been centered on philosophical statements regarding institutional purposes [25] and descriptions of transfer education, general education, vocational training, etc. [44]. Some attention has been focused on describing the external influences that impinge on junior college curriculums [10] and the intra-institutional forces that shape certain curricular decisions [6], but most of it has been purely observational. Only one major investigation [42] sustains the premise that two-year college transfer curriculums are governed to a great extent by the practices of nearby senior institutions. The California study of general education [33], published two decades ago, revealed that general education was then a captive of the transfer curriculum, but a recent observer has argued that general education is now a euphemism for programs designed for "terminal students" [18]. The Clark study [14] suggested that junior college curriculums were untowardly constricted by community pressures. Recently, though, Jencks and Riesman [31] suggested that two-year college curriculums are hidebound by the national disciplines of knowledge. No studies have been undertaken to assess the content validity of occupation-centered curriculums, and few efforts have been made to appraise the validity of instructional materials used in junior colleges.

Apart from the lack of information about the content and focus of the junior college curriculum, the welter of conflicting notions suggests the need for assessment models of content validity. Frameworks need to be developed within which researchers can ferret out the types of educational objectives, the sources of subject matter, and the kinds of instructional materials used in junior colleges. One study, presently under way [40], is examining the development of "black studies" in junior colleges in terms of the conceptual system developed by John I. Goodlad. Content validity is not an insignificant issue. At stake is the rational planning of coherent learning opportunities for students – students who have been complaining loudly about irrelevant curriculum in higher education. Properly conceived assessment models of content validity can make it possible for junior college practitioners to engage in rational curriculum planning.

RECOMMENDATION VII: A MODEL OF JUNIOR COLLEGE SCHOOLING

A model of junior college schooling, based on the notion of student learning, should be formulated

Three assumptions appear to underly the way practitioners and researchers in the field look at junior colleges. The overriding assumption seems to be that people have to be certified by schools and colleges in order to "make it" in American life. It is assumed that enrolling in a junior college – provided of course that all other avenues to higher education are closed – is the best option open to every high school graduate. It is further assumed that junior colleges themselves are the most flexible educational agencies for certifying and recruiting potential student clients, i.e., black and other minority group students, to the junior college [38].

Although these assumptions may not be unworthy of the two-year college, they strongly suggest that junior colleges are primarily social agencies for sorting youth and "safety valves" for cooling out the unrealistic educational expectations of many high school graduates [31,14].

In some respects, the assumptions above must be sustained with a degree of disingenuousness on the part of junior college professionals, because two-year colleges generally sort their students by way of placement examinations and letter grades in the same manner as four-year colleges and universities. Also, they have such high drop-out rates that they become, more often than not, "one-year colleges." While many professionals lament these high drop-out rates, some of them apparently believe that high attrition is an outward sign of inward academic excellence [45].

Cohen [15] has argued for the notion that the "teaching institution" should be a "learning institution" that purposefully collects evidence of student learning. He has proposed the outlines of a model of student learning in terms of defined outcomes, measurable instructional objectives, and stimulus-response learning theory. It is on these elements that further work needs to be done, for a comprehensive model of school learning must come to terms with the cognitive rationalists, such as Bloom [5] and Carroll [12], and it must have points of contact with the "fantasy and feeling" notions of Jones [32] and others.

The Clearinghouse suggests the development of an action-model of junior college schooling that would involve working directly in junior college settings with staff members and students. Such a project would yield an empirical model of schooling, summative data on institutional and educational functioning, and a series of target communications for researchers and practitioners.

RECOMMENDATION VIII: PROGRAM ASSESSMENT MODELS

Program assessment models should be developed for evaluating the outcomes of junior college schooling

Program assessment has not been undertaken by junior colleges at the institutional level. Medsker [42,43] has twice assessed the institutional characteristics of a national sample of two-year colleges with respect to a few contextual variables. There have also been sporadic attempts to appraise particular programs of study in the two-year college – especially nursing curriculums. And Johnson [14] has called for program evaluation of innovative practices. There are several Clearinghouse Topical Papers that provide designs for conducting decision-oriented research in the junior college; however, each of these designs is limited to a single topic or concept and does not address the broader issues of program assessment. Yet it is commonplace for junior colleges to draw up "five-year" plans that are divorced from any comprehensive effort at appraising contemporary institutional or educational functioning.

We suggest a model for evaluating the outcomes of junior college schooling as they apply to the four major societal functions two-year colleges typically perform—student sorting, student custody, community service, and student learning. The model would define these four functions and set forth appropriate evaluative criteria for each. The proposed model would be designed specifically for institutional self-study.

RECOMMENDATION IX: EFFECTS OF JUNIOR COLLEGE SCHOOLING ON STUDENTS

Large-scale studies should be undertaken to assess the effects of junior college schooling on students

There is a rich literature dealing with the impact of *four-year college and university* schooling on student populations and alumni [22]. This research on "impact" has enlarged our understanding of college students and the institutions they attend. Unfortunately, information about the effect of *junior colleges* on their students is not a part of that literature. We have only fragmentary information regarding the effect of junior college schooling on students.

The Knoell and Medsker investigation [37] of junior college transfer students is the only substantive study in the field that deals with the impact of junior colleges on students. This study concluded that junior colleges were more supportive of their transferring students than were the receiving institutions – a conclusion that was not at all surprising. Pace and Hendrix have developed Junior College Environment Scales [48] based on Pace's College and University Environmental Scales [47], but the avowed purpose of this instrument is to predict junior college environments that are most conducive to transfer student learning. In the same vein, two other studies have attempted to assess the institutional characteristics of junior colleges [51] in terms of the model devised by Astin and Holland [2] for senior institutions. Although those studies revealed evidence of regional variability in junior college institutional characteristics throughout the country, the indices of variability seem to be essentially predictive of what sections of the nation are most likely to have junior colleges with environments that support transfer students. This approach to research on student impact complements the work of Pace and Hendrix.

However, only a minority of students actually transfer to senior college from junior college. And there are no serious studies or measures of the impact of junior college schooling on the many drop-outs or on those who terminate their formal schooling after completing a two-year college program of study. Moreover, there is no indication that any investigations are being planned to conduct large-scale studies of the impact of junior colleges on the majority of students who do not transfer to senior institutions, although plans are now under way to establish certain national data bases.

Impact studies, both flat-time and longitudinal, are needed to reveal the strengths and weaknesses of junior college schooling. As social agencies, supported for the most part by public funds, junior colleges are accountable to the public for the effects of their programs on students and alumni. In the 1970's it seems likely that the public will be demanding more information from all levels of schooling about the impact of formal education on students. Well-conceived investigations should enlarge our present understanding of the nature of junior colleges and the people who attend them.

A number of paths of inquiry are open to researchers interested in assessing the impact of junior college schooling. We suggest that particular attention be devoted to appraising the effect of junior colleges on student personalities. The conceptual framework devised by Brawer [8] is one model of inquiry that deserves such use by researchers.

A current project, *A Study of Junior Colleges*, is an example of Clearinghouse involvement in helping to plan and conduct studies of this type. James Trent, the initiator, has drawn heavily on models supplied by the Clearinghouse. In addition, the Clearinghouse staff is providing literature reviews and bibliographic support for the project.

RECOMMENDATION X: STUDENT CHARACTERISTICS IN OCCUPATION-CENTERED CURRICULUMS

Studies should be undertaken to appraise the characteristics of junior college students recruited to occupation-centered curriculums

Research on junior college students has focused principally on two topics. There is a substantial body of research findings on the characteristics of junior college students – research, however, that is based on predictive measures and models of inquiry designed to characterize senior college and university students. This research has been carefully reviewed by Cross [4]. The upshot of that research is that junior college students do not generally compare favorably with their peers elsewhere in higher education on traditional predictive measures, and it sustains the validity and re-

RECOMMENDATION XIII: ASSESSING ORGANIZATIONAL CLIMATES

Studies should be conducted to assess the organizational climates of junior colleges

Most of the substantive efforts to appraise the organizational climate of junior colleges has been conducted by Blocker and various associates [4]. The Blocker studies concluded that organizational structures in junior colleges should be responsive to indigenous conditions and that patterns of organization and staff interaction vary considerably from one college to another. These investigations are valuable, but further research on organizational climate is needed. For, despite the work of Blocker in particular, administrative research and theory in the junior college field remain devoted to the formal-legalistic tradition. A great number of studies, for example, have focused on an analysis of formal statements of rules and procedures, and an abundance of prescriptive literature has been written on how administrators should behave in junior colleges.

To get a better perspective on the organizational *Geist* of junior colleges, studies need to be conducted in the tradition of Gordon [26] on task orientation, of Halpin [28] on *ésprit* and community, and of Parsons [49] on the "associational" characteristics of academic communities. From such investigations will emerge clearer identities of junior colleges as educational institutions; a fulfillment of this need has been the plea of countless professionals in the field.

RECOMMENDATION XIV: ATTITUDINAL STUDIES

Instruments should be developed for conducting longitudinal studies of the attitudes and perceptions held by junior college professional staff members and lay trustees with regard to the nature and purpose of junior college schooling

A widely held assumption in the field is that many teachers and administrators are recruited to the junior college without much knowledge of its purpose or nature. A wealth of prescriptive literature calling for pre-service and in-service training of practitioners emphasizes the study of institutional characteristics and goals in the two-year college. The W. K. Kellogg Foundation has funded several programs within the past ten years or so to "train-up" prospective practitioners for service in the junior college field, and most junior colleges conduct some sort of in-service training session, focused on their special nature and purpose, for their new faculty members. These in-service orientation programs have been analyzed recently by Kelly and Connolly [36]. The underlying premise of the call for pre-service and in-service orientation of practitioners is simple enough: the junior college wherein the practitioners are fully cognizant of its functions will be a more effective educational institution.

Research on the topic has been limited. No investigations have been undertaken to study the institutional perceptions and attitudes held by administrators. One study of the educational attitudes of lay trustees in junior colleges [13], which sampled opinions from junior college board members in California, was concerned with the institutional functioning of the two-year college. Conclusions reached in that study suggest that the issue of institutional identity is troublesome for lay trustees.

A major piece of research was conducted several years ago by Medsker [42] on the topic of faculty perceptions and attitudes. He concluded that there was more than ordinary disagreement among teaching staffs regarding institutional identities and instructional purposes. He also observed that some of the disagreement undoubtedly stemmed from the relative ignorance or lack of interest of teachers about the nature and purpose of junior college schooling. Although this study was recently updated [43], his conclusions are the same. The earlier study by Medsker heavily influenced the conclusions reached by Blocker and associates [6] in their synthesis of research and literature on the topic.

Rooted in reference group theory, Medsker's methodological approach is likely to characterize much of the future research on the general topic of professional staff and trustee perceptions of junior college schooling. Yet a complementary approach to the topic is needed that stresses the relationship between perceptions and attitudes on the one hand, and institutional functioning on the other. At the present time, two researchers are attempting to develop a model for this particular type of inquiry into attitudes [16].

RECOMMENDATION XV: POLLING COMMUNITY OPINION

Measures should be developed for polling community opinion on the educational functioning of junior colleges

Within the past decade it has become popular to refer to the two-year college as a "community college." A number of books and articles have celebrated that functional definition [29]. Although this concept intentionally suggests that the two-year college is responsive to the needs of its parent community, there is every indication that the colleges simply assume the needs of their parent communities because they have not undertaken systematic polls of community opinion.

Measures for polling community opinion about the functioning of junior colleges could be useful devices in educational planning, in making the community aware of the existence of the two-year college, in timing the call for bond and tax elections, and in giving direction to the educational programs of the college. Regular polling of community opinion would surely indicate to community residents that the two-year college expects to serve expressed "needs."

Summary

This report has presented recommendations for fifteen studies needed if people in the junior college field are to become more aware of their purposes, processes, and effects. The list is not—nor was it meant to be—exhaustive On the contrary, we undertook the task in

liability of the measures used to gather the data.

There are also a number of studies of junior college transfer students concerned, in the main, with the impact of junior college schooling on transfers to senior institutions. The research on this topic was summarized a few years ago by Hills [30] and revealed that junior college transfers do not, on the whole, perform as well academically as native students; nor do transfers graduate as readily. These conclusions were confirmed again in the recent work of Trent and Medsker [55].

But the field knows very little about students recruited to sub-baccalaureate occupation-centered training programs. To date, research efforts have been limited to identifying salient variables that account for student selection of "voc-tech" curriculums [23], but this research is not sufficiently broad in scope to warrant any generalizations. Virtually all of its subsumes the notion of rationality in student selection of occupation-centered curriculums, a premise seriously questioned by Trent and Medsker [55]. A couple of researchers have toyed with Holland's [27] empirical theory of vocational choice, which is rooted in personality theory. Their efforts were undertaken to verify the Holland framework and not to implement it in decision-making, although Holland's work was designed for both conclusion-oriented and decision-oriented research. In brief, the field is simply ignorant about the characteristics of students recruited to occupation-centered programs that could give meaning to both the students and the programs.

RECOMMENDATION XI: ASSESSING VERBAL SKILL DEPENDENCY

Conclusion-oriented and decision-oriented studies should be undertaken to assess the verbal skill dependency of occupation-centered curriculums

In spite of countless inquiries within the field, conclusions about the verbal skills of junior college students remain relatively stable. It is consistently reported that, on the whole, two-year college students are not as verbally proficient as their peers elsewhere in higher education [21]. Besides, remediative efforts to correct verbal deficiencies have been singularly unimpressive [3]. Nearly all the research on verbal skills subsumes that language proficiency is the central criterion for academic success. In the case of transfer educational programs, which are highly verbal curriculums, this argument is clearly defensible. By way of contrast, however, verbal proficiency may not be a dependent variable of equal importance in such occupation-centered curriculums as automotive mechanics.

Occupation-centered curriculums are rapidly becoming the most important part of many junior college instructional programs. Yet most junior colleges appear to shunt enrolling students with low scores on measures of verbal proficiency into occupation-oriented curriculums without regard to the issue of verbal skill dependency. The field simply does not know what actual—in contrast to desired—level of verbal proficiency is needed for people to be satisfactory wage-earning technicians. There is no available information on the extent of verbal skill dependency in existing occupation-centered curriculums. Consequently, neither junior colleges nor potential employers are able to deal realistically with the question of verbal proficiency in technical and semi-technical vocations.

Conclusion-oriented investigations should concentrate on finding answers to two questions: What is the minimal verbal proficiency of practicing automotive mechanics and other wage-earning technicians? and What is the verbal skill dependency in existing occupation-centered junior college curriculums? Further investigations would preface a variety of decision-oriented studies that would attempt to answer pertinent questions regarding the minimum level of verbal proficiency needed for students to succeed in different types of occupation-centered curriculums and to function satisfactorily in a variety of wage-earning vocations. Together, these investigations should yield an index to verbal proficiency in a host of technical occupations.

RECOMMENDATION XII: IMPACT OF JUNIOR COLLEGES ON PARENT COMMUNITIES

A large-scale study should be conducted to assess the impact of junior colleges on their parent communities

Since 1960 there has been a rapid expansion of the number of junior colleges and the number of students seeking higher education in them, but there has been no attempt to assess the impact of junior colleges on their parent communities. The growth and expansion of two-year colleges seem to be the major criteria of their success and efficacy [1].

Undeniably, the expansion of educational opportunities beyond high school by way of the junior college has played an important role in democratizing American higher education. However, this does not speak to questions about the impact of the colleges on the communities that organized and funded them. Among those questions would be: (1) Has the establishment of two-year colleges outside of urban areas stemmed, accelerated, or left unaffected the tide of young people moving to urban centers? (2) How are parent community economic systems affected by the presence of junior colleges? (3) Does local tax support of public junior colleges syphon off funds that would otherwise be invested in elementary and secondary schooling or other social agencies? and (4) Has the presence of junior colleges in communities led public and private employers to up-grade educational qualifications for entry-level employment?

In a very important sense, these questions and a number of others, addressed to the social and economic utility of junior colleges, would be of inestimable value to state and local planning agencies, legislatures, opinion leaders, and businessmen in parent communities, as well as to the lay trustees and officers of the colleges. Besides, the research contemplated under this topic would enlarge considerably our knowledge about the political economy of education. Such knowledge will be especially important as the schools generally become involved in accounting for their effects.

order to stimulate dialogue on the issues presented. Members of other research groups may wish to prepare and submit their own lists. If so, the editors of *Junior College Research Review* will be pleased to present them.

Rather than studies to be conducted, the recommendations offered here might better be considered areas of continuing investigation to be pursued. The junior college is far too important an institution—and the ideas it represents are far too basic to American education—for it to continue developing without involving itself in serious, disciplined inquiry.

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JUNIOR COLLEGE RESEARCH REVIEW

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COOPERATIVE WORK-EXPERIENCE EDUCATION PROGRAMS IN JUNIOR COLLEGES

Occupations within business and industry are more specialized and diversified than ever before. At the same time, an ever-increasing share of the responsibility for providing post-secondary education in this country is being allotted to the junior college. Unfortunately, many junior colleges find themselves in the almost universal quandary of lacking funds, facilities, and manpower. To meet their educational responsibilities, junior colleges have had to adapt both their curricula and teaching methods to make student learning experiences compatible with, and relevant to, the needs of business and industry. One innovation that has grown in application and scope is the cooperative work-experience education program, which combines course work with directly related employment. These programs are distinguished from other types of student employment, which may be only casual in nature, by the fact that in them the student's employment is an integral part of his college program and is supervised and evaluated cooperatively by a college coordinator or instructor and his employer.

Those interested in exploring the possibilities of cooperative work-experience programs for their college may ask the following questions: What are their specific benefits? What types of curricula lend themselves to this cooperative arrangement? How are the programs administered? What problem areas can be anticipated and possibly avoided, through careful planning?

This issue of the *Junior College Research Review* addresses these aspects of cooperative work-experience education programs. Documents cited in this review were selected from materials received and processed by the ERIC Clearinghouse for Junior Colleges. All documents listed in the bibliography have been announced in *Research in Education* and may be obtained from EDRS, as explained on page 4.

VALUE OF COOPERATIVE WORK-EXPERIENCE PROGRAMS

Cooperative work-experience programs have a demonstrated value for students, participating colleges, the cooperating employers, and the community. Specific areas in which each may benefit from the programs have been outlined in the *Handbook on Work Experience Education*, California State Department of Education, 1965, and are noted in Hayes (ED 031 220 and ED 035 397). The following have been selected from among those listed.

Value to Students

1. augments the financial resources of the students and assists them to remain in school
2. develops an appreciation and understanding of the relations between formal education and job success
3. gives students who must work a feeling that their jobs have added importance
4. broadens their understanding of the occupational world and of conditions in the world of work

Value to the College

1. provides an opportunity for the school to relate academic training to job requirements
2. uses many community facilities and resources for training purposes, making it possible for the college to provide training in fields that it could not otherwise serve
3. enables the college to keep abreast of developments in the business and industrial world
4. provides a direct avenue through which the college can meet community needs

Value to the Employer

1. provides him with carefully selected, part-time help who may become permanent at a later date
2. provides him with employees who are receiving additional training through related instruction at college
3. serves as a training program for prospective employees of small businesses or industries unable to conduct extensive training programs of their own
4. reduces turnover because the employees have become adjusted to the job before they accept full-time employment

Value to the Community

1. provides the community with an increased source of well trained workers
2. provides the community with a labor force that is more thoroughly trained than graduates who have not had work-experience education, and hence works more efficiently
3. increases cooperation between the community and the school
4. increases the possibility that young people will remain in the community after graduation, since they will already have found a place in it

ORGANIZATION AND STRUCTURE

Two factors that may be considered central to the development and eventual success of a cooperative work-experience program are the function of the advisory committee and the program coordinator.

As pointed out in one article (ED 031 184), it is difficult to over-estimate the importance of the role of the advisory committee in promoting the success of coop-

erative work-experience education programs. The committee can be helpful in developing and maintaining these programs by:

1. supporting the program coordinator and assisting officials in the establishment of broad policies
2. establishing and maintaining contacts among community agencies to insure employment opportunities for program graduates
3. absorbing feedback from the community and helping the college use this information to assess the goals of the college and develop new operational goals as the need arises.

As a rule, the advisory committee should be a strong advocate of work experience; this group can "sell" these programs to community agencies very effectively.

The program coordinator has been identified by some as the key to the success of cooperative work-experience programs. The following are examples of how the coordinator can promote the success of his programs. He should:

1. be personally convinced that the work-experience concept is a valuable educational method
2. utilize the feedback from individuals and agencies associated with the program to evaluate its effectiveness from year to year
3. communicate with operational units in all areas of student work assignment (personal contacts with participating agencies should be made before approaching them for student work assignments)
4. establish the maximum number of students he can adequately supervise, as a successful program depends on a realistic span of supervisory control (ED 031 184).

Various arrangements may be made for dividing students' time between work and study. The program may be structured to provide a semester of college study followed by a semester of work or students may go to school and work at the same time – attending classes for half a day and working the other half – or it may be arranged on a purely summer basis (ED 031 184).

There is also variation in the amount of college credit awarded for this type of program. It has been recommended, however, that rarely should a college give credit in excess of six semester hours for any work-experience combination (ED 031 184).

Although business and industry are often receptive to the idea of the cooperative work-study arrangement (one study (ED 032 039) found that 80 per cent of 50 employers interviewed agreed with the principle of the plan and felt that they could use it), steps should be taken to insure their continued support. Recommendations that have been made (ED 023 371) include:

1. Agency personnel should be involved in the planning of the program; they should be allowed, even encouraged, to express their views on how the program is to be operated.
2. Various departments of the cooperating agency should be involved – the executive staff, the supervisory staff, and the public relations staff, as well as the training directors.
3. A training program for the college teaching staff and the agencies' supervisors to keep each other informed of what they are doing can lead to a better understanding of the total program.
4. Programs should be scheduled well in advance, providing the college as well as the agency with ample time for planning.

REVIEW OF SELECTED PROGRAMS

The Career Advancement Program (CAP) is a unique cooperative program in technical education at Rock Valley College, Illinois (ED 023 371 and ED 023 397). In its first year, 1967, approximately 40 industrial firms joined with the college to expand educational opportunities for students, to orient the college's programs locally, and to meet their own short- and long-range technical manpower needs. Students attend classes and work each day, with classes in the morning and work in the afternoon or vice versa. This program is unique, however, in that:

1. Industry takes the lead in finding student-trainees. The college cooperates with industry in finding students who are interested in technical education, but industry leads the way.
2. Any student who is enrolled in CAP must first be hired by a cooperating company and go through the regular employment procedures of the company in which he is interested.
3. No academic credit is given for the work-experience portion of CAP. Each company gives its trainees the on-the-job experience it feels they should have.
4. The training stations are established by the cooperating industries.

Although cooperative work-experience education programs are typically business- or industry-related, this approach may be applied to other curricula.

The College of San Mateo has reported a proposal for a teacher-assistant training program with cooperative education field experience as a part of the curriculum (ED 032 038). The program is designed to generate para-professionals trained to work under the direct supervision of certified teachers, assisting them in the accomplishment of their professional duties and responsibilities. As an integral part of their program, students work in a paid, cooperative arrangement with local school districts on either a part-time (an average of fifteen hours a week) or alternate-semester basis. Work stations are available at the elementary and secondary school levels as well as in college readiness tutoring. This flexibility allows the graduates to seek and find employment at many levels in the school system – from kindergarten through junior college.

A document on law enforcement education describes how cooperative work-experience education may enhance these programs (ED 019 965). Police agencies have traditionally trained their recruits without association with a college program; the cadet system, however, may provide a promising possibility for work-study arrangement. Although few agencies currently require that cadets attend college classes, the President's Commission strongly recommended that all of them be required to attend a college or university on a full-time basis. Combining college education with the traditional cadet system would not only attract and hold qualified young people in the police service but would also produce, at twenty-one years of age, a candidate for police service who has not only received training, experience, and education, but also has been closely observed over a period of years for defects in

character or attitude that would adversely affect his performance as a policeman.

EVALUATION

As in any type of college program, the success and progress of students participating in cooperative work-experience education programs must be evaluated.

Evaluation instruments should be designed to identify areas in which students demonstrate superior ability and performance as well as those in which they need improvement, e.g., their relationships with co-workers and their work habits. Evaluation, conducted by agency and college supervisors familiar with the students' work, should be integrated into the educational process; that is, provision should be made for the students to profit from the evaluation (ED 031 184).

Two documents provide samples of rating forms for evaluating student performance (ED 031 184 and 032 039).

PROBLEMS ASSOCIATED WITH COOPERATIVE WORK-EXPERIENCE PROGRAMS

Five major problem areas have been identified by B. Lamar Johnson in his book, *Islands of Innovation Expanding*. As cited in two articles by Hayes (ED 031 220 and ED 035 397) they are:

1. Coordinated college-employer supervision of student employment. At times, students report that inadequate supervision is provided by the college and/or the employer. In particular, such supervision is occasionally not coordinated at all, so that employers and college staff members give conflicting advice.
2. Relationship between college courses and employment experience. Students at a number of colleges report that their course work is but slightly related to their work experience.
3. Conflicts in scheduling work experience and college classes. This problem is, of course, eliminated when the student, at alternate periods, studies full-time and is then employed full-time.
4. Student overemphasis on financial remuneration in his employment. Students, it is reported, often wish to accept higher-paying employment that is only indirectly related to their course work, rather than lower-paying positions directly relevant to their educational goals.
5. Student placement. On occasion, even though students are placed in positions for which they are qualified and which are related to their educational and occupational goals, employers are not satisfied with their work. (This is seldom reported, however. High employer satisfaction appears to be the rule.)

SUMMARY AND CONCLUSION

Cooperative work-experience education programs have demonstrated benefits for the community, college, cooperating agencies, and, most important, for participating students. Students can gain more from their classroom experience when they are able to use the skills and knowledge learned in a work situation and, further, experience gives them a chance to learn first-hand about the requirements of the world of work.

This type of cooperative arrangement has been applied to a wide range of curricula. Although most commonly associated with business and vocational courses, these programs have also been successful in preparing students for more professional careers.

Serving the dual purpose of providing students with a meaningful education and supplying a work force prepared to meet the needs of today's employers, cooperative work-experience education programs may well play an increasingly important role in junior college education.

The ERIC Clearinghouse for Junior Colleges welcomes reports of additional studies relating to work-experience education programs.

As we go to press, we find other items of probable interest to readers of this issue of the Junior College Research.

In Progress

A program is currently being developed within San Mateo and Orange Coast Junior College Districts to provide a national demonstration model for cooperative education in community colleges. This program, developed in cooperation with local business and industrial leaders as well as with government and social agencies, will allow students in a wide variety of college curricula to supplement their course work with related employment experiences. The two-year experimental phase of this program was conducted within San Mateo Junior College District with support from the Ford Foundation. A three-year award of federal funds will help support the demonstration model program to be implemented in the junior college districts in fall 1970. Forthcoming reports concerning this program will be added to the ERIC collection and announced in *Research in Education*.

Additional References

The Center for Vocational and Technical Education, at Ohio State University, in conjunction with the ERIC Clearinghouse on Vocational and Technical Education, has recently published a state-of-the-art paper, *Review and Synthesis of Research on Cooperative Vocational Education*. The paper is designed to help identify substantive problems and methodological approaches for researchers and curriculum development specialists as well as provide practitioners with a summary of research findings directly applicable to educational programs.

Within the next few months, a new publication developed by the Occupational Education Project of the American Association of Junior Colleges, with assistance from the W. K. Kellogg Foundation, will be released. The publication, *Cooperative Education and the Junior College*, by Robert L. Brown, will provide practical guidelines for junior college administrators and board members as well as for industrial leaders interested in the development of cooperative occupational education programs.

These two documents will be added to the ERIC collection and announced in *Research in Education*.

Additional references to reports dealing with cooperative work-experience education programs may be found in *Abstracts of Instructional Materials in Vocational and Technical Education* (AIM) and *Abstracts of Research and Related Materials in Vocational and Technical Education* (ARM). (These are publications of the ERIC Clearinghouse for Vocational and Technical Education, Ohio State University, Columbus, Ohio 43212.)

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ERIC CLEARINGHOUSE FOR JUNIOR COLLEGES

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The Clearinghouse operates under contract with the U.S. Department of Health, Education and Welfare, Office of Education

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Besides processing documents for the ERIC system and issuing the *Junior College Research Review*, the Clearinghouse publishes two other series of its own. The Monographs are in-depth studies or interpretations of research on junior colleges. They are available from AAJC at $2.00 each. The Topical Papers are either research models useful for general junior college testing or items of occasional interest to the field. They are distributed by UCLA Students' Store – Mail Out, 308 Westwood Plaza, Los Angeles, California 90024 at various prices.

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Hazel Horn, Editor

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OCCUPATIONALLY ORIENTED STUDENTS*

K. Patricia Cross

For the past twenty years, this nation has been working toward an explicit goal of universal higher education. The concept has found ready acceptance by both political parties and by four American Presidents since Truman's Commission on Higher Education proclaimed in 1947 that "At least 49% of our population has the mental ability to complete fourteen years of schooling with a curriculum of general and vocational studies that should lead either to gainful employment or to further study at a more advanced level." In 1947, when only one-fourth of the 18- and 19-year-olds were in college, the proposal was heralded as a bold ideal. From our perspective now, it seems quite modest. We have already surpassed the goal they envisioned and, by 1980, two-thirds of the college-age youth will be in college. We are no longer concerned with whether students are ready for higher education, but rather with whether higher education is ready for them.

Not long ago, higher education addressed itself to a limited segment of the population. The academic model served reasonably well, and each level of education was judged by how well it prepared students for the next level. Past school grades were, and still are, the best predictors of future grades. Admissions tests did, and still do, an adequate job of predicting success in college, if success is defined along traditional academic lines. Our national commitment to universal post-secondary education, however, has brought us face-to-face with the reality that we must educate youth for life in a society where knowledge is exploding, semi-skilled and unskilled jobs are disappearing, and most of the population will have to run just to stay in place with the demands for new skills. In Venn's (1964) colorful words, technology has placed education "squarely between man and his work" (21).

Arising in part to counteract the technological society, but also dictating a broader base for higher education, is the move toward egalitarianism and equality of opportunity. Talcott Parsons, the noted Harvard sociologist, has observed that "The available evidence points to the conclusion that it is one's standing in school work which is the primary criterion of differentation between those who will and those who will not reach the higher levels of the educational system and, via that, of the occupational world" (15:246). If we are to offer full opportunity to those who are not especially successful in the present educational system, we must devise alternative pathways to success.

Traditional colleges will continue to play an important role, but they are far from fulfilling the needs of either society or of individuals. Their range of offerings and their cultivation of talent is too narrow to meet today's need for an educated citizenry. Community colleges, with their broad offerings and their open doors, represent higher education's concern for providing alternatives to the academic model, but old habits die hard and new images are not established overnight.

Occupational education in the community college has many strengths. Ostensibly, it can meet the new needs of society as well as the diverse needs of individuals, but it also has a past to overcome. Because of our narrow academic definition of higher education, occupational education has never been quite "academically respectable," nor have the young people in it been considered "talented." Occupational education has all too often been thought of in negative terms: i.e., students take occupational courses not because of what they can do, but because of what they can't do.

Certainly students in the occupational curricula of the community colleges today are an early taste of the demands that universal higher education will make on educational innovators. To give up the educational techniques that have not worked and to find new ones that will is the challenge, and it will take much better understanding than we now have of the characteristics of the student who is new to the ranks of higher education. Although the research is scanty, a synthesis of scattered bits of data may help to construct a tentative description of the characteristics of the occupationally-oriented student.

Although it simplifies things to speak of both students enrolled in the technical degree programs and those in the vocational non-degree curricula of the community college as occupationally-oriented, it should be noted that many of them say that they hope to transfer to a four-year college. This aspiration obtains not only for 85% of those pursuing a college-parallel course of study, but also for 43% in technical programs and for 21% of the vocational students (3). Most students who enter occupational curricula will not transfer to a four-year college, but a study of career graduates from four community colleges of the City University of New York found that three years after graduation, 44% of the students responding to the questionnaire were enrolled in or had completed a four-year college program (8). This figure is probably much above the national average, but it illustrates the potential role to be played by community colleges in the distribution of the nation's talent. The proportion of freshmen registered in the various curricula in one major study (3) is about 50% in the college-parallel, 27% in the technical programs, about 5% in the vocational courses, with the remaining 20% in general and developmental education and undesignated curricula.

In the forefront of present thinking about the characteristics of young people is the thesis that they are very much a product of their environments. Past experiences shape interests and attitudes and, to some extent, we believe, abilities and talents. Thus a research description might start with some data on the homes from which students come. Across all institutions of higher education exists a virtually unbroken and totally consistent hierarchy on socioeconomic and ability indices. The universities serve the richest and the most academically able students. Next

*Prepared for a two-day conference jointly sponsored by the American Educational Publishers Institute and the American Association of Junior Colleges on Occupational-Oriented Programs in Two-Year Colleges, in Miami, Florida, December 5, 1969.

in line are private liberal arts colleges, followed by public state colleges, followed by two-year colleges, followed by occupational and specialized schools. Figures from the American Council on Education study of some 240,000 freshmen in 350 colleges illustrate the point. Two-thirds of the students in private universities have fathers who have had some college education. At state colleges, the figure drops to about one-half and, for junior colleges, it is less than one-third (4:1-92). Within the public community colleges, the socioeconomic hierarchy continues, and data from the College Board's new Comparative Guidance and Placement Program show that only 20% of the technical and 15% of the vocational students come from homes where the father has had any college experience. In most cases, they are first-generation college students.

Closely related to the index of father's education is that of father's occupation. Whereas only a little over one-third of the college-parallel students in community colleges come from the homes of workers – skilled, semi-skilled, or unskilled – over half the vocational students do (3). A point of reference is provided by the statistic that roughly one-fifth of university freshmen are from the homes of workers (4:1-92). The point is that young people are exposed at home to different stimuli, different interests, and different reward systems. While the child of a doctor or lawyer or teacher feels quite at home with books and the emphasis on verbal learning that he finds in school, the child of a laborer or cook finds himself in a foreign culture. A child's ability to succeed in school is intricately interwoven with his family background. Although it is undoubtedly simplistic to maintain that poverty causes low ability or that low ability causes poverty, we do know that socioeconomic status and academic ability are related, and that both influence who goes to college, where he goes, what his major is, and how long he stays.

Project TALENT, a 20-year longitudinal study of nearly half a million students as they progress through the educational system, found that indices of socioeconomic level, such as the presence of television and radio in the home, the number of books owned by the family, and the student's access to a room, desk, and typewriter of his own were significantly related to measures of ability–especially to tests of information and reading comprehension (10). Keeping in mind the interaction of environment and ability, it is still possible to look at the effects of each on college attendance. Chances for senior college are poor for those who fall in the lowest quarter on either ability or socioeconomic level. The majority of low-ability (bottom quarter) students do not go to college regardless of how privileged they are socioeconomically and the majority of low socioeconomic level (bottom quarter) students do not go to college no matter how able. However, high ability is more likely to compensate for low socioeconomic status than vice versa. Specifically, a high-ability (top quarter) male from a below-average socioeconomic background is almost twice as likely to enter college as a low-ability (bottom quarter) male of above average socioeconomic status (16).

It is quite clear from the research that the average academic ability of two-year college students is lower than that for four-year college students (6). The community colleges are democratizing higher education as they move rapidly toward representing ability in the population at large (7). Freshmen in community colleges are very like high school seniors in tested ability except that community college classes tend to have more students in the middle ranges of ability, with fewer very low- or very high-ability students (9). Low-ability high school graduates do not continue their education, and high-ability graduates are more likely to enter four-year colleges. Ability differences between occupational and transfer students within community colleges are mixed, attributable primarily to sex differences. There appears to be general agreement in research studies that men in occupational curricula score significantly lower on tests of academic ability than men in the college-parallel program (1; 3; 11; 12; 14). For women, there seems to be little difference between college-parallel and occupational groups (1; 14). The CGP scores on ten tests of academic ability show women in the health programs to be especially able, scoring above the liberal arts women on many measures. There is also evidence that more women of moderate ability enter the occupational curricula, whereas occupational men tend to be concentrated at the low-ability levels. In fact, one study showed that occupational men scored lower on measures of academic ability than the high school classes from which they came (11). Since women of low ability are much less likely than men of the same ability and socioeconomic level to continue their education beyond high school (5), it is understandable that marginal-ability men would enter occupational curricula, while marginal-ability women enter the labor market after high school graduation.

Occupational students in general are much more likely than the average high school senior to have taken an occupational course of study in high school, and the high school course of study is a major difference between transfer and occupational students within the community colleges (1; 11). It is not clear whether their lack of experience with academic subject matter leads to low test scores or whether lack of academic success leads to choice of occupational programs. The fact remains, however, that, for many, the choice of an occupational course of study is determined between the ages of fourteen and eighteen, if not far earlier.

It is hard to say whether most students now registered in occupational curricula would have taken that course had other alternatives been open to them. In California, students who do not graduate in the upper one-third of their high school class are not eligible for the state colleges and the universities–and the students seem to accept this exclusion. About two-fifths of the occupational students from twenty California community colleges said they felt they would have no chance or only a slight chance of success at a state college, and nearly three-fourths thought that they would have little chance of success in the university system. Most wish, however, that they had "studied harder in high school," and that they had "taken high school more seriously" (18). Whatever the reasons – an intellectually sterile home environment, low ability, earlier frustrating school experiences, or interests directed in other areas–many occupationally-oriented students in our present educational system recognize that they are not successful in the academic pursuits on which our society places such great (probably undue) value. Needless to say, this self-concept is not conducive to self-fulfillment, and community colleges (and everyone who influences the education program offered there) face a tremendous challenge in capitalizing on strengths of ability and interest and motivation.

Despite a high dropout rate–60% of the entrants to two-year occupational programs in one California study (11)–occupational students appear optimistic about their futures. Three-fourths of them are quite certain that they will continue in the field they are studying, and an even larger percentage feel that they have a fair or a very good chance of success in the occupational program of their junior college (18). There is also positive evidence that they are interested in their choice of field for study. On twelve interest scales used in the CGP battery, the scores of students were obviously related to their field of study. Science and pre-engineering students in both the college-parallel and the occupational curricula scored high on interest in math, physical science, and engineering technology. Students in the health-related fields scored high on health, biology, and, perhaps because so many are women, on home economics. Students registered in business programs scored high on measures of business and secretarial interest. Liberal arts students scored above the overall average on interest in social science, but their interests in other areas tended to parallel men's interests and women's interests more than specific field interests (3).

The interest of occupationally-oriented students in concrete and tangible goals is consistent with the research that finds lower socioeconomic groups concerned with security, immediate impulse expression, and concrete rewards, whereas higher socioeconomic groups are more likely to seek goals of status, achievement, and social re-

spectability. These different value systems show some consistency of interest, attitude, and personality across the few research studies of junior college students that have been done in this terribly important area (1; 2; 13; 17: 46-52; 19; 20). Generally speaking, researchers characterize two-year college students as little interested in abstract thinking or in originality and as prone to be more conventional and rigid than students beginning their education in four-year institutions.

In the CGP data (1968), occupational students were twice as likely as the college-parallel group to see the object of education as mostly or entirely job training; the great majority of them said that, in their freshman courses, they planned to concentrate mainly on learning things that would be useful to them in their future work. Happily, the College Satisfaction Scale of the CGP showed the vocational students most likely to feel that their community college courses did relate to their future plans, and they were also more inclined than the average student to feel that they would be happy in the work for which they were preparing. The New York City study showed that 80% of the employed graduates of career programs were in jobs directly related to their community college training (8).

The responses that occupationally-oriented students give on questionnaires present a picture of young people who know what they want and are pursuing an obvious pathway to their goal. This may be more artifact than fact, however, since it is easier for a liberal arts student than for one taking auto mechanics to express vague career goals and to accept more traditional general education as reasonable preparation for his immediate future. With the exception of wanting help in finding a job, occupational students express no more desire for counseling or guidance or tutoring than other community college students. In fact, they are less likely to indicate that they want help regarding educational and vocational plans than are transfer students (3). While there are no major differences between curricular groups in their desire for assistance, it should be pointed out that community college students as a group are receptive and eager for counseling assistance (6). Over half the students in each curricular group in the CGP program expressed a desire for help with reading, study techniques, and educational and vocational planning.

Although there is a dearth of solid, comparative research studies on the motivations and values of occupationally-oriented students, evidence indicates that the occupational student is more likely to be motivated by extrinsic rewards, while the more academically-oriented student finds greater satisfaction in intrinsic rewards. For example, occupational students are more likely to place value on grades in school and on money in jobs than the academic students who are more prone to value learning for its own sake and for the opportunity to be creative in a job. Apparently all humans seek the approval of their associates and, for this reason, the reward systems may be undergoing some dramatic changes in the recent social upheavals. Traditionally, the lower classes have not shown much interest in social service occupations. Now, however, we are beginning to see able young people turning their backs on the concrete and tangible rewards that they are supposed to seek in order to return to the ghetto to do social work—where it is not easy to find immediate gratification, concrete examples of progress, or tangible financial rewards. If the so-called helping professions become highly valued among the peers of occupational students, it may well be that we will find the high academic saturation that presently exists in social work is not an important aspect of the ability to do the job, and that occupational courses will lose their identification with the concept of manual skills. It boils down to what we have known for ages—that motivation is the key to learning and that this varies greatly from culture to culture and from decade to decade. It is for this reason that a thorough understanding of the attitudes, backgrounds, and interests of students is so important. Fortunately, although the students seem to arrive ahead of their data, the capacity and sophistication of educational research are making tremendous strides. There is considerable cause for optimism regarding the ability of research to aid in the understanding of students and, through this, in the improvement in educational programs.

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ERIC CLEARINGHOUSE FOR JUNIOR COLLEGES

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Hazel Horn, Editor

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ENTRANCE AND PLACEMENT TESTING FOR THE JUNIOR COLLEGE

Prologue

During the spring of 1970, an organization of junior college institutional research people, at their bi-monthly meeting, invited a speaker who is a professional tester from a large and prestigious testing service. His topic was entrance and placement testing in the junior college. At the conclusion of his prepared but informal talk, I asked him to name one junior college, four-year college, or university that used entrance and placement testing programs appropriately—and he was unable to do so. Though he was intimately familiar with dozens of testing programs throughout the country, and presumably very knowledgeable about mental and psychological tests, he could not recommend a single institution of higher education that could serve as a model for the colleges represented at the meeting.

This paper will first describe, in a general fashion, the uses made of entrance and placement tests in the junior colleges as reported in documents submitted to the Clearinghouse. Second, it will examine in detail the psychometric model and its assumptions as reflected by junior colleges' use of standardized tests. Third, it will make recommendations for an alternative approach to the testing programs presently being implemented by junior colleges.

Research on Testing Programs in the Junior College

A previous *Research Review* by Roueche and Boggs (January 1968) listed 21 Clearinghouse papers on entrance and placement testing. Of those listed, nine were described and commented on (kindly) by the authors. At that time, almost all the research papers dealt either with the development of local norms for standardized tests or with the use of test scores in predicting academic success. For the present *Research Review*, a search of the Clearinghouse material on entrance and placement testing yielded 43 additional papers in the same area. In reading through all of these, I conclude nothing has changed in the last three years. Junior colleges continue to develop local norms and use various standardized tests to attempt to predict academic success.

Typical of the papers developing norms are: Diablo Valley College (ED 010 737), which reports percentile of norms on SCAT; Los Angeles City College, which has been using the SCAT for many years and reports a consistency over time in their student population on this test; the Virginia State Council for Higher Education, (ED 012 183), where SAT norms were developed, used CEEB scores; and Daytona Beach Junior College (ED 015 725) has developed its own norms for both SCAT and STEP. Virginia and Daytona have separate norms for different curricula, including one set using over 200 pre-engineering students.

Most papers on testing submitted to the Clearinghouse report studies on the prediction of academic success. A number of these, in the Northwest particularly, examine the Washington Pre-College Test as a predictor (ED 012 624, ED 017 248, ED 032 043). Others use the SAT or ACT scores to compute their correlations and develop their regression equations (ED 012 181, ED 011 196, ED 029 626). In general, the results give zero order and multiple correlation ranging from .50 to slightly over .60. Though some of the studies report the actual regression equations, those that do so use "b-weights" rather than betas and seldom keep an uncontaminated holdout sample for cross-validation.

A few studies using the same model introduce both normative data and non-cognitive test scores to help improve their prediction. The predictor variables are usually high school grade point average (computed in a number of ways), the Edwards Personal Preference Schedule (ED 024 374), and student responses to questionnaires (ED 013 628).

Almost all the research reports that use high school grade point average as a predictor for college success find, as has been found for decades, that it is the best predictor. As most race track touts know by instinct, and psychometricians by logic, past performance is the best predictor of future performance. From the Clearinghouse reports and articles appearing in refereed journals, I am convinced that little can be meaningfully added to high school grade point average as a predictor of success in college—neither test scores nor personality variables.

The Psychometric Model and Abuses Thereof

There is one commonality in all the test studies submitted to the Clearinghouse: none of them questions the appropriateness of the traditional psychometric model they use for education in general and the open-door comprehensive community college in particular.

Let us assume, for the moment, that the classical psychometric model can be of some use to the junior college, that it can, in some mysterious way, improve the education we are peddling. Gross discrepancies remain between what the sophisticated psychometrician would advocate and what is being done. Certainly, a philosophical gap exists between the use of test scores as admission criteria to particular curricula, and the statement of philosophy that is summarized by the phrase "open-door college." Though it appears that test results are not used to deny students admission to a community college, it is equally evident that the student's academic life is much affected by the scores he receives. It is on the basis of these that he is granted or denied permission to take specific courses or to enter certain certificated programs, particularly the para-professional curricula. As a consequence, the probability of his continuing his formal education or completing a specified curriculum, is considerably influenced by the test scores he gets.

It would appear from the documents submitted to the Clearinghouse that junior college researchers either are unaware of the assumptions implicit in the psychometric model or choose to ignore them. For example:

1. The basic assumption that test items are nothing more or less than a sample of behavior (and test-taking behavior at that) seems to have been lost.

2. The concept of validity is frequently used with what appears to be no thought of what the test is valid for. Validity, it seems, is represented by the correlation coefficient between the test or sub-test and grade point average. The particular factors that influence the size of the validity coefficient, or any other correlation, appear to be ignored.

3. Descriptors of the sample used for correlations, such as range of talent or presence of extreme scores, are seldom reported in the studies, though they can frequently account for potentially spurious correlations.

4. The standard error of estimate, a much better concept of predictive validity, is seldom reported and, when it is, appears to be frequently misunderstood or misused.

5. Actual regression equations are scarce in the research reports and, when they are given, they most often include b-weights rather than standardized regression coefficients (betas), making for difficulty in interpretation.

6. In some reports using multiple regression techniques, predictor variables pick up a reverse sign weight, e.g., though there is a positive correlation with the criterion variable, there is a negative value in the equation. At a very high level of probability, this is attributable to a mathematical artifact as opposed to its being a real suppressor variable.

7. It is also evident, from the papers that report regression equations, that many of the predictor variables have such puny weight in the equation that they are "eyewash" as opposed to a real contribution to the existing variables.

8. Few investigators take into account the ipsative nature of correlating any two paper-and-pencil tests. The idea that specific test-taking abilities will add to the size of a correlation seems ignored.

9. Few investigators seem to differentiate between the significance of a correlation and its meaning. Some colleges report hundreds of correlations and scores of t-tests with the same sample of less than a hundred students. They don't seem to know that the significance of a correlation depends almost entirely on the number of cases used to compute it.

10. Though most junior college investigators understand that coefficient of determination (r^2) represents the proportion of the criterion variance accounted for by the predictors, they lose sight of the fact that they have computed an "r," using a sample of students as opposed to a "rho" of the true correlation for total population. As a consequence, with $r = .31$, they assume they are accounting for ten per cent of the criterion variance.

Summarizing the above assumptions and criticisms, I conclude the test research is being performed by sincere, dedicated people who are completely naïve about the psychometric model and its assumptions. Further, it seems apparent that little can be added to high school grade point average that will have any meaningful, defensible use in determining which students should take what.

And still college administrators continue to insist on getting scores. They want someone to make the decision about which student should be admitted to Transfer English and which to a registered nursing curriculum. Most important, they want these decisions to be made on some empirical basis, so that they are protected from the antagonism of the community. The person most likely to be given the job will be the director of research, the dean of admissions, the dean of students, or a committee from the department in question.

The kind of "research" used to find the cutting scores normally compares frequency distributions of people who have done well and people who have been put on probation or flunked out. The more sophisticated studies develop a correlation and regression equation with the grade point average as the dependent or criterion variable and the test score as the independent or predictor variable. The ultra-sophisticated use multiple regression and may even add some normative variables as potential predictors (e.g., age, sex, or social class) to a battery of test scores. From a review of the studies submitted to the Clearinghouse, it is evident that most educators, even those responsible for testing, are extremely ignorant of what affects correlations and regression equations, and that they ignore the value and meaning of the standard error of estimate.

The psychometric model is most useful for describing the status of groups. It is next most useful for predicting the performance of groups. It has some utility in describing the status of individuals, but very little in predicting the performance of individuals—*but the latter is what it is most often used to do!*

The validity criterion most frequently used is grade point average and, though few studies are conducted to examine the reliability of this criterion, reliability is a limiting factor on any empirical validity coefficient.

Some junior colleges with tens of thousands of students have no one on the staff capable of serving as test officer. Test scores have become God-given truths to which excellent, caring educators defer in their ignorance when making important decisions about their students.

If a college maintains its faith in classical psychometrics

and desires to improve its use of the testing program to make it less punitive and less out of step with the concept of the open-door college, I have some recommendations.

First, deny access to test results to everyone (including the president of the college) who does not thoroughly understand the statistical concepts of standard error of measurement and standard error of estimate.

Second, hire and train a test officer who thoroughly understands basic measurement concepts. He should know, for instance, that the only real difference between "achievement" and "aptitude" tests is the use made of the results. He should understand that contributions to the size of a correlation and the beta weights of a regression equation are made by extreme cases and range of talent. He should know the dangers involved in spuriously high correlations caused by the ipsative nature of most correlational studies. These ideas should not be just learned and known by a good test officer, but thoroughly incorporated into his professional being.

Third, the college should not accept on faith research studies from national test companies, even such ethical and competent organizations as Educational Testing Service and American College Testing Company. It should rather develop meaningful criterion variables on its own campus and conduct its own validity and norming research.

An Alternative to the Standardized Test

It is my opinion that the psychometric model, even when properly used, is not only useless, but actually antagonistic, i.e., destructive, in the educative process. It is the psychometricians who foist upon us such insidious constructs as the "normal curve" (any teacher who expects a normal distribution of achievement by his students should be fired outright); "discrimination coefficients" (we're not trying to discriminate, but to teach), and "educational expectancy" (ignoring self-fulfilling prophecy).

The revolution in higher education will shortly be a *fait accompli*. Courses, curricula, and departments are changing radically. The idiotic practice of punitive grading is disappearing. The concepts of recruitment and selection of students using grade point average and standardized test scores are being rapidly revised. Hundreds of colleges are combing the streets, pool halls, and jails of the ghetto and the barrio to get their share of black and Mexican students. Yet we still cling to our entrance tests as to a religious fetish. We treat our testing program as if it were separate and distinct from our instructional program. This should not be the case. The criteria for selecting students for courses and curricula should be related as closely as possible to the content of these courses rather than based on the irrelevancies described by the construct of academic aptitude that has only one operational definition, i.e., the test score.

From the foregoing discussion and from the basic philosophy of the open-door college, it is evident that the use of cutting scores on standardized tests, even when done by experts, is an indefensible practice for the community college. But what are the alternatives?

It is apparent that, if students are permitted to enter any courses or any curricula they choose, the failure and dropout rate will increase exponentially. It follows that we should advise, encourage, and counsel students to enter learning experiences for which they have a high probability of success. The use of standardized tests to predict success is notoriously poor. The use of tests permits us to account for 25% to 40% of the variance in overall grade point average and considerably less in specific courses or subject fields. The logical alternative is to determine as explicitly as possible the entry skills required for a particular course or curriculum and to devise procedures to evaluate the student's mastery of these skills.

The omnipresent example for the comprehensive community colleges is the placement of students in a transfer college English course or in one or more courses in remedial or repair English. The stated purpose of the remedial program is preparation for the transfer course. However, any college that has bothered systematically to appraise the success of remedial English as preparation for college English has found almost total failure. The normal criterion variable for original placement involves grades in high school courses or, more often, scores on standardized English tests. Yet the content of the college English course deals most often with essay writing and, to some extent, analysis of literature. What are the entry skills that are required to write a freshman theme? The armchair English teacher will immediately respond with a list of abilities measured by the standardized tests, i.e., grammar, spelling, vocabulary, mechanics, etc. It seems highly improbable that a test company can pre-determine the objectives a large number of teachers have for their students in any subject matter area. An alternative to the standardized test must be found.

A great deal of effort would be required to specify the skills needed by a student for him to benefit from instruction in writing compositions. However, once this were adequately accomplished, one could place the student in a learning experience that would appropriately lead him to the accomplishment of his objective, i.e., passing freshman English. Meanwhile, using a standardized English test or its ilk and arbitrarily defining cutting scores are antagonistic to every principle espoused by community college philosophy and by anyone who cares about helping people to learn things. It would be more useful simply to have students write sample compositions and let it go at that.

The alternative to standardized tests then is to analyze the goals of the instructional process for any course or curriculum and to help students achieve these goals. The barring of a student from a stated goal on the basis of irrelevant test scores (the practice of most colleges) is the method by which we will perpetuate the sadistic, irrelevant, and pejorative institution of education that has developed in this country. The comprehensive open-door community college cannot remain in the wings, merely following the lead of the academically respectable and educationally irrelevant universities. We must question every quasi-religious belief and procedure we have adopted and extrapolated over the decades. It we don't, our community and our students will.

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ERIC CLEARINGHOUSE FOR JUNIOR COLLEGES

ARTHUR M. COHEN, *Principal Investigator and Director*

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Hazel Horn, Editor

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TEACHER PREPARATION PROGRAMS AND THE JUNIOR COLLEGE

Recently, Arthur M. Cohen and Edgar A. Quimby of the ERIC Clearinghouse for Junior Colleges suggested a series of research efforts that might be undertaken in the junior college (*Junior College Research Review*, September 1970). These recommendations were made on the premise that research is useful only when a user puts the results into practice. However, because the university-based researcher and the practitioner in the junior college do not communicate as well or as often as they should, the ERIC Clearinghouse for Junior Colleges attempts to bridge the gap between them.

One of the Clearinghouse's special concerns is junior college teacher preparation. This review sketches the relationships—or their lack—between junior college administrators and the university programs that address themselves to junior college instruction.

Reviews of Programs Are Available

Many aspects of teacher preparation have been discussed in previous issues of the *Junior College Research Review*. The titles of these issues reveal their special viewpoints: "The Preparation and Characteristics of the Junior College Teacher" (February 1968), "Research on Junior College Teachers" (March 1968), "Selected Teacher Preparation Programs" (May 1968), "Faculty Recruitment" (September 1969), and "Teacher Evaluation: Toward Improving Instruction" (January 1970). As with all *JCRRs*, pertinent research is cited and commented on for the information of the practitioner.

A number of teacher preparation programs have been given detailed treatment in these reviews; others are cited in various documents in the ERIC collection—e.g., the internship program for William Rainey Harper College (ED 035 407), the Faculty Development Project, cosponsored by the American Association of Junior Colleges and the Carnegie Institute (ED 034 516), the proposed Doctor of Arts in College Teaching, supported by the National Faculty Association of Community and Junior Colleges (ED 031 205), the Appalachian State Teachers College Program (ED 015 759), and the Eastern Washington State College Interinstitutional Program (ED 016 488). Each of these programs is built on some research that relates to teaching.

In addition to these documents, many other materials related to teacher preparation are available through ERIC. An extensive account of the Junior College Teacher Program at UCLA is given by Arthur M. Cohen in *Focus on Learning: Preparing Teachers for the Two-Year College* (ED 019 939). Florence Brawer's *Personality Characteristics of College and University Faculty: Implications for the Community College* (ED 026 048) is an in-depth investigation of the personnel now teaching at the junior college with emphasis on identification of personality traits. More than a descriptive study, it suggests the kinds of research that might be undertaken on teachers and teaching.

Administrators Seem to Ignore Research

Meanwhile, what is or is not happening at the junior college? The practitioner looks with disdain on "esoteric research" conducted at the university. Generally, research is considered remote from the daily problems of a teaching institution. It is questionable whether those who recruit and hire in the junior colleges (division chairmen, deans, presidents, and personnel directors) are even vaguely aware of the special aspects of the teacher preparation programs described in the reports mentioned above.

Several links are missing between the teacher trained to teach in a junior college and the means whereby the junior college recruits and selects teachers, as pointed out by Wattenbarger (ED 014 440) and Heinberg (ED 019 958), to mention but two sources. Little concern is given to whether an individual has the ability to teach. The major criterion seems to be whether or not he has a master's degree in the subject matter taught. It is costly and time-consuming for individual junior colleges to conduct extensive searches for "qualified junior college teachers"—90 per cent of fifty-eight junior colleges in California that responded to a survey indicated they had advisory committees for locating and selecting teachers in vocational fields (ED 019 958). At least one junior college district spends thousands of dollars on "recruitment trips" throughout the state and even, until recently, throughout the nation.

There are several well-established patterns followed by the junior college bureaucracy in its teacher recruitment ritual. Gerald Kennedy outlines some procedures used for the recruitment of part-time instructors (ED 027 894), and Northern Virginia Technical College reports the use of 1,225 man-hours in a four-month period merely to determine faculty needs (ED 010 020). There is much to be desired in this bureaucratic method of recruiting junior college teachers. One might ask when, if ever, the administrator discovers if the candidate can teach; what, if any, learning theory he favors; what, if any, learning objectives he will attempt to achieve; and what, if anything, he knows about the junior college.

Many Teachers Come from Secondary Education

Wattenbarger reports that 33 per cent of the nation's junior college teachers are recruited from secondary education (ED 014 283). The fact that a teaching candidate has taught in a high school merely means that the same college graduate has added several years of secondary teaching experience to whatever subject-matter knowledge he had. It is debatable whether this experience gives the prospective teacher any particular knowledge either about the junior college or about how to cause learning. In fact, a recent survey (Park, in press) showed that the majority of junior college teachers at three institutions considered themselves to be *below average or average in understanding and accepting the junior college philosophy*. Indeed,

most ranked themselves as *average or below in causing student learning*. Nearly 50 per cent of these teachers were recruited from the secondary schools.

One might seriously question why the junior college recruits so heavily from high school. Is it because the administrators themselves are primarily from the high school—bringing with them their secondary school methods and criteria—or is it because they are unaware of the special programs at the universities and colleges developed specifically to train junior college teachers? Do they really think former secondary school instructors are perforce better teachers?

How Junior College Teachers "Qualify"

Every junior college administrator knows that employing teachers affects instruction, the finances of a district, and the very core of institutional operations. Staffing within budget, a practical and relevant concern, is no longer a problem of supply and demand, but of obtaining qualified teachers. The term "qualified" is a matter of judgment, for, other than personal characteristics and a few years of teaching experience, the common denominator for junior college teaching candidates is the training received at an accredited university or college. The uncontrollable factor in the bureaucratic pattern is the personal preferences of the hiring administrator.

Barring the personal idiosyncrasies of the administrator, educational research involves training junior college teachers. Whatever criticism might be leveled at the nation's schools of education, they are still the only agencies engaged in preparing teachers. Universities and colleges produce history majors, English majors, science majors, and the like in seemingly unlimited numbers, but these subject-matter specialists are not necessarily prepared to teach in a junior college. If the junior college is to survive as something other than another educational bureaucracy, it must cooperate with the agencies involved in research on teaching. Teaching is a skill that must be learned; a master's degree does not necessarily qualify an individual as a teacher. Unfortunately, subject-matter departments at the universities and colleges, as well as junior college administrators, seem to feel that this combination is adequate for junior college teaching.

A document published by the National Council of Teachers of English on Research and the Development of English Programs in the Junior College reports that junior college teachers retain an aloofness and disdain for professional studies (ED 002 976). This attitude, according to the report, makes the junior college teacher a "fumbling amateur." The report notes the need and calls for ways to bridge the gap between subject-matter respectability and professional training. It is significant in that it deals specifically with English instruction in the two-year college and was prepared under the auspices of a major subject-area association, not a school of education.

Problems of Teaching and Learning

There are many schools of education attempting to improve teaching and learning methods through research, but the junior college has neither accepted nor contributed to that endeavor. Rather than employ a teacher trained for the junior college, administrators urge older professionals to "innovate," sometimes at a higher cost than hiring a new teacher. As a group, few junior college teachers have the time or inclination to conduct professional research. Moreover, junior college teachers feel that research refers only to subject matter. In Park's study (in press), which called for self-ratings by teachers in three institutions, most felt that the lack of time for scholarly research was a major problem—a finding that corroborated Garrison's larger study (ED 012 177). At the same time, the junior college public relations arm states that it is a comprehensive learning institution, serving the needs of the community. The contradictory view of research vs. teaching contributes to the confused image of the junior college.

The research undertaken by various institutions and foundations obviously points to the idea that the junior college is a unique educational entity. Its purpose is supposedly learning, not research, as compared with the university. If we accept the idea that the junior college is a teaching institution, should it not be interested in research on teaching and learning? If the junior college is unable to carry on the necessary research, is it not logical for it to participate in developing teacher-training programs with institutions already engaged in such research? It is as necessary for the researcher to be knowledgeable about current institutional practices as it is for the practitioner to know about research being conducted in junior college education. As one cannot exist without the other, the problem is to involve the junior college in this research. As Gleazer points out, it is a task that must be "shared alike by the universities and the junior college . . . research of the universities must be pooled with the . . . resources of the junior college" (ED 016 489).

Causing the System to Change

The avowed purpose of the junior college teacher program at UCLA is not only to train teachers to work in the junior college, but also to *cause change within the junior college system*. The program actively recruits and trains those candidates capable of operating within a special teaching-learning situation (ED 017 269). The missing connection between research and application might be found in a practical and feasible suggestion by Arthur M. Cohen, the program director. Each junior college would establish a "teaching chair" to be filled by an intern actively enrolled in a teacher-training program. The intern would occupy the chair for a year, with full pay and responsibilities, under the supervision of both the institution's administration and the university or college. It would be understood that this chair must be vacated and filled with a new intern each year. Variations to the basic idea are obvious, e.g., the chair could be designated for the first semester only or could be a half-time position, depending on enrollment and need.

With the increasing number of programs being created to train junior college teachers, the junior college, if it wants a voice in how teachers are trained, must decide whether it will support a profession that requires a specialized foundation in teaching and learning. If the junior college is unique in the scheme of higher learning, it should participate actively in teacher-training research.

A number of intern programs throughout the country are reviewed in the May 1968 issue of the *Junior College Research Review*. Other programs, especially in the state colleges in California, follow the high school training pattern with student teachers. Both the interns and the student teachers are part of the established methodology used by the secondary and elementary levels for years. The teaching chair might be compared with the student-teacher programs currently in practice. Supervisors of student teachers tell of many instances where the prospective teacher gained little or no actual teaching experience. Indeed, frustration to the point of depression and resignation is more often the case. The student teacher seldom has the opportunity to teach; he generally sits out his assignment in the last row of the classroom. When he actually does teach, it is usually only because the regular "master teacher" is ill or attending a conference. Whatever benefit might result from student teaching is negated by such remarks of the master teacher as "You automatically flunk 60 per cent of the students on the first exam — otherwise you get the reputation of being an easy grader."

Contrary to the negative attitude of junior college administrators toward teaching interns (noting that the junior college is supposedly a teaching innstitution) is their attitude toward administrative interns in the state of California. The rationale often given is that the administra-

tive intern is federally funded or that the position is half-time. In the experience of many, however, the administrative intern receives as little practical experience as the student teacher does. Yet administrators still see great advantages to hiring administrative interns, being trained themselves, of course, to be acceptable members of the junior college bureaucracy. This is not the case with teachers. As one administrator was heard to remark, "I'll be damned if I'll subsidize the teaching program of some college." It might be added that these same administrators spend literally millions of dollars for "innovative" gadgetry, toward which, a recent survey showed, many teachers themselves have a negative attitude (Park, in press).

The Danger of Bureaucracy

Junior college teachers and administrators have reached the point of development that generally leads to the establishment of a rigid bureaucracy. Roscoe Martin describes it as follows:

> It may be argued, indeed, that bureaucracy (in the invidious sense) is a natural concomitant of professionalism. Thus the most advanced professions are those most effected by sclerosis; by certitude of the rightness of any professional course or stand adopted; impatience with any contrary view; and suspicion of all criticism.[1]

Critical and harsh as this appraisal may be, the features of a closed system have become obvious in the junior college. One indication of it is found in Pratt's study of the relationship between the degree of authoritarianism in the personalities of public community college presidents in New York and the number of authoritarian personalities in the respective faculties they hired (ED 023 382).

The fact seems to be that the junior college bureaucracy does not wish its steadily solidifying structure to be reorganized. This applies to teachers as well as to administrators. One can only contrast the great expenditures on innovations, facilities expansion, higher wages, fringe benefits (and their accompanying higher taxes) and other operational details of a teaching institution with the total lack of investment in teacher-training programs that require little but the desire to participate.

In its growing stages, the junior college faced many obstacles, one being the difficulty of finding qualified teachers for an ill-defined role. Today it has reached that stage of development at which other educational units leveled off and entrenched themselves in a tightly organized bureaucracy, complete with dogma and sacred rituals. Blocker, Plummer, and Richardson put the matter succinctly when they pointed out that the time has come for a serious evaluation of the entire concept of the junior college and of its purposes and functions within the framework of higher education.[2]

The junior college might escape the stagnation in which the high schools found themselves before James Conant's report, by investing in teacher-training research — not on a theoretical basis, or by superficial instruction in the guise of teaching innovation, but by a realistic contribution to the process of training junior college teachers through cooperative research. It may well be the investment needed to save the junior college from oblivion.

The university-based educational researcher is not without his share of blame. He seems inclined to survey retired military personnel in the junior college (ED 010 593) and the job-seeking strategies of junior college faculties (ED 022 440) and to describe, rather than to analyze, faculty recruitment and evaluation. Yet there is an inescapable connection between the junior college and research in the university or the senior college, because these institutions are the major sources of junior college teachers. Since the educational profession is composed primarily of graduates from the university, the junior college must depend on it for providing competent instructors as well as the necessary number of bodies. Both must contribute to the study of what each is doing to enhance junior college instruction.

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[1]Roscoe Martin, *Government and the Suburban School* (Syracuse, N.Y.: Syracuse University Press, 1962).

[2]Clyde Blocker et al., *The Two-Year College: A Social Synthesis* (Englewood Cliffs, N.J.: Prentice-Hall, 1965).

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In today's society, both our technology and our population are growing rapidly. As a result, the responsibilities assigned to the members of the professional community, including doctors, nurses, teachers, librarians, and social workers have outgrown the number of them available to handle the situation. Many functions previously performed by these professionals are being delegated to technicians and assistants under their direction. In many cases, these technicians and assistants (or paraprofessionals) can be prepared to perform their functions effectively with less than four years of college; often an Associate degree or an even shorter-term program is sufficient. Thus the preparation of many classifications of paraprofessional falls within the scope of the junior college.

This issue of the Junior College Research Review *deals with four paraprofessional training programs offered by junior colleges: teacher aide, library technician, social work assistant, and allied health and medical assistant. Documents cited in this* Review *were selected from materials received and processed by the ERIC Clearinghouse for Junior Colleges. All documents listed in the bibliography have been announced in Research in Education and may be obtained from EDRS, as explained on page 4.*

PARAPROFESSIONAL TRAINING PROGRAMS IN JUNIOR COLLEGES

Teacher Aides

Large-scale use of auxiliary or paraprofessional personnel to assist in performing school functions is a relatively recent development. Such employment was recorded in Bay City, Michigan, as early as 1953 on an experimental basis, but little further interest was shown in this kind of program until the 1960's, with the availability of federal support. Today, at least fourteen government-sponsored projects provide funding for the training and employment of such personnel, through legislation like the Economic Opportunity Act of 1964, the Elementary and Secondary Education Act of 1965, and the Education Professions Development Act of 1967.

Three conditions influenced this increase in interest: (1) a school-age population increasing at a rate greater than the corresponding supply of teachers; (2) the growing complexity of the instructional role in education; and (3) the need to expand and improve school-community communications (ED 032 876). The teacher auxiliary or aide was seen as one response to these conditions.

Benefits from their use became increasingly apparent: (1) "utilization of low-income workers as auxiliary personnel in school settings may, with appropriate role development, training, and institutionalization, have positive outcomes for pupil learning, home-school relationships, teacher competence, the development of auxiliaries as workers and persons, and the system in its totality" (ED 023 400); and (2) use of auxiliaries from the local community can greatly improve and facilitate school-community relationships (ED 027 877).

Auxiliary personnel can perform a variety of needed classroom functions, especially for nursery, elementary, and secondary institutions. Routine activities such as taking attendance, distributing tests and materials, operating audio-visual equipment, and recording grades are some examples (ED 024 356). More recently, the employment of bi-lingual classroom aides where English is spoken as a second language has proven highly successful, especially in improved teacher-pupil relationships and student interest in subject matter. Tutorial assistance to small groups or individuals, as well as individual counseling, may be more effectively handled in this manner (ED 031 224).

Regardless of the prescribed duties, having the paraprofessional accomplish routine activities lets the teacher concentrate on giving individual attention to his students, and on experimenting and innovating with new content and techniques. Other promising areas for the use of auxiliary personnel include the science laboratory, library, industrial arts facility, and study hall (ED 031 212).

Paraprofessional trainees can be drawn from many sources. As possible candidates, one program at Garland Junior College (Boston) considers the high school dropout, the housewife with children in school, those on welfare, and the elderly (ED 024 356). Another program, at Pasadena City College (California), focuses specifically on "indigenous non-professionals in antipoverty agencies," hoping to provide them with "career-ladder employment as bi-lingual and other teacher aides and assistants in inner-city and ghetto schools" (ED 027 877). Programs at the University of California (Los Angeles) and California State College at Long Beach send currently enrolled students to local school districts for assignment as assistants (ED 016 452).

Looking at these personnel sources, it is obvious that a variety of formal education backgrounds must be expected. Because of this, most training program prerequisites emphasize other than academic qualifications. Sensitivity to children's needs, individual flexibility and interest, social adaptability, and a sense of responsibility are typical requirements (ED 024 356). Existing training programs combine both formal and on-the-job training (ED 032 873). Some even make provision for earning an A.A. degree. The Garland Junior College program, for example, holds two to eight weeks of pre-service training dealing with child development, curricular materials, remedial reading, school-community relations, and first aid. This is followed by a year-long in-service program during which the aide is actually involved in classroom activity (ED 024 356).

One pressing need of the trainee is the chance for career progression. The ones who seek and merit upward mobility need access to training that permits career development. Training people for entry-level jobs that lead nowhere would mean rapid failure for the program. Several approaches to this problem, using current educational structures, have been suggested. For example, Roberts, in his commentary on the teacher-aide curriculum at Rio Hondo Junior College (California), suggests that the classification "teacher aide" be given to those without a high school diploma or equivalency certificate. Advancement in terms of responsibility and salary leading ultimately to one's qualification as a fully certified teacher could proceed as follows (ED 016 452):

TITLE	*EDUCATIONAL REQUIREMENTS*
Teacher Aide	---
Teacher Assistant	High School diploma or equivalency certificate
Teacher Associate	A.A. degree
Teacher Intern	B.A./B.S. degree
Teacher	Certification

Investigating the nationwide roles and uses of paraprofessionals in schools, Laurel N. and Daniel Tanner's 1969 study of the 50 state education departments disclosed that, while teacher aides were employed in virtually all states, no agreement existed about the extent to which duties reserved formerly for teachers could now be assumed by the auxiliaries (ED 027 896). Another 1969 study reported that only eleven states had laws regarding the duties of teacher aides, while twelve had policy statements and guidelines regarding their duties (ED 032 876). Currently, there appears to be an absence of direction or general trends in existing policies, regulations, and legislation.

The following description of a recently terminated program at one community junior college shows possible pitfalls in developing and sustaining a training program: "The program has not succeeded for several reasons. Schools were interested in the idea of teacher aides, but had made no specific decisions about the work an aide would perform. As a result, the committee recommended a program that overtrained its graduates. Academic and education courses were required, but little occupational training. A course intended as vocational education was built into a transfer curriculum. School systems in this area who were using aides were operating under federal grants that could vanish. None had provided for this type of employee in their regular budgets. It is also probably true that the program was under-advertised to high school students and to the public and therefore failed to attract students. Only five enrolled . . . it may be that the effort was premature (ED 038 136)."

Clearly, the benefits of the training and employment of auxiliary aides in schools appear both feasible and promising. It should be equally clear that the junior college can play a large role in supporting these programs.

Social Service Aides

The demand for trained auxiliaries and paraprofessionals in the public and social service fields is increasing. Contra Costa College (California) has initiated a program designed to prepare aides for work in such diverse areas as law enforcement, mental health, community relations, probation, and the business activities of the junior college itself. Entrance into this program depends on a particular individual's potential as demonstrated during a personal interview, rather than on his or her particular level of education. The program also emphasizes on-the-job training in conjunction with required course work (ED 032 873).

Pasadena City College (California) conducts a program for assistants in social work and urban community development. A critical aspect of this program is its recognition of the financial inability of many potential students to pursue regular academic courses. As an alternative, it provides program credit for on-going work in community agencies and every attempt is made to insure that the employee/student's initial courses are job-related.

Library Aides

The "knowledge explosion" that pervades our society today is resulting in masses of materials – books, journals, periodicals, etc. – far beyond any ever before produced. One document (ED 028 764) states that thousands of additional librarians are needed to provide the necessary services for existing and potential users of the nation's libraries. In recent years, there has been an increasing emphasis on training for a middle level of library personnel, generally known as the Library Technician. A variety of junior college associate degree programs have been developed for the academic preparation of these technicians.

An annotated bibliography of sixty references to articles and papers (ED 028 764) should interest administrators and librarians concerned with recruitment and training to meet the manpower needs of the library profession. It gives special emphasis to library technical training in the junior college and cites seven documents particularly concerned with the library technician in the health sciences.

A library technology program was initiated at Harrisburg Area Community College in fall 1970 (ED 038 136). Five years ago, libraries in the area surrounding the college were unwilling to employ technicians. Lately, however, with the pronounced shortage of library personnel apparent at all levels, the attitude of these libraries has changed. The college felt the curriculum, based on 42 hours of general education courses and 18 hours of technical library courses, would attract not only high school graduates, but also nonprofessionals already employed in local libraries and mature persons with college background who would like to receive specific technical training as well.

In 1966, the California Association of School Librarians undertook a study based on the 1966-67 catalogs of all California public junior colleges (ED 020 730). The catalogs were checked for library courses and recommended programs for either the professional or the technician. The study provides course titles and descriptions for each of the forty colleges that offer such programs. The following are among the general findings of the investigation:

1. The designation for the departments at the various colleges showed a greater apparent diversity than the offerings really provided
2. While a wide variety of content and organization was evident, the most common courses were library fundamentals, public service, technical processes, and reference work
3. A combination lecture-laboratory was the most common teaching method; work experience credit was granted by only six colleges, although several others indicated plans to add this at a later time
4. In programs leading to an A.A. degree, the library course was closely tied to the secretarial program, providing a dual job opportunity for the graduates.

On the basis of these and other findings, recommendations were made that may be useful in avoiding potential hazard areas.

1. The difference between the professional and tech-

nician should show clearly in the curriculum and method of instruction – the technician program should not be a watered-down version of a professional program. Too often the lecture method is used instead of giving the students an opportunity to learn by doing.
2. The staff should be given adequate time to teach. The tendency has been to "absorb" these duties as part of the regular schedule, to the neglect of both teaching and regular library duties.
3. Community ties cannot be stressed too much – a local advisory committee should be established to explore employment potentials, suggest emphases applicable to the area, and act as a sounding board for continuous evaluation and assistance in obtaining instructors.

Health and Medical Training Aides

The *Health Careers Guidebook*, 1966, of the U. S. Department of Labor listed over 200 occupational fields ranging from anesthesiology to X-ray technology. There were 2.8 million people in health occupations in 1966; this figure will probably increase to 3.8 million by 1975 (ED 019 081). These statements show the need for a large number of individuals trained in a wide variety of skills, many of which do not require a baccalaureate degree. The junior college is helping to fill these manpower needs. The American Association of Junior Colleges, in 1968, developed a list of 42 programs they considered appropriate for junior college offering (ED 019 081).

Few documents in the junior college collection discuss specific program offerings at junior colleges. One document, however, reports programs as they were discussed at two workshops sponsored by the American Association of Junior Colleges (ED 032 067). Colleges planning or developing occupational programs in allied health or medical training fields may wish to keep in mind the following issues from among those discussed at the workshops:

1. The problem of getting the practitioner to use technicians as much as possible. Apprenticeship training is prevalent among doctors, who still equate length of training with quality of education, and are therefore skeptical of the community college.
2. The prohibitive expense of these programs, especially when facilities are on campus. Through the extended campus facility approach, where the facilities of the practitioners are used in a work-study arrangement, the programs become more practical.
3. The desirability of developing core programs wherever possible. In colleges with twelve or fifteen related programs, common subject elements need to be coordinated, with spin-offs into various specialities.
4. The advantage of regional or state coordination in planning the location of programs. It can help avoid or minimize problems of duplication, high cost, and obsolescence.
5. The benefit of coordination between the two- and four-year institutions. Transferability, however, should not be the major concern of these programs; they should relate effectively to the occupation.
6. An increasing tendency toward specialization within health programs. It should be pre-determined that real career opportunities are available. Over-specialization can result in training students for jobs that will soon be out-dated. The cost of these specialized programs may be high because of the small number of students enrolled.

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ADDITIONAL REFERENCES

Several bibliographies have recently been added to the ERIC system by the Clearinghouses for Library and Information Systems, Teacher Education, and Vocational and Technical Education. The titles and ERIC numbers for them are:

(1) *Library Technology Materials: A Bibliography* (ED 036 302)
(2) Paraprofessionals and Teacher Aides: An Annotated Bibliography (ED 036 482)
(3) Teacher Aides: Bibliographies in Education, No. 7 (ED 037 406)
(4) Poor People at Work: An Annotated Bibliography on Semi-professionals (ED 038 510)
(5) Paraprofessionals, Subprofessionals, and Nonprofessionals: A Selected, Annotated Bibliography (ED 038 514)
(6) Utilization of Paraprofessionals in Education and the Helping Professions: A Review of the Literature (ED 040 159)

Other relevant information in the ERIC system may be identified by looking under the following descriptors in the *Current Index to Journals in Education* (CIJE) and *Research in Education* (RIE): Health Occupations, Library Technicians, Paraprofessional School Personnel, School Aides, Subprofessionals, and Teacher Aides.

Finally, two recent publications might prove of interest:

(1) *The Library Technical Assistant Program* (128 p.), available from the California State Department of General Services, Documents and Publications, P.O. Box 20191, Sacramento, California 95820, for $2.50.
(2) *Hospital-Junior College Survey*, available from the American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611, for $1.00.

These documents will be added to the ERIC collection and announced in *Research in Education* in the near future.

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STUDENT STUDIES: COMPARATIVE AND REMEDIAL POPULATIONS*

How can we characterize 2,000,000 people? Height? Weight? Prior academic achievement? Personality characteristics? Parents' income and country of national origin? There is no end to the possible categories.

Ways and reasons, means and ends. The how and the why of assessing students remain in flux. Yet we measure them and produce an unwieldy number of reports that draw pictures of the "typical" junior college student, the student dropout, the student activist — pictures that are often vague, confusing, and of indeterminate value.

There is probably no school in existence that does not gather information about its students—a point readily attested to by the preponderance of ERIC documents describing students. This review deals with student studies that focus on comparative and remedial populations.

Comparative Studies of Students

In education, as elsewhere, we make comparisons. Studies comparing transfer and non-transfer students appear to be especially popular even though none of their findings are particularly earth-shaking. A case in point is Anthony's report (ED 019 088) that transfer students generally come from higher socio-economic levels and from academic high school backgrounds, score higher on college tests, are upwardly mobile, and emphasize prestige as a factor in career selection. Although the occupational choices of both transfer and non-transfer students are influenced by their parents, more students with higher academic ranks go directly to four-year institutions than to junior colleges.

According to ACT data, transfer students make higher composite scores than terminal students. The reason for this is quite obvious—in many colleges, a student is not allowed to enter a transfer program if his test scores fall below a certain cut-off point. Also, for some junior college groups, there are differences between transfer and terminal students on high school and college grades—again, for the same reason. However, there are exceptions. Munday, (5), for example, found it unusual for transfer students to achieve *both* higher test scores and higher high school grades than terminal students. Although some differences between test scores and grades were evident, they were small; in fact, transfer and terminal students appeared to be far more alike than different.

Also using ACT data, Fenske (2) reported that, although significantly more seniors indicating vocational/technical plans ranked in the lowest 30 per cent in scholastic ability, the presence of a local vocational/technical college had a greater influence on their plans than did the lack of such an institution. To identify influences on the selection and completion of vocational/technical programs, McCallum (ED 022 453) studied male junior college students who made initial or deferred decisions regarding their school majors. Comparisons had already been made of 327 students from six San Francisco area junior colleges —those who started in a vocational/technical program (initial group) and those who began in a transfer group and later changed their majors (deferred group). Both groups were equally influenced by parents and college teachers, and generally agreed on occupations that were held in high or low esteem. Only 10 per cent of these students expressed dissatisfaction with their majors, but, interestingly enough and despite their vocational/technical orientation, more than 70 per cent described plans to transfer to four-year institutions.

Comparative studies of students are often indigenous to their own schools and stay well within their institutional boundaries. Exceptions do occasionally crop up, however —as in Gold's investigation of students' religious attitudes at three extremely different schools (ED 013 073). Selected results, analyzed from previous studies conducted at Harvard, Radcliffe, and Los Angeles City College from 1946 to 1948 and from 1966 to 1967, indicated that all three of these institutions had become more liberal since 1946, with both religious commitment and traditional religious behavior becoming less common. Students professed less need for religious orientations and beliefs and/or an explicit belief in a personal God, although students at LACC indicated the most conservative attitudes toward religion.

Looking at other characteristics among a broader sampling of institutions, Tillery (ED 019 953) examined University of California freshmen and their peers at California junior colleges. Although academic ability was definitely related to the choice of college or university, much diversity was found within each institution—a finding corroborated in numerous studies. The university student was usually seen as having been better prepared academically, eligible to enter college at the end of seven rather than eight high school semesters and—providing his campus offered a self-challenging, liberal-cultural atmosphere—significantly higher in intellectual motivation, while the junior college student indicated greater interest in applied learning. Further comparisons suggested that the greater social maturity of the university student was matched by his greater flexibility in ideas and values, while the junior college student was less responsive to new experiences.

Corroborating some of these results, Hoyt and Munday found that junior college students, representing 85 schools, were somewhat less academically able than their peers at 205 four-year colleges. Differences among junior colleges in academic potential were so great, however, that the

*An expanded version of this paper forms a chapter in the book, *The Constant Variable: An Analytical Review of the Junior College,* to be published in the summer of 1971.

least able students in one college could be above average in another. "Similarly, the average academic potential at several junior colleges was well above the average in typical four-year institutions" (ED 011 196). Students within individual junior colleges demonstrated more diverse academic talents than was typical of students in four-year institutions, and the college grades for these junior college people were also more varied.

Comparisons of institutional and student characteristics are included in the continuing attempts to predict academic success. An ACT report by Betz (1) includes measures of 36 college characteristics inter-correlated for 581 junior colleges, and the experiences and achievements of junior college graduates from 29 specific colleges. In one study, the majority of students reported that they planned to transfer to a four-year college, worked for part of their two years of college, commuted to the campus, and were generally satisfied with their school.

Such studies are assumed to be worthwhile—else why continue doing them? But are they really? The comparative study yields information about groups of students at one point in time, but wouldn't it be better to establish common data sources and compare effects over a period of years? Only in that fashion could the results of changed procedures of recruitment, admission, counseling, instruction, and curriculum be assessed.

The Disadvantaged

Well-documented by the statements of many who are actively involved in junior college education is the dedication to a curriculum designed particularly to meet the identifiable educational needs of disadvantaged students. Whether "disadvantaged" is defined in terms of academic handicaps or socio-economic deprivation, few schools fail to acknowledge a concern for this type of student. Remedial programs, enhanced counseling services, and a host of other special activities are created to serve this separately identified population. Just how do remedial programs affect the student? How pertinent are they to the lives of the people they purport to serve? Some attempts to answer these questions will be described here.

Reference is frequently made to the effects of "deprivation" on aspirations, values, motivation, and self-concept, as well as to its influence on academic progress. According to several studies, (ED 015 754; 3), the student who falls under this rubric needs to develop positive feelings of worth and value that are important for him individually and for society generally and to develop the social, conceptual, and manipulative skills necessary to fulfill his goals. College programs may help by attempting to develop special skills and to stimulate changes needed for such development by concentrating on what can be done within the context of the student's own nature and the pressures exerted upon him. For the disadvantaged student, these pressures typically include a lack of educational tradition, low motivation and low self-esteem, poor reading and language skills, antagonism toward school and authority figures, and, frequently, an unstable home life. To improve self-image and to reinforce motivation, a comprehensive program must give the student a chance to experience some success in his learning. Disadvantaged students need options that they can visualize as real opportunities. Programs to create or maximize such opportunities will often require variations in admission procedures, success criteria other than academic achievement, and preadmission counseling.

Several colleges have designed special readiness programs to integrate minority youths into both college and community. The College of San Mateo (California), for example, rejected scores on entrance examinations for their disadvantaged students on the grounds that they were invalid predictors of grades (ED 017 231). At Foothill (California) College (ED 022 437), a program designed to help students needing remedial work included a combination of courses in English and psychology, a team teaching approach, and block scheduling procedures.

Student and faculty questionnaires have been used to identify and assess programs especially designed for the disadvantaged. Looking at students in California colleges, Berg and Axtell (ED 026 032) noted a pervasive money problem, lack of study time, a low degree of correspondence between expectation and reality, and a general approval of the institution. Other investigators report results worth considering in different schools. Gold (ED 018 180), for example, conducted a six-week experiment for three groups of under-educated youths in the Los Angeles City Junior College District: 50 students with low high school grades, 51 with bilingual home backgrounds and also with low grades, and 51 admitted to college but unable to maintain a C average. Students in all three groups attended tutorial sessions and cultural events; Group One students also took courses in a bilingual context; and Group Three enrolled in a psychology course as well as one called "Man in Society." In pre- and post-testing of attitudes by means of an inventory purporting to assess the meaning of words, fifteen of thirty items showed a positive change on the part of the students. In subsequent reading tests, students in Group Three showed the greatest improvement and those in Group One, the least. Of greatest impact, however, was the fact that 83 per cent of all these low-potential students were still enrolled in school at the end of the project.

A follow-up survey of 67 Project Success students at the Urban Education Center, City College of Chicago (Illinois) and of 69 students receiving remedial training at other Chicago campuses indicated that students overwhelmingly supported the principle of remedial education, that personalized remedial training significantly increased their desire to persist in college, and that remedial assistance cannot be instituted as a program adjunct—that is, merely to intensify the usual curriculum of a single year (ED 039 870).

Other surveys have reached different conclusions. Participant opinions were obtained through questionnaires and interviews on Georgia Southwestern College's remedial program, dissemination of publicity, the program's deficiencies, and potential improvements (ED 015 737). Because the students did not regard this program as an opportunity to learn anything or to form a basis for choice between college or some other activity, it was recommended that certain curriculum changes be made.

A study at Cerritos (California) College (ED 039 868) revealed inadequate guidance procedures. After being placed on probation, only one-third of the students initially selecting a transfer major changed to a non-transfer one. Almost the same number of probationary students changed to a more difficult major as the number selecting an easier one, while the proportion of students seeking non-transfer majors declined over time. A major cause of high attrition rates, as well as of failure to earn junior college degrees, was attributed to this reluctance on the part of students to accept more realistic goals—a failure that, according to existing research, is probably tied to family and social pressures, preconceived notions of certain levels of prestige with different majors, and ineffective remedial instruction and guidance programs.

Not all findings are negative. Indeed, some programs

seem to have a different impact on students. At San Diego City College, for example, 122 students in the general studies program were compared for four consecutive semesters with a control group of 128 students enrolled in other programs (ED 039 881). Completion of the general studies program seemed to encourage males and minority students to re-enroll in school for a second semester. Additionally, minority students who had enrolled in the program dropped fewer units for the first semester than those who had not enrolled.

But no matter how adequate the research, how relevant the criteria, or how appropriate the methodology, program evaluation has little to say to the individual who forms but one spoke in the large wheel of student populations. While there are several subcategories of "high-risk student," the stereotyping of his performance needs no documentation. We need better understanding, not more figures, and we need truly committed people to work with low-performing students. We must also understand the differential characteristics of students categorized as high-risk and answer such complaints as Moore's that "Black students are being denied college entrance because of a white standardization measure—entrance exams and high school rank" (4). What are the strengths of disadvantaged students in areas other than academic ability? What are some of the goals of under-achieving students compared to the goals of achievers and over-achievers? Do the attitudes of these disadvantaged students differ from those of other students?

An allied question is whether remedial students' attitudes toward academic skills, activities, and aspirations differ from those of high-achieving students. Perceptions of self and of the ideal student, as well as perceptions of the college's expectations, have been surveyed by several investigators. At Los Angeles City College, students admitted on probation because of low test scores were seen as viewing the college from a vocational orientation and seeing no need for high academic skills and interests, although they did express the belief that the ideal student possessed such qualities. They also expressed faith in the junior college to provide what the economy and the social milieu had not offered them, faith in the junior college as an aid to a more productive economic life, a very high self-esteem as students, and an expressed willingness to subject themselves to the discipline of regular study. Further, they were confident that their values and needs were similar to those of both the college and the ideal student (ED 014 274).

If some degree of congruence exists among certain characteristics, how can we better understand and assist the disadvantaged student? Like Cross (ED 024 354), Knoell argues against the use of traditional instruments to assess this type of person, noting that:

> The disadvantaged student tends to be handicapped in a variety of ways when confronted with group tests of aptitude and achievement in common use in the schools. . . . A prior handicap is his basic lack of motivation to do well on the tests, in part because of his self-concept as a loser in school competition (ED 041 573).

And Sheldon, in the December 1970 issue of the *Junior College Research Review*, calls into question *all* placement testing—for any group of students.

Since testing and other selection procedures usually apply to academic aptitudes and not to other qualities and, accordingly, may have negative effects on the expectations of certain students, we need to look for different methods of appraisal and for alternative educational systems. Every person possesses both strengths and weaknesses. Do we honestly bother to look at both?

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ERIC CLEARINGHOUSE FOR JUNIOR COLLEGES

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STUDIES OF STUDENT AND STAFF ATTITUDES

Many of the documents found in the ERIC Junior College Clearinghouse collection report affective measures that were auxiliary or supplemental to other standard data collection procedures. Generally, the measures supplement achievement or biographical data. The documents that report affective measures as the primary focus of their study are far less numerous; in fact, there were only ten documents listed under the retrieval terms "attitude assessment." Nine of these documents are the focus of the present *Research Review*. One describes how to develop an instrument for measuring attitudes, five deal with student attitudes and values, and three concern staff attitudes.

The document that describes how to develop an instrument for measuring attitudes is a Clearinghouse Topical Paper on the subject of remedial education (ED 026 050). Although the attitudes of remedial students toward remedial courses is central to the paper, it describes an assessment method — the Thurstone method — which is applicable to many situations. The assumption of the method is that a person's attitude is reflected by the opinions he endorses.

To develop the instrument, four steps are followed: (1) the determination of a referent and a population, (2) the collection of possible items (statements of opinion), (3) the screening of items, and (4) the selection of suitable screened items for the final instrument. The referent can be anything toward which a population can have an attitude. It could be admission policies, student personnel services, curricula, or the like. Possible items are collected by having members of the relevant population write statements of opinion to reflect given attitudes. Statements are made to reflect very positive, somewhat positive, neutral, or other attitudes. They are screened by using members from the same population to judge what attitude (e.g., very positive, neutral) is reflected by each statement. The statements that receive a high consensus by the judges are potential items for the instrument. The selection of screened items for the instrument is done in such a way that the entire range of possible attitudes is included in the instrument and each level (degree of positiveness or negativeness) of the range is represented by the same number of items.

The advantages of the above method for developing an instrument for attitude assessment are that it provides continuous data for statistical treatment and the steps followed in developing the instrument help provide reliability and validity. A limitation of the method is that the resultant instrument does not provide information on different aspects of the referent. Therefore, if one found negative attitudes toward "student personnel services," what specifically caused the attitudes would still be unknown, although the measurements would provide baseline data for determining if specific changes improved attitudes.

The five documents that deal with student attitudes cover two topics: attitudes of entering freshmen and attitudes that differentiate groups.

A dissertation study by Stein (ED 021 534) tested several hypotheses regarding the junior college entrant with low measures of aptitude (i.e., scores below 39 on the *School and College Ability Test*). One hypothesis was that certain attitudes would differentiate the successful from the unsuccessful of the low-aptitude group. The 64 successful students were those who were released from probation at the end of the second semester. Unsuccessful students were 172 who were disqualified or withdrew before completion of two semesters. Attitudes were assessed with a questionnaire and Q-sort technique designed to determine concepts of "ideal student," "self as student," and "expectations of the college." Findings suggested that the 64 successful students were more goal-directed in their use of time, more tolerant of general education requirements, and more flexible regarding teaching and learning methods.

Characterizing all low-ability entrants tested for the study, Stein gives the following positive values on which a junior-college counseling and instructional program can be based: (1) a faith in the junior college to provide a general education; (2) a belief that the junior college is a means to a more economically productive life; (3) a fairly high self-esteem as a student; (4) an expressed willingness (not always implemented) to engage in regular study and to drop extraneous activities; and (5) a confidence that values and needs are congruent with those of an ideal student and the college.

Documents by Johns (ED 039 877) and Lunneborg and Lunneborg (ED 039 865) also deal with assessing the attitudes of entrants. Johns administered a battery of tests to determine correlates of academic success in a predominantly black, open-door, public, urban community college. Included was the *Survey of Study Habits and Attitudes.* When correlated with first-quarter grade point averages, the instrument was found to have no value as a predictor. Lunneborg and Lunneborg forecast changes in the Washington Pre-college Testing Program. In the near future, the current cognitive emphasis of the program will be altered to include more attitudinal measures such as a vocational interest inventory, an assessment of educational, employment, and life goals. There is also interest in expanding criteria beyond grades by including measures of personal growth and immediate and long-range feelings of satisfaction concerning college experiences.

Two studies found attitudes and values that differ from one student group to another. Mauss (ED 013 076) postulated four student subcultures on the basis of a typology developed by Clark and Trow and adapted to the junior college situation. The reason for interest in the typology was concern for sociological factors in educational performance. Two values were involved in defining typology subcultures: (1) identification with the adult community and (2) involvement with intellectual ideas. One subculture was composed of *academic types* characterized by both; the second subculture, *vocational types,* was characterized by the first only; the third, *incipient rebels,* by the second only, and the fourth, *perpetual teenagers,* by neither of them.

To see if differential responses to questions about such values could be obtained from a junior college population, a questionnaire was administered to a cross-section of 462 students on a suburban California campus. Included were several items to provide background information and questions to permit analysis of value commitments. The data indicated that the four postulated subcultures did exist. The table indicates the percentage of the sample found in each subculture.

		Involvement with Ideas	
		High	Not high
Identification With Adult Community	High	Academics 9.5%	Vocationals 24%
	Not high	Incipient rebels 23%	Perpetual teenagers 44%

N = 462

The findings suggest that the "environmental press" of large urban junior colleges is perhaps anti-intellectual and adolescent.

Abbas (ED 023 390) investigated the interpersonal values of three groups of students: (1) junior college students in a terminal course, (2) those in a transfer course, and (3) university students. The samples were comprised of 93 Missouri University freshmen, 116 junior college transfer students, and 40 terminal or vocational students. Gordon's Survey of Interpersonal Values was used to measure six qualities: support, conformity, recognition, independence, benevolence, and leadership. Both junior college groups scored significantly higher than the university group on conformity. On the leadership scale, the university students scored significantly higher. No other differences were noted. It seemed possible that the junior college students scored higher on conformity because they were more likely to live at home, whereas a university atmosphere usually fosters nonconformity. The author also suggested that there was a need for leadership training programs at the junior college.

The last three documents are concerned with the attitudes of staff. One investigator, Maloney (ED 031 247), studied the attitudes of Missouri public junior college faculty toward the objectives of the comprehensive junior college. He sought opinions on the college's objectives in occupational, general, transfer, pre-professional, part-time adult, community service, and counseling and guidance programs. The subjects were sent a 35-item questionnaire; 60 percent responded. Over 70 percent of these agreed with the overall college objectives; 52.3 percent disagreed with the transfer program. As least 70 percent agreed on all other functions. The investigation suggested that particular attention should be paid to attitudes of the more influential faculty members and that a stronger orientation program was needed, especially for the faculty who were undecided.

In Florida, the degree of faculty satisfaction in community junior colleges was analyzed by Kurth and Mills (ED 027 902). Data were collected by a 220-item questionnaire on six aspects of the faculty members' own college. Of 4,289 questionnaires sent, 2,756 replies were usable. Findings were: (1) satisfied teachers contribute more to the junior college objectives, especially community service; (2) a few faculty members are complacent; (3) most faculty, while content with their profession, working conditions, community, associates, and students, wish to improve both the institution and themselves; (4) opinions differ on the role of counselors and teachers; (5) salary is less important than other teaching conditions; (6) there is too little in-service or other training; and (7) teachers want more say in decisions. Recommendations from the study included more in-service graduate training, more faculty recommendations on governance, a statewide study of student characteristics affecting the colleges, and further study of subgroups of satisfied and dissatisfied faculty. It was also recommended that the present study be repeated in five years.

The final study (ED 032 047) looked at the attitudes of community college presidents, chief student personnel officers, and faculty from the student personnel point of view in selected Illinois community colleges. Replies from 26 presidents, 26 student personnel officers, and 1,143 instructors led to the following conclusions: although most instructors favor the student personnel point of view, they are not as student-oriented as they should be; presidents and personnel officers agree that instructors should be student-oriented, but are not as much so as they should be;

and certain characteristics of the instructors' training and experience distinguish the guidance-oriented from the non-guidance-oriented. From these conclusions, it was suggested that instructors should have at least two courses in guidance during their preparation.

Nine documents are not many for a topic as important as attitude assessment. Obviously, many gaps are not yet filled.

One example of current attempts to close the gaps is the 3-D Project coordinated by the ERIC Clearinghouse for Junior Colleges. Students and staffs in three proximate but diverse California colleges have been examined according to several variables, among which are their value systems.

In one ERIC/AAJC Monograph (No. 12), *Junior College Faculty: Their Values and Perceptions*, Young Park presents the thesis of an institutional personality, developed on the value hierarchies of staff members. Another ERIC/AAJC Monograph (No. 11), *Values and the Generation Gap: Junior College Freshmen and Faculty*, by Florence B. Brawer, compares the value ratings of incoming freshmen and staff members. While such dimensions as sex, age, and discipline have varying effects on the way these subjects respond to Rokeach's *Terminal and Instrumental Value Scales* (in Milton Rokeach, *Beliefs, Attitudes, and Values: A Theory of Organizational Change*. San Francisco, Jossey-Bass, 1968.), the role orientations (student vs. staff) account for the greatest differences.* Further analyses of these data may offer more information regarding the belief systems, attitudes, and values of junior college populations.

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* Both these monographs on attitudes in the academic world are presently in press. They will be available from the American Association of Junior Colleges, One Dupont Circle, Washington, D.C. 20036. They will subsequently be announced in *Research in Education*, with prices for purchase from ERIC Document Reproduction Service.

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ONE INSTITUTION: SIX ALTERNATIVES

Introduction

This expanded issue of the **Research Review** *examines six alternatives to current patterns in the community college. Each paper points to similar needs—the same needs that have become contemporary gospel but still hinge on the theoretical, the ultimate, the yet-to-be implemented. Each paper also looks at today's community college from different perspectives, seeing divergent goals, and suggesting varied emphases.*

A fairly negative view is taken by Winthrop Adkins and Frank Jennings, who describe New College. This "instant institution," founded on hope, enthusiasm, and good-feelings-for-all-mankind, ends in disillusionment and despair. However, they continue, if attention is paid to the clear definition of objectives, anticipation of problems, explicitly developed procedures, and well trained staffs, failure is not inevitable. The authors offer guidelines for formulating institution-building capabilities, developing curricula, and designing a Personal Development program according to a Life Skills Education model.

Albert Canfield's paper discusses verifiable objectives in terms of theories of instruction, management, and motivation. He suggests that, because of those concepts and the knowledge of training procedures, techniques for identifying key problems, and the ability to undertake organizational re-examination, education is in a unique position to "assume leadership in organizational effectiveness."

Martin Cohen's **College of the Whole Earth,** *although the most visionary plan, still allows for flexibility and stimulates autonomous decision making on the part of administrators, community, students, and faculty. Each group is brought into the process of establishing the college as a viable center for gathering information about the community's needs and resources. The paper applies Buckminster Fuller's World Game to the relatively small community structure and extends it into educational institutions.*

Changing from an emphasis on curricular designs and objectives, William Birenbaum's paper discusses community college students more directly. He points to the disparate perceptions of middle- and lower-class students, especially to the fact that "new" students, who have had the least prior academic success and the fewest educational and economic opportunities, are forced to make early vocational choices that limit them to specialized and compressed programs. Despite the "open-door" commitment of two-year colleges, their curricula lead to a closed system of limited space, measured time, rigidity, and narrowly fixed teaching procedures.

In her discussion of alternative enrollment-attendance patterns, Dorothy Knoell synthesizes the many findings about community college students, suggesting that student attrition "tends to reduce [the heterogeneity resulting from diverse abilities and backgrounds] . . . to what may be too low a level of student mix." Whatever the variability, however, there is considerable deviation from standard attendance patterns among two-year college students, deviation that points to the necessity for alternative patterns. She proposes ten such alternatives for the many students who do not succeed in "regular" programs.

Moving from the special focus on students to a proposal for faculty, students, and community people, Warren Friedman and Rue Wallace make a strong plea for a radical redefinition of the school. They propose the political use of an institutional voice to build links between school and community and further suggest a "forum for real dialogue" concerning educational functions, with the school as a focus for community problem solving. They stress the necessity for a combined effort by the schools to force certain events.

One institution: six alternatives. These approaches, of course, do not represent the views of all educators or, necessarily, the views of the staff of the ERIC Clearinghouse for Junior Colleges. They do, however, provide new and interesting perceptions of today's community college.

Florence B. Brawer
Special Projects Coordinator

DEVELOPMENT OF LIFE SKILLS CURRICULA IN COMMUNITY JUNIOR COLLEGES

This story of the establishment of New College is not true in any one of its details. It is quite accurate, however, as a description of what is now taking place on many junior college campuses about to become operational.

ITEM: Three years ago the Regents announced to the press that a new community college would be established on the four acres of abandoned waterfront property of Seaport. The school would serve the immediate community of the downtown area, tightly packed enclaves of Italians, Irish, and Blacks. Secondarily, it would welcome all the children of the poor from other depressed neighborhoods of the city. The announcement on TV and in the press resounded with the rhetoric of humanistic innovation:

> The city is a learning laboratory . . . All who are to be affected by the consequence of educational decisions would participate in some meaningful way in their formulation and enactment . . . No student . . . who would wish to enter the school's programs would be debarred . . . the teaching staff would represent the populations to be served . . the life styles of the total community would be respected, celebrated, and supported . . . a new kind of curriculum structure . . . would be developed . . . it would be task-specific, person-specific, a rich and virile blend of the humanities, the sciences, and the marketplace . . . the American Dream of equality of educational opportunity with the school as a fail-safe ladder to social betterment would be enhanced and elaborated to include something that could only be called "equality of educational results." THERE WOULD BE NO CASTOFFS HERE . . . no dropout, no man or woman would be denied [his or her] warranted success.

ITEM: Two months after the Regents' announcement, a search committee made up of community leaders, church leaders, labor leaders, and the mayor's press secretary reported that Dr. Able, a young sociologist with a Peace Corps background and a history of success as a change agent in Appalachia, had been chosen president of New College.

ITEM: In the fall of the first year, Able introduced to the public his administrative planning group, which included high school students and young, unemployed adults, several history teachers, two employers, several technical specialists, a human relations officer from the police force, and an emeritus professor of education. Shortly thereafter,

a twenty-six page document, the plan for the development of the college, was released.

ITEM: The following spring, the Board of Trustees of New College announced that applications would be accepted on a first-come-first-served basis, with no high school diploma required. Cooperative work-study education would be the central thrust. The curriculum would be tailored to the needs of the individual student by active advisement and counseling. New College would be a gateway and a channel into the upper reaches of both higher education and the professions. More important, New College would be in and of its home community—a service agency *par excellence*, a clearinghouse for civic issues, a common ground where diverse groups could meet to discover and deal with common problems.

ITEM: New College opened the following fall with five hundred students. Orientation was a two-week retreat in which the resident faculty and a student cadre briefed the newcomers about openness, freedom, and opportunity. There were "rap" sessions, encounter groups, interactive planning meetings, affective marathons, and chalk-talks about information flow and governance. The academic calendar described the rhythms of work and study. Administration-faculty-student task forces on curriculum, student life, decision making, and community participation were established and began to confront conflicts and hammer out policy. The academic year began with enthusiasm, great releases of energy, and optimism.

Troubles were not long in coming. The temporary quarters were found to be cramped and inadequate. Student and faculty definitions of curricular "relevance" and "standards" began to diverge and polarize the groups. Long-standing ethnic suspicions erupted in open confrontation and occasional violence. Community groups took to the press with charges that they had not been fully consulted. Science and shop equipment failed to arrive. Work stations could not be found in the community. Students complained about two-hour commuting time and inadequate transportation. Faculty pronounced their offices noisy and their workload too great to tutor and counsel the many students who lacked adequate communication and study skills. The drop-out rate began to rise alarmingly. All-college meetings were held; the president's office was occupied and reoccupied; a student underground newspaper mysteriously appeared with accusations of boring courses unrelated to student needs, violations of the spirit of the retreat, little consultation with students, and insufficient concern for their welfare. Administrators were heard to say, "I spend my time putting out fires. I can't remember when last I had a chance to think where we're headed."

The second year began without a retreat and with the admission of an additional 700 students. The promised new facilities had not even been planned. Classes increased in size; some started at eight in the morning; some ended at eleven at night. A quarter of the original faculty either left or were asked to look elsewhere. The new faculty were appalled at the looseness of the operation, the arrogance of the students, and the low academic standards. The generation gap yawned at the gate of New College. The ancient town-gown conflict was reenacted. This was neither what the Regents had sought nor what the city fathers had planned. This was not what the parents of the ethnic groups had expected from their school. This was not the way to jobs, to a "real college," to a new life.

ITEM: Dr. Able left eagerly for a far better post at the end of the academic year. His successor, slightly older, left a career as a military educator and is busy bringing "orderly order" out of "romantic chaos," as he described the curriculum and operation on his first day. Scores of students were encouraged to go out—or drop out—to work before engaging in "serious study." Again the faculty turned over. New College now expects to meet all certification requirements within the severe time limits that have been placed on it for the remaining students. Liberal education will be available to those who can profit from it; for those who cannot, cooperative work-study education will meet their instructional needs. Thus a new educational institution is formed. In a few years it will be no better than others, but no worse than most.

The Instant Institution

The preceding paragraphs display the tragi-comic fate of far too many "instant institutions." The pattern was similar in the War on Poverty and, with variations, even in the industrial sphere. New College would have suffered similar consequences even if it had been conceived and created under simpler conditions and on a more traditional model. The scenarios for the development of new educational institutions have been agonizingly similar: too many contradictory and ill-defined objectives, too little anticipation of problems, too few explicitly developed plans for growth by stages, inadequately trained or inexperienced staff to plan and implement the development, and, worst of all, too little time.

Deliberate institution building is a modern and peculiarly American phenomenon. Modern times demand new educational institutions to meet recently discovered socio-economic problems of a society in deep trouble. Historically, American optimists have been willing to tackle the impossible without the European's sense that institutions, like men, cannot be made excellent in one generation—academic or genetic. In a sense, our institution-creating ambitions are our strength, but when we ignore the necessity of using fully our technological and managerial know-how in achieving them, they are also our weakness.

There can be no denying that we must have people-changing institutions, new schools that can give generous assurance that anyone can be prepared to live a better life and that most of our social and political ills can be assuaged by the actions of an informed, engaged, and receptive citizenry. We need schools at all levels to help create such citizens—from nurseries to universities and educational service centers for life-long learning and doing. The present community junior college in this country is, for all practical purposes, a new institution—one of the newest [6, 9]. It must be multi-purpose, flexible in operation, and a major integrating force between institutions and people. The opportunity for innovation has been seen by many; the realization has seldom been achieved.

We are convinced that perhaps the major reason society has not yet been able to build community colleges sufficiently stable and innovative to meet the peculiarly difficult educational needs of their clientele is that no one yet fully realizes that to do so requires a special capability. It has been assumed that ambition to deal with great needs, faith in progress, hard work, liberal thought, and vigorous leadership will by themselves accomplish the task—imagine if we

built skyscrapers that way, or prepared to wage war, or launched moonshots!

What Kind of Institution-Building Capability Must We Have?

The development of a community college is a complex process [3, 4]. It requires a carefully defined set of compatible objectives; a well-conceived, detailed plan for development; judiciously selected and expensive resources; and above all, the systematic body of knowledge and trained manpower to create and manage them all. We are convinced that little progress in institution development will occur until we have a cadre of new kinds of specialists, trained in the design, development, and management of new institutions — organizational architects, engineers, and manager-builders. Second, there must be better theory, models, and systems, a reservoir of literature by experts— in short, the base for a new technology.

One looks in vain today for university programs that train institution-development specialists or for a systematic body of literature on problems of the development of a new educational organization. Departments of educational administration are too often oriented to the problems of maintenance, not development; to finance and to physical plant, not to students and communities; to the *existing* institution, not the new. To be sure, graduate schools have begun to introduce programs and courses in change-agentry. Though still provisional, the orientation is to be the identification of strong agents for change within existing organizations and the better use of existing resources [5, 7]. While this is also important, deserving academic attention in these times of organizational obsolescence, we contend that the tasks of *new*-institution development are considerably different. At the risk of seeming to underestimate the difficulty of maintaining existing schools, it is a little like developing a cadre of interior design specialists before one has even thought of developing architects and engineers.

Producing change in existing institutions requires many of the same planning, design, negotiating, and management skills. Yet a new institution requires a great many other skills of a different order [2]. It is one thing to react creatively to visible negative feedback within an organization; it is quite another to start from scratch in building, under pressure of time, new systems that exist only in the imagination. Both kinds of specialist are needed: those who can design and guide the growth of a fragile fledgling institution, and those who can help create new possibilities for excellence in human development in existing ones.

We are persuaded that the need for educational developers should have been felt long ago by the graduate schools of education and the funding sources, and we urge most strongly that those committed to the viability of the community college begin now to put in their orders for these specialists. The creation of new graduate programs to supply professionals at the master's and doctoral level, trained in educational planning, development, and management, would have several beneficial side-effects. It would require the creation and assembly of a body of relevant knowledge and expertise and would stimulate the delineation of theories, models, and systems necessary for the task. Inevitably, professional interest groups and associations would be born. A good start would be to bring together those who have "paid the price" by actually living through the rigors of such an effort. By now, there should be a number of former administrators of new community colleges, training centers, and other educational institutions who have learned a great deal from their errors and experiences and who would make good use of the chance to systematize their hard-won knowledge. While the development of institutions will never be totally smooth and predictable because of the complexity of the task, the capability for developing detailed plans (with their alternative fail-safe strategies) that are staged for optimum growth will greatly improve the chances that institutional intentions become stable operations. Given processes for constant monitoring and evaluation, an emphasis on performance, and flexible methods of governance, an institutional base can be created for the effective education of productive citizens.

What Kind of Curriculum Could Be Developed?

Inevitably, one of the problems faced by the new breed of development specialists is the creation of a curriculum designed to meet the unique needs of the community college population. It is not enough to have a smoothly developing institution; the basic program must provide the student with the necessary knowledge, skill, and experience to attain his occupational and educational goals. One of the problems at New College was that the rhetoric about curricular relevance was not matched by institutional performance. The high dropout rate recalled the high national rate of attrition — not surprising when one considers the diverse educational problems presented by the heterogeneous community college population.

There are the familiar students who suffer the peculiar status problem of rejection by four-year colleges. There are the high-aspiring, educationally disadvantaged groups with serious need for viable direction and sufficient academic tools to take them on the way. There are the technology-oriented sons of parents made practical by the depression of the '30s who want to learn today's equivalent of a trade with no nonsense. Some want mainly a moratorium on adult work-life or something vaguely better than they could get merely with a high school diploma. Most are in cultural transition from the lower classes to some level in the middle. Opportunity, however vaguely defined, is the principal expectation from two years of attendance.

We will not attempt to discuss fully the curricular alternatives that will enable the multi-purpose community college to deal with more widely differing student goals. We would, however, suggest that alternatives will likely be developed within three major domains: Technical Career Training (including paraprofessional), the Liberal Arts, and Personal Development. Students having disparate goals will take different programs comprised of varying proportions of each of the three main curriculum areas. Technical Career Training and the Liberal Arts are traditional in the present community college in one form or another; Personal Development represents a new curriculum area—"a third curriculum"—ripe for development. It is for this area that we should like to make some specific suggestions.

In many schools and colleges, personal development is thought to occur as an indirect result of exposure to various learning experiences, including interaction with mentors and peers. Special problems related to academic

difficulty, normal growth, or social and interpersonal conflicts are dealt with, if at all, on a crisis basis by trained counselors. With the admission of the disadvantaged, who lack many of the opportunities described by Strodtbeck [8] for learning how to deal with personal development in our culture of achievement, it has become increasingly clear that the community college must offer more effective preventive methods than counseling and advisement for making the transition from adolescence to adulthood, from ghetto to the world of work, from school to employment. The recent legitimation of affective and social objectives in addition to cognitive ones for systematically developed curricula has turned the attention of educators to finding ways of enhancing student learning of "urban survival skills" and "human relations skills," as well as the more common "study skills." These we have designated "Personal Development." Unfortunately, program development in this area has been haphazard and limited in imagination and scope.

An ambitious, systematic method for developing a Personal Development curriculum, called Life Skills Education, has been devised over the past several years by one of the authors [1]. The basic model was developed first for disadvantaged blacks in an urban vocational training center, and later in Canada. In the past two years, the underlying Problem-Centered Structured Inquiry model has been further refined in projects at Teachers College through applications to the affective and social problems of beginning teachers. Recent work has indicated that the basic model is an effective way both to help students deal with their problems in living and to help teachers learn some of the more difficult skills of teaching.

In brief, Life Skills Education is a problem-centered, experience-based curriculum model, using small-group methods, that provides an opportunity for the student to acquire new experience, knowledge, and skill as he gains practice in solving problems in living. The Life Skills curriculum model has the following characteristics:

1. It focuses on specific psychological and social problems experienced by most people in a given target population in training, on the job, in the family, in personal development, and in the community.
2. It takes full advantage of the positive peer relationships of adolescents and adults by maximizing group activities in areas of common concern through discussion and structured learning experiences in small groups of ten to twelve students.
3. It builds on students' present experience, knowledge, and skills and provides a means for improving problem-solving ability while promoting the acquisition of new experience, knowledge, and skills.
4. It provides students with alternative ways of perceiving and resolving life problems on a preventive basis and encourages them to make conscious, informed choices about their personal values and objectives.
5. It is structured to permit the group to deal with one problem at a time and to experience success and cumulative progress in resolving an increasing number of related problems.
6. It requires students to engage actively in exploring their environment and provides a means of reflecting on their experiences and setting and implementing new goals.
7. It demonstrates the utility of knowledge and the value of learning by reading, study, and research as well as by discussion and experience.
8. It engages the group in applying both their accumulated and their newly acquired knowledge to real and simulated life problems and provides an opportunity for trial and practice.

When properly developed, the Life Skills Curriculum provides in effect a course of study for achieving many counseling and teaching goals by dealing with both cognitive and emotional aspects of personal problems and by integrating inductive and deductive modes of learning.

The development of Life Skills curriculum units is basically a two-part process: (1) a systematic method for deriving behavioral objectives from model problems in living met by a target population such as the community college student–the "what" of the curriculum; and (2) the design and development of sequential learning experiences following the four-stage problem-solving model–the "how" –for helping students acquire the necessary knowledge and skill to deal more effectively with the problems in behavioral terms. Deriving the syllabus from the actual problems faced by students insures that the curriculum will be relevant to their perceived needs and that motivation will be high. The structured problem-solving method *starts by highlighting the problem, dignifies what the group already knows about it, provides multi-level and multi-media resources to help them find what they need to know, and gives them an opportunity to translate their knowledge from insight to action.** After several lesson cycles, students begin to acquire, in addition to specific knowledge and skill, a basic problem-solving strategy that can be generalized to other problems for which no programs are already available.

The creation of such a curriculum requires careful assessment of problems, a clear understanding of both the model and the characteristics of the target population, analytical skill and imagination in design and development, and sufficient lead-time and resources for enough cycles of development, trial, evaluation, and modification to insure that units in fact do what they are intended to do.

Examples of learning units or lesson series appropriate for the community college student are: how to choose, find, get, hold, and advance in a job; how to express and present oneself effectively in a group; how to budget time effectively; how to deal with marital conflict; how to cope with the social demands of training and work; how to get the most out of a community college experience.

It is not difficult to imagine other problems that could be programed in a Personal Development curriculum. The students have to deal with all the stresses and strains of socio-economic mobility, as well as with all the life problems encountered by a continuing learner, a potential multiple-career worker, a family man, and a citizen in a rapidly changing society. A preventive program of Life Skills Education would help students cope with dilemmas they will inevitably face and thus minimize the chance that problems will become so severe that they must drop out or fail to take maximum advantage of their learning and employment opportunities.

Once again, however, new kinds of development specialists and sufficient time and resources are required to insure

*See Reference [1] for a more detailed description of the Life Skills Education model than can be presented here.

that curriculum plans are well designed, developed, tested, modified, and installed. Life Skills Developers and the teacher-counselors called Life Skills Educators who will administer the program will have to be trained in specifically designed university graduate-degree programs.

Given adequately trained program developers and sufficient time, such programs as Life Skills Education will be an important way to insure that the personal development needs of students will be met in community colleges. The ability to cope effectively with immediate personal problems allows a fuller concentration on learning opportunities in other areas, such as Technical Career Training and the Humanities. If the "third curriculum" can in fact be developed to accomplish its intended job, it can help the student integrate what he is learning in occupational training, liberal arts, etc., and thereby create the truly unique institution the community college has always promised to be.

Conclusion

We are persuaded that the community college must make more aggressive demands on the graduate schools of education (with the assistance of funding sources) for the new kinds of development specialists we have described: the macro-developers of institutions and the micro-developers of unique curriculums. Given such personnel resources and the appropriate framework, systems, and knowledge, the patterns of New College can be avoided and the community college will have a chance to live up to its promise of helping to make real the American dream of equality of opportunity through education.

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OBJECTIVES, MOTIVATIONS, AND ACHIEVEMENT

The current emphasis on verifiable objectives (sometimes called behavioral objectives or performance objectives) is generally attributed to the continuing and major impact of Mager's *Preparing Instructional Objectives* [2]. Such an emphasis within instruction is similar to the emphasis within management, namely, *management by objectives,* that is ascribed to Odiorne's *Management Decisions by Objectives* [5]. A third area of thought, and perhaps the most powerful unifying concept, concerns contemporary motivational concepts centering on achievement needs and has been formulated by McClelland in his *The Achieving Society* [3].

In all three cases–instruction, management, and motivation theory–the approach has shifted from an emphasis on the activity or process to the results of that activity in relation to some specific objectives. Each of the three concepts is now reasonably well documented by substantive research, comment, and study–so well, in fact, that no one of them could be adequately described in a paper of this size. Nonetheless, all three should be considered and their reinforcing implications suggested.

Briefly, the stream of conceptual development in management has followed a relatively clear path in the past decade or so. Among the earlier and more significant entries in the field of management were CPM (Critical Path Method) and PERT (Program Evaluation and Review Technique). As a corollary to these systems, with their elegant acronyms, a group of highly sophisticated mathematical procedures emerged, each designed to permit the application of decision and queueing theories to a variety of management problems. In their evolution, it became evident that the development and analysis of such decision options often required the extraordinary computational powers of the high-speed digital computer. The current hot letters are, of course, PPBS (Program Planning and Budgeting System). Some efforts to make use of the full gamut of objectives, targets, interactions, checkpoints, and deadlines have drowned in their own paper trails. Others suffer because no general agreement can be reached on the basic objectives and consequent work or output units.

In each of these management concepts, the emphasis has tended to remain on the charting of the courses and the monitoring of activity, not necessarily on the clarification or definition of the organizational goals themselves. Odiorne, however, identifies three essential activities for the organization: (1) accomplishing routine objectives – the day-to-day business of the organization; (2) solving problems–correcting out-of-control situations or performances that fall outside acceptable limits for specific operating results; and (3) innovation–the development and use of new approaches.

A common analogy to illustrate these points relates to a buildings and grounds department and might read: (1) cut the grass (routine), (2) rid the grass of weeds (problem solving), and (3) replace the sod with artificial turf (innovation). By concentrating energies on the identification, clarification, and communication of mutually accepted and carefully defined objectives, Odiorne and many of his

clients have found that applying PERT or the PPBS concept follows quite naturally.

As for the instruction side, Mager opted for instructional objectives that could be verified by learner performance. He proposed that the learner's learning should be evident to both teacher and learner, mutually understood, and concretely defined. He also asked that the definition include clear statements describing the conditions under which the performance would occur and a precise description of the standard or acceptable level of performance. Some find such clearly differentiated goals or purposes for learning too restrictive and more or less reject out of hand the notion of verifiable outcomes. With a little reflection, however, it will be clear that the concepts of Mager could virtually be deduced from the concepts of management by objectives—or *vice versa*. Despite this, it is rare to find administrators pressing for management by objectives within their own structure while, at the same time, encouraging their faculties to adopt the performance-objectives approach to instruction.

Meanwhile, a great mass of data on achievement motivation has been accumulating. McClelland and several other investigators have formulated, implemented, and verified the contribution of the achievement motivation in essentially entrepreneurial environments. Learning would appear to be, essentially, an entrepreneurial activity.

The articulation or consolidation of these concepts (management by objectives, performance objectives, and achievement motivation) has yet to be fully achieved. The concepts of instructional and managerial objectives that divert attention from personal qualities and their relationship to activities inside or out of procedural or policy limits have yet to emerge. Yet it is clear that the motivation to achieve excellence or to achieve some moderately difficult goal is an extremely powerful force—for both the individual and the organization. The potential power resulting from a congruence of an output-oriented management emphasis (instructional and organizational) with the achievement (output) motivation emphasis of the social scientist seems evident. Without such articulation, we are likely to have organizational leadership attempting to establish specific goals for achievement while the personnel who must achieve these objectives view their roles, their jobs, and their tasks with widely differing personal motivations.

Several questions remain. There is, for example, the question of whether or not the people *now in the organization* can be trained, educated, shaped, developed, or changed to understand, endorse, and apply any of these concepts. There is an abundance of data to indicate that people can and will learn to make use of performance objectives in the development of instructional procedures or in their instructional strategies. Similarly, there is considerable evidence that people can and will apply the concepts of management by objectives. The question about which we generally have the least knowledge has to do with teaching people achievement motivation. McClelland [3, 4] gives a qualified affirmative, and in *Teaching Achievement Motivation*, Alschuler [1] gives an even stronger and more vigorous affirmative.

In a very real sense, then, the stage is ready. We have the means for total institutional articulation within our grasp. We currently have the resources and the know-how to move ahead in all three fields. Accordingly, it is here proposed that instruction, management, and motivation be merged in a process that involves people in goal setting, carefully defining what is expected to happen, monitoring progress, permitting the individual considerable latitude to follow the behavior style that produces the best results for him (within policy guidelines, of course), and managing by exception those performances outside acceptable limits.

In management, this would free the manager from status or progress reports and show-and-tell sessions at staff meetings and would allow the administrator to devote his energies to individuals with problems the moment such problems become evident. The parallel in instruction is to free the teacher from the often laborious outpouring of content, group contact, etc., and allow him to facilitate progress toward some goal defined for the individual student—all within the framework of achievement rather than power, achievement rather than friendship, achievement rather than bureaucratic conformity. In a sense the question is: "If we have something to achieve, can we agree that we are successful when it *has* been achieved?" Not uncommonly we pretend that to be the case but, in reality, the race often goes to him who runs most stylishly.

Along with administrators, faculty, and students, could we involve the person seeking a goal in the goal-setting process itself—assuring that the goals were reasonably difficult and obtainable, establishing limits of performance acceptability in a joint discussion, and letting the individual achieve the goals in his own way, within broad policy limits? If his performance falls outside acceptable limits, discussion would concentrate on healthful correction and/or improvement in the identification and elimination of problems—not on placing blame, analyzing personal quality limitations, or on other annoying gambits in a preoccupation with the hows rather than the whys or whats of achievement.

While we might hope that we will all be innovative, most of us tend to be well occupied, if not fully satisfied, with routine work and periodic problem-solving forays. For the innovator (often the strong achievement-motivated person), we need to provide an environment within which his ideas and suggestions are not perceived as criticisms or attacks on the existing order. This is really not difficult, *if* the emphasis is on achieving results rather than on the consequences of behavioral style—be it for power, friendship, likability, or avoidance.

As McClelland's research continues to be verified by investigators in several other fields, as the concepts inherent in and related to the notion of performance-verifiable instructional objectives are more widely accepted, and as the adoption of a management-by-objectives approach widens, the congruence of the three separate concepts occurs automatically.

If we become preoccupied with what we are trying to achieve, remarkable things may occur. Committees, for example, are presently likely to discover that their objective is to discuss and exchange views in a particular domain of issues. They disregard any implications or consequences their discussions might have for goals or objectives relevant to them or to the organization. Committees *ought* to meet for a specific objective, be formed because a group is likely to be more effective than an individual, be encouraged to concentrate on a single objective, and be disbanded when they either achieve the objective or concur that they cannot reach it.

Individuals within the organization *can* establish moderately difficult goals for themselves, *can* be expected to work in their own style to achieve them, and generally *do* have access to individual or *ad hoc* groups to help them if a problem remains or a change seems indicated. Most people in education—trustees, administrators, faculty, and students—are genuinely determined to improve their effectiveness, to achieve more in less time, to function effectively, etc. This determination, directed toward instructional and organizational efficiency and effectiveness, united with and facilitated by our growing understanding of human motivational needs, offers a powerful potential for personal improvement through an organizational commitment to ends rather than means. We may well find that success, elusive as it is, is less in the being than in the becoming.

It is evident that we now have the concepts, the training procedures and the materials for producing massive organizational improvements; consensual techniques* for identifying and clarifying problems; and participative techniques to assure that individual goals are *really* individual goals rather than organizational expectations or administrative assignments. We have the theoretical and operational foundations to move into a total organizational re-examination and to defer any further propensities to engage in the futile preoccupation with processes, addiction to which comes so easily.

I predict that education, because of its dedication to human values and its commitment to the service of people, will assume leadership in organizational effectiveness within this decade. Our counterparts in business and government who have the same desire and hope cannot do so because only we have the wide range of objectives and the specific motivation to make such an alternative a reality.

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COLLEGE OF

THE WHOLE EARTH

There are great needs in the world — for food, power, energy, water, and material resources; for equitable distribution of the resources so that everyone in the world will be able to lead and continue to lead a healthful and successful life. The increase in human population on the earth strains these resources and threatens the ecological balance of all other animal and plant life. Increasingly rapid development of the economies of the world for the benefit of people yields inefficiencies in the distribution and use of the resources, which then show up as pollution of the environment. This development also leads to conflict for access to the finite resources. If the world is to develop peacefully and in harmony with the natural forces that sustain it, these conflicts must be resolved and the inefficiencies reduced—*all over the world and for all humanity.*

The goals need to be stated for all humanity, for the world is one great inter-related system. Buckminster Fuller, in his ideas for a World Game, has suggested that we look at the earth as a closed and finite system, that we examine what is there and what is needed, and attempt to formulate plans to achieve our goals for the whole world.

He suggests that scientists, planners, and world leaders gather knowledge of the needs and resources of the earth, develop their ideas, and test their plans against our best understanding of worldwide industrial and economic processes. He suggests further that knowledge of all plans and results of all tests be made available worldwide, so that people themselves will be able to witness and evaluate the evolution of the world plans.

While that work proceeds, each community will continue to need information and guidance concerning its own life and its part in the whole. In a sense, that need for knowledge calls for a form of World Game within each community, for an educational institution within each community to research, organize, and present to the community information about itself and its workings. The institution must be in and of the community it studies, as the World Game is in and of the world.

The community college as an institution has a unique relationship with its community. In many ways, it is already charged with the well-being of the entire community; it accepts all students who come, without prejudice for or against past activities and without limitations on the recognition of present abilities; it exists in and for its community and has no great obligations outside its geographic area.

College of the Whole Earth

This paper suggests a radical change in the self-image, direction, and goals of the community college. It describes a plan for a new college, unlike any that now exist, whose goal is to create a center for information *about* the community available to everyone *in* the community, by assuming as its primary function the collection, tabulation, and dissemination of information for and about the community or district in which it functions.

Several re[illegible]derlie this proposal for an alternative model: the c[illegible]unity, as defined by the district boundaries of the community college, is of suitable size for intensive surveys of needs and resources. All the information sought by such surveys may be found within the district, within commuting distance of the college and of the students' homes. The economies of such communities are

complex enough to enable the survey staff to consider each community as a microcosm, a sub-system of the whole earth. Thus to learn to deal with a whole earth system, students will start by dealing with a smaller, but whole, system—one of manageable size with which they are intimately related.

This model proposes to make the college an important center for providing information about the community and for planning its future, and to accomplish this through the cooperative work of students, the guidance of the faculty, and the help of the material resources of the college.

Ivan Illich, among others, has proposed that schools (in his term) "disestablish" themselves.* In referring to the public schools, for example, he suggests that compulsory attendance be abolished and that certificates of graduation from school not be required for people to obtain jobs. He proposes a "school that is not a school," where people have access to the information and tools that they think they need, but where they are not subject to curricular or certification requirements or limited in the time during which they may use them.

This proposal for an alternative to the community college attempts to meet Illich's specifications and, in doing so, perform a needed service for its students and community. This alternative, which we call the "College of the Whole Earth," is an offshoot of the community college as we now know it. It performs, however, certain functions we do not ordinarily associate with community colleges and is organized in a different fashion.

The College of the Whole Earth is related to today's community college insofar as it exists in and for its community. It accepts all students who want to attend and who are eighteen years of age or have graduated from secondary school. It has a recognizable physical plant, faculty, and staff, all of which, however, are to perform many functions different from those they now exercise. The curriculum of the new college is also different from any we now know. Since the college does not certify people for jobs or for transfer to other institutions of learning, it does not structure its curriculum to meet the needs of employers, accrediting agencies, or universities. Instead, it defines its own ends and recognizes itself as its own chief resource, produces most of its own texts and instructional aids, and makes them available throughout the district. Indeed, these are among its most important functions.

The overall goal of the college is to become a center for information about the community and for the articulation of alternative futures for the community. In doing this, it hopes to help the community as a whole not only to define but also to achieve its goals. It regards the entire district as its constituency—all the people in it, not just the students who attend. This educational institution has, in fact, done many things. It has truly "disestablished" itself. It does its best to work for the success of its whole community. It does not regard itself as the only path to success, nor does it insist that any specific individuals succeed. It recognizes that is has in its tools, instruments, space, buildings, and knowledgeable and concerned people, a uniquely valuable inventory of resources. It works to make its inventory available to the whole community and sets as its goal the success of all the people both in its own community and in the world. It structures all its programs and the use of all its tools and resources to achieve those goals, while recognizing that its most valuable resource is the energy and dedication of the young people of its community. Thus it strives to inform and lead them, through care and sensitivity to their particular needs and the needs of all life. The college works for the success of its community through foresighted, cooperative use of resources, without benefiting at the expense of any other community. It does this because it realizes that the whole earth is one system and that the earth and all its life are dependent on finite quantities of physical resources.

The general goals of the College of the Whole Earth are to make people confident in the technologies on which their life is based and to make them knowledgeable about the world's work processes. Its specific goals are to produce extensive documentation on the resources and the trends in the needs for and uses of resources in the community; to engage its students in the collection of data about community resources and their tabulation, transformation, and presentation; and to make the information visible to the community in the form of charts and by animation on films, slides, and television programs. Students, teachers, and the lay community share in learning how to define their objectives and to work cooperatively. They learn about the world as it is and about trends in the needs and resource use of their world. They are responsible to each other and learn how to solve their problems together. They are able to do their work and present finished documentation of it to others. They are competent at the research needed to find out answers to their questions and can create readily comprehensible displays of the data they collect and the work they do. They understand their community and the world as dynamic processes, how they are related and how they change. In summary, the College of the Whole Earth regards itself as part of its community and its community as part of the whole world.

The institution itself should show several results from the changes in goals and functions suggested above. First, the students and faculty of the college will learn much about both the community and the world in which they live. Second, the college will demonstrate beyond question its relevance to the community and the world. Not only are its intentions laudable, but it is also closely involved with many other activities and institutions at home and abroad. It is in constant contact with nearby colleges and universities, with local business and industries, with the utilities of its community and region, with local, regional, and national service industries, and with civic leaders and planners at all levels. Third, the college would begin to recognize itself as its own best resource. In its own right, it is a producer of educational media and software for the use of the whole community. It assumes the dignity of a self-determining organization, defining its own ends and processes. Fourth, the college may actually help to solve some problems for its own community and to work out prototype solutions to problems for the whole earth.

The program and curriculum proposed here differ greatly from those mentioned in the December-January 1970-71 issue of *Junior College Journal*, although they share some of the same goals. The program is not directly vocational, nor does it envision merely the addition of a course in human ecology to the present curriculum and instructional format.

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*Illich, Ivan. "Education Without Schools: How It Can Be Done." In *New York Review of Books*, N.Y. 15(12):25-31. Jan. 1, 1971. (Special Supplement)

EQUAL ACCESS

TO WHAT?

The junior college is presently the great white hope for the democratization of educational opportunity beyond the twelfth grade. This hope arises in an urban society, beset by poverty and race discrimination, in which a large disadvantaged class is the main source of political pressure. Ironically, the extension of educational opportunity to this class comes at a time when middle-class youth, traditionally college-bound, express far-reaching doubt about the prevalent values of American society and education.

Institutionalizing People

Beginning with kindergarten or grade one, if we assume observance of the law, Americans go to school for at least twelve or thirteen years, and potentially, among the "highest achieving," for twenty-one years or more.

Elementary, junior high, and secondary schools, colleges, and graduate and professional schools all classify young Americans by age and certain assumptions about their learning capacities. We assume that almost everybody is ready, willing, and able to learn essentially the same things at the same time, despite human variability, different environments, and different teaching capacities of institutions. We further assume that we know what *all* people—irrespective of place and time—should learn.

A serious dislocation, however, has arisen among young American students, their environments, and the schools in which they are institutionalized. Does the two-year college really represent a break in the existing patterns, a promising new approach to this problem?

The Job Equation

America's manpower needs, combined with popular political readings of the demands of the poor, the blacks, the Spanish-speaking (and perhaps even of the upset middle-class collegians), suggest an equation between the main purpose of higher education and preparing the young for jobs. This equation embodies political conclusions about keeping things cool. The equation is:

$$\frac{\text{Jobs}}{\text{Domestic Tranquility}} = \frac{\text{New Students}}{\text{College}}$$

By this equation, we intend to convey that just as an abundance of jobs tends to produce domestic tranquility, so will a constant flow of new students into college. Through the achievement of a simple economic result, the colleges and universities function as basic law-enforcement agencies for the whole society.

Job preparation has always been a central purpose of the university. The élitism of the European models most widely emulated in this country was defined mainly by the job categories on which their curricula concentrated and by their preconceptions about who should have access to them. Still, the academics have always maintained that other purposes of higher education are at least as important as making the young employable.

Most middle-class students admitted to our colleges are not expected to make, nor do they make, career choices during the first year—many do not do so even in the second or third. Despite graduate school pressure, most are still subjected to various packaged versions of the "liberal arts," through which they are supposedly "liberated"—better prepared to make intelligent and informed career choices.

The technology, career, and vocational programs unique to the two-year college are usually not meant to appeal to the traditional college student. These options are designed especially for the new students — the ones heretofore not admitted. The specialized and compressed nature of these programs (sixty to seventy credit hours, twenty to twenty-four courses) compels the student to decide which one he will enter before he gets in. There is no time to "waste"; if a student expects to be a mechanical engineer's assistant or a dental assistant, sixty to seventy credit hours of study over two years is barely enough time, say the professionals, in which to prepare. According to the American Association for the Advancement of Science, most such college programs provide three to four "liberal arts" courses during the two years. Invariably, one or two of these are required English composition. The student is also often required to take one course in American history or government. In such a pedantic and constrictive fashion are the keys to our culture, to the treasures of our civilization, placed in the hands of these students! Such ineptness is our educational

response to the assertions often made by these students that "black is beautiful," that the Vietnam War is immoral, or that the administration of American justice is corrupt!

Students with the least prior academic success, who most often have grown up in urban ghetto settings where they have the fewest opportunities to see what America claims it is, are encouraged to make the earliest choice of lifework. And they must make this choice knowing that their options are already severely limited by their prior failures, which the system has defined—and often rigged.

The Subversion of Change

The two-year colleges have opened the door to higher education to thousands of young Americans. They have brought technology within the pale of "higher learning." In achieving these significant results, the junior colleges have also served as a filter, precluding education beyond grade thirteen for those "not qualified," thus enabling the Establishment to avoid facing the full impact of democracy of access to its estate.

The curricula of the so-called "comprehensive" two-year colleges reflect conservative expectations and external pressures. The terminal career programs embody—quite imperfectly—the expectations of industrial and technological employers. The liberal arts transfer programs embody—also unsatisfactorily—the demands and values of the faculties in the upper-division and four-year colleges offering grades fifteen and sixteen and the graduate and professional schools beyond. *Far from upsetting the status quo of American higher education, the junior colleges shore it up. Far from contributing something new and substantial, the two-year colleges strengthen the status quo in a higher educational system desperately in need of reform. There is a real and present danger that the expansion of the two-year colleges along present lines may serve mainly to subvert and postpone urgently needed changes in our higher education.*

Open to Closed

Formal education in the United States stands for a closed, rigid view of the conditions essential for learning.

Learning space is closed. Learning, according to the prevailing view, happens only on the campus, in the school, in the classroom.

Learning time is closed. Learning time is graded, knowledge itself measured by the credit-hour. It is assumed that there is an exact learning time for everything and for everybody.

The standards used to measure the learning ability and the learning needs of people are closed. These standards, enforced by institutional power, segregate people according to class, race, and the educational version of who in America is entitled to achieve what.

Teaching methods and curricular prescriptions are closed. The compartmentalization of knowledge and teachers and the vesting of monopoly powers in the departments virtually preclude any quality control over education as well as any competition in the shaping of programs or in the evaluation of results.

Nationally, we are in the paradoxical position of opening the door wider to tightly closed, institutionalized educational opportunities. New students, more diverse than ever before, are being poured into a narrow funnel, into educational institutions rigid and "uptight" in the face of the challenge.

Our political rhetoric remains committed to an open society, but our schools seem geared to the accommodation of a pre-urban, pre-Berkeley, pre-Martin Luther King America.

Closed to Open

The dynamism of the new knowledge, present-day politics, and the economics of financing education all point persuasively toward more open versions of learning places, time, programs, and systems.

The boundary line drawn at the age of eighteen between lower and higher education is no longer tenable. Secondary and collegiate institutional resources must be regrouped. New institutional bases—staging grounds—need to be invented.

The relationship between learning and working, between thinking and acting, must be reconsidered. For many kinds of jobs, employers must assume a larger responsibility for educating future employees. The tensions now produced by our educational institutions between learning for employability and learning for many other purposes must be reduced. On this front, the schools may play an effective role in combatting the prejudices of status popularly held about certain jobs.

Our old assumptions about the education of plumbers and teachers—about what each is capable of learning or wants or needs to learn—are no longer acceptable. Plumbers and other blue-collar workers outnumber teachers, not only in the voting booths but also in the marketplace of American culture and in the home where American children are brought up. The democratization of access to education beyond grade twelve inevitably means that the technicians, the craftsmen, the paraprofessionals will in due course expect to have, and in fact will have, a completely new impact on the quality of American life. Education is the key to the noblest products of our civilization – to its great ideas, to its finest art, to the power for life it produces. Those now being encouraged to seek higher levels of learning will not long tolerate a denial of access to them.

The Issue

The separation of grades thirteen and fourteen is not the important issue. The issue is whether the expansion of the two-year colleges will enhance learning options, close the gaps between human diversity and institutional rigidity, and better equip American society to meet the changing tasks of educating its citizens.

The evidence to date is neither reassuring nor conclusive. The danger is that by 1975 or 1980, when 300 to 500 new two-year colleges will have been built and opened, and the enrollment in them will have risen from two to three, four, or five million, we may find them, like the dinosaur, no longer fit to survive.

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ALTERNATIVE ENROLLMENT-ATTENDANCE PATTERNS

The recent special report of the Carnegie Commission on Higher Education, *Less Time, More Options,* calls attention to a wide range of alternatives to the quite rigid structure of undergraduate enrollment patterns that characterize current higher education. For the community colleges, the report might well be titled *More Time, More Options.* Studies of the flow of students through the community colleges lead to the conclusion that most of these students need *more* time to complete associate degree programs than is now allotted in curriculum development, not *less.* A relatively small group of bright young students are attracted to community colleges. Having completed high school at an early age, they seek a brief, interim educational experience before enrolling in a residential college. Such students may well be able to fulfill most lower-division requirements in one year of college, particularly where good articulation exists among secondary schools, community colleges, and the senior institutions to which they transfer.

Community college students vary in abilities, interests, family backgrounds, values, goals and objectives, and readiness to undertake college-level courses when they enter. Student attrition, rather than the actual impact of the educational experience on the students, tends to reduce this heterogeneity to what may be too low a level of student mix. Community college students, unable or unwilling to adapt to the conventional enrollment pattern described in the college catalog and prescribed by faculty advisers, drop out for academic, financial, motivational, and various combinations of reasons.

Assumptions About Enrollment Patterns

Sometimes explicitly, but more often implicitly, curriculum developers and enrollment projectionists make certain assumptions about community college attendance patterns without citing validating data. These assumptions are made not only as a matter of administrative convenience or neatness, but also in the belief that full-time, day-time, continous enrollment is "good" for all students. Were empirical data to show that students enroll in a variety of patterns that produce successful performance, the planners would probably devise techniques and administrative policies to force as many students as possible to conform to this different form of "regular" student enrollment pattern. The effort would be made less as a convenience to the curriculum planner or classroom scheduler than in the best educational interests of the students. Financial aid, scheduling of required courses, and, of course, academic advising relating to program may all be directed toward the college's goal of enrolling as many students as possible in a pattern of full-time, continuous attendance.

The curriculum developer works within an inflexible framework of a two-year, four-semester, sixty-plus unit program (or its counterpart in quarter units). He follows a required sequence, progressing from a freshman program dominated by courses in communication skills and general education, to a sophomore year in which the student concentrates on his major field if he is in an occupational program, or in courses required for graduation from the senior institution if he plans to transfer. The limiting assumptions are also made that students enroll directly after high school graduation and that they attend full-time four semesters without interruption (or until dropping out). All other attendance patterns are viewed as deviations and nuisances even though students who deviate from the standard enrollment pattern tend to outnumber the "regular" students in many colleges.

The students who deviate from the standard attendance pattern tend to (1) delay college until one or more years after high school graduation, sometimes to fulfill their military service obligations; (2) come under-prepared to enroll in required courses without extensive remediation; (3) be undecided about their occupational goals and uninterested in choosing one they view as possibly limiting their future options; (4) enroll on a part-time basis, probably in late afternoon or evening hours; and (5) drop out periodically before completing a two-year program, not always at the end of the term year. Other students will have begun their degree programs in four-year institutions, received technical training in the armed services, or be skilled as a result of on-the-job training and experience between high school and college. While the system readily accommodates the ill-prepared community college students, accommodation is more difficult for the ones who come with special preparation as a result of training, experience, or sheer maturity

The Case for Alternative Patterns

As many as two-thirds of the community colleges' students enroll with the initial intention of transfering to an institution awarding the baccalaureate degree. For reasons that are not at all clear, the number who *do* transfer is no more than half those intending to do so, and the degree of overlap in the two groups has never been established. Among the entrants intending to transfer, fully half need some type of remediation or special assistance to succeed in English composition and other basic skill courses required by the transfer institution. They probably lack foreign language, laboratory science, mathematics beyond algebra, and other "solids" that university freshmen will have completed in high school. Most of all, they tend to have an under-developed sense of their own academic potential, occupational interests, and personal values and goals. Attrition exceeds fifty per cent before the sophomore year, an undetermined percentage for failing grades (or a feeling of having done unsatisfactory work).

Community college students tend to come from families without a college-going tradition, one or both their parents being high school dropouts. Family incomes are modest, with little ability (or inclination) on the part of the parents to make financial sacrifices to send the children to college. While charging little or no tuition, community colleges nonetheless make certain financial demands on their students for transportation (few are served by public transportation), books and supplies, student fees, food and clothing, and other incidentals. Students must work to maintain themselves in college, often at considerable sacrifice to their studies. The consequent juggling of class and work schedules may weaken both academic performance and employment security.

A substantial portion of the community college student body comprises gainfully employed adults who seek upgrading, retraining, or simply collegiate-level education to become more effective as adults. They tend to be more highly motivated and better prepared for their studies than the young high school graduates who have not yet found themselves. Still, the adult students are seldom available for full-time, day-time programs of instruction, for enrolling in neatly arranged course sequences planned for regular,

full-time students. Under present procedures, they tend to enroll in freshman classes without regard to their special attainments and experiences in the world of work, although fully capable of advanced achievement in occupationally related courses.

The following alternatives to full-time, day-time, continuous enrollment may then be proposed, alternatives with a reasonable probability of meeting the needs of far more community college students than are now succeeding in "regular" programs.

1. Delayed college attendance with a guarantee of admission and financial aid, as needed, if the period between high school and college is spent in a program of supervised work experience or service, with counseling and remediation related to the planned college attendance
2. Concurrent course enrollment and supervised work experience, the latter for both credit and pay, with students spending two or three days each week off campus
3. Alternate terms devoted to study and work experience, the latter at an ever-increasing level of skill and closely allied to the student's occupational major, with permanent job placement at the end of the final term before the degree is granted
4. An "upside-down" sequence of courses, in which occupationally related courses are taught before general education, composition, and others usually required in the freshman year
5. One-plus-two-year program for "undecided" students in need of both remediation and extensive career counseling, the first year to be primarily exploratory and developmental
6. Planned leave of absence between the freshman and sophomore years to obtain intensive work experience in one or more jobs arranged by the college
7. Concurrent enrollment in the community college and the transfer institution during the last term before transfer, if possible, or during a summer term, if the transfer institution is not within commuting distance
8. One or more courses to be taken at neighborhood centers, via open-circuit television, by correspondence, or as independent study
9. Enrollment in one or two courses full-time for periods of three or six weeks, followed by a break for off-campus activity, after which full-time work in one or two new courses is undertaken
10. Courses taken to adults out on their jobs with released time given by the employer for their participation

Students learn best in ways that change as success is experienced and maturity is attained. In the case of academically weak students, formal coursework may be taken best in relatively small doses, reinforced by successful work experience. The assumption that students needing extensive remediation will learn best if they are scheduled to spend eight-hour days in classroom and laboratory instruction has never been tested. However, the wholesale failure of many community college remedial programs casts doubt on its validity. Students needing such remediation tend to have multiple education handicaps — families with income below the poverty line, poor public school preparation, language or other cultural disadvantage, physical or emotional handicaps, and/or lack of clearly defined interests or motivation. Planned variation in workload, in type of activity, and in scheduling may produce a higher, more sustained level of performance on the part of the diverse community college student body than adherence to a single pattern of enrollment.

In the absence of systematic experimentation with different types of students, diverse attendance patterns are "messy" to administer and difficult to counsel about. Ultimately, however, the results of such diversity should produce better use of college facilities and personnel resources and, over time, greater student persistence toward occupational and degree goals. Students now elect a wide variety of attendance patterns with little or no guidance by the college and with infrequent evaluation of results. What is proposed is the systematic variation of attendance-enrollment patterns by the college over a period of time, with a concomitant evaluation of outcomes by the faculty, counselors, college planners, and the students themselves. The variations might be viewed as one possible formulation of the "open university" concept, uniquely suited to the community college with its emphasis on career education.

Enrollment projections for community colleges are for the most part based on an assumption of a single student type—a high school graduate, undistinguished by sex, who enrolls full-time in a day-time program of an indeterminate nature for an indefinite period of time. Under- and over-estimates of enrollment are frequently unexplained, since relevant data on student characteristics are lacking. The conversion to a structure of many and varied college attendance patterns extending beyond two years would undoubtedly create grave concern on the part of the enrollment projectionists. However, the present attrition rate in the community colleges is high enough that the advantage of neatness afforded by the full-time attendance pattern is scarcely sufficient. Instead, the systematic variation of such patterns should, in the long run, inspire the student to better performance and greater persistence.

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THE MASTER PLAN: WELCOME TO THE FACTORY*

Within the next twenty years, it is anticipated higher education will change its position from one favored by liberal financial funding to restructured federal, state, and local control. The implications of this change will affect the community junior college in several ways. There will be more emphasis on the vocational/technical training aspects of the junior college, with increasing use of educational hardware. Concurrently there will be a concentrated effort to co-ordinate national employment needs and appropriate educational training. The number of liberal arts and transfer courses will be reduced for lack of funds. Faculties will be reduced in number and their workloads increased.

What can emerge from this strategy is the organization of junior colleges, by local and state boards and by the federal government, as employment markets for large corporations, leading inevitably to increased corporate control over the programs, even the counseling of individual students—who will become workers, consumers, voters.

Master Planners who project the economic needs of the nation can abolish liberal education and institute vocational/technical education in its stead. But, if planners can restructure the school system so that liberal education is no longer an objective of the junior college, if it can do this without protest from the students and community, this is indeed a judgment on the work we, as teachers, have been doing.

The above trends also represent dehumanization of education in America and can be combatted only by teachers who are not isolated from their students and their communities. Teachers must be willing to struggle for a kind of education of such value to the students and community that any threat to it will be perceived as a threat to them. Education must not be Master Planned. Students must have a voice in the objectives and purposes for which they are being educated.

The Alternative

As teachers, we must do more than just defend a *status quo ante* of liberal arts and transfer courses to which we cannot, in fact, return. We must be critical of what and how we have been teaching. We must ask each other and ourselves whether we have acted as missionaries, bringing high culture, or science, or standard English to the "disadvantaged" masses (2).

We must cease being teacher-missionaries and become teacher-organizers. This means making a choice between working long, unrewarding, alienated hours as "learning-unit managers" (as current behavioristic jargon has it) and working long and challenging hours with students, segments of the community, and our colleagues in the educational industry. We must begin working with them to build an institution that serves people, not industry.

One way to build an institution different from what we now have is found in Boggs' proposal that the function of education be redefined "to make it responsive and accountable to the community" (1:31). She suggests that schools become centers of the community and that the "community itself with its needs and problems must become the curriculum of the schools" (1:31-32). She continues:

> More specifically, the educational program or curriculum should *not* consist of subjects like English or Algebra or Geography. Instead the school must be structured into groups of youngsters meeting in workshops and working as teams. These teams are then encouraged (1) to *identify* the needs or problems of the community; (2) to *choose* a certain need or problem as a focus of activity; (3) to *plan a program* for its solution; and (4) to *carry out the steps* involved in the plan (1:32).

Traditional skills now taught in school would thus be learned, not as separate subjects, but as means of reaching socially relevant and desirable goals.

Such a redefinition of education is appealing, but it is easier said than done. For instance, how does a teacher find students sufficiently motivated to get the team off the ground and how, once it is off the ground, does he keep from despair and paralysis a small group facing a big problem? There must obviously be a series of intermediate steps before students, teachers, and community will believe enough in the possibilities of such a program to make it a reality.

A good beginning would be a public discussion on campus of trends in education, in which class positions and interests were clearly defined. This would have to be accompanied by education built around an analysis of "individualism" and its relation to class interest, property values, and the maintenance of power in this country. Again, as Boggs suggests: "American education, like American society, is based upon the philosophy of *individualism*. According to this philosophy, the ambitious individual of average or above-average ability from the lower and middle classes is constantly encouraged to climb up the social ladder out of his social class and community" (1:28).

> *The individualistic, opportunist orientation of American education* has been ruinous to the American community, most obviously, of course, to the black community. In the classroom over the years it isolates children from one another, stifling their natural curiosity about one another as well as their potential for working together. (This process is what the education courses call "socialization.") In the end it not only upgrades out of the community those individuals who might be its natural leaders, fragmenting and weakening precisely those communities . . . in greatest need of strengthening, it also creates the "used" community, which is to be successively inherited by those poorer or darker in color, and which is therefore doomed from the outset to increasing deterioration (1:29-30).

During this period of initial public discussion, three points must be made clear:

1. People who control education have different interests from the students, their parents, and their teachers. One way to clarify this point is to show who pays for education and who profits. Statistics from California give at least a partial answer: Seven out of ten of the 270,000 young people (3) who graduate from California public and parochial high schools come from families with a total income under $10,000—the income group that pays 55% of the state's taxes. Fewer than 10% of these young people, however, enroll in the state universities or colleges after high school graduation, whereas nearly 35% of the graduates from families earning over $10,000 do enroll.

2. The present educational system will not significantly improve a student's future economic prospects (i.e., getting ahead is a fraud and a myth). For most working and lower-middle-class junior college students, upward mobility —

*This article has been abbreviated especially for the *Review*. The complete version is available from the New University Conference, 622 W. Diversey, Chicago, Illinois 60614.

interesting work, job security, more money than their parents, prestige–is one of the main purposes of a college education. It will remain one of the promises of the junior college and one of the hopes of the students until the transition from transfer to vo-tech programs is complete. At least two-thirds of the students who now register at Chicago City College campuses, for example, signify their intention to transfer to a four-year institution; only 10-15% actually do so (this figure is true nationwide as well as in Illinois); the average length of stay at a senior institution for those who do manage to get there is only two semesters.* Given that over 7 million students are in college today, that there clearly are *not* seven million jobs requiring a college education, that few if any junior college students get a four-year degree, and that the high number of degrees being granted means a college education does *not* insure a move up the social ladder – given all these facts, we can assume that junior colleges fail to provide students with significant upward mobility. Clearly the failure is becoming so blatant in our contracting economy that the myth of upward mobility is creating expectations feared by the Master Planners.

3. The only way to achieve the interests of students, teachers, and the community is through all three groups working together.

Within the context of these three points, student and faculty power struggles become class struggles, which, if explained carefully, will seem justified to most people and will educate both those participating and those looking on. The justification for these struggles should include the claim that, only if students and faculty have power, can or will the institution serve the community. Ultimately the goal of small struggles should be to build a base on campus large enough (1) to push the local administration to take an explicit political stand in service to the community, for instance, against the war and war-makers (for, as long as student deferments exist, this stand can be made real by the school's refusal to notify the draft board if a student drops), against manipulators, against specific polluters, against inflation by attacking some company's price increase, or (2) to form a "people's college administration," which, perhaps through a referendum, will speak for the school and take stands on controversial issues of concern for the community. This radical redefinition of the school and the political use of its institutional voice should polarize the community, cause allies to emerge, and make possible the building of links between the school and the community. Study of the community and careful thought should lead to a fairly accurate anticipation of the elements of any community that will emerge as sympathetic. (Of course, concurrent off-campus organizing to prepare an articulate nucleus of support is a good idea.) If the issues are carefully chosen and the supporters painstakingly educated, the opposition that will emerge in the community will probably be small.

*It should be noted that junior college students' failure to gain four-year degrees has little relation to their abilities. A process called "cooling out" by sociologists transforms the open-door admission policy into a "revolving door" policy – redefining students aspirations by means of remedial courses, counseling courses, flunk-out policies, non-credit and non-transfer courses, etc., all serving to convince the student of his own personal failure and his need to lower his academic and occupational sights.

Initially a kind of attention-getting maneuver, a people's administration could develop into a coalition of students, faculty, and community people. It could provide a forum for real dialogue on the function and use of education, on the school as a focus for community problem solving, on the budget, and on a whole range of other relevant issues. Disgruntled faculty and students might very well be willing to "vote in" a slate of popular and committed "administrators" from their own ranks, who could then proclaim their existence, take a controversial and attention-attracting stand, and begin working toward making the institution serve the people. The new administration could take a public stand on the war, for instance, and set up a draft-counseling center for young men in the area. It could organize students and sympathetic faculty to set up a counter-counseling department to guide new students through the maze of bureaucratic red tape, prerequisites, requirements of other schools, good or bad teachers and classes, etc. It could work with parents in the school and in the community to set up child-care centers in such places as nearby homes, YMCA centers, coffee houses, and churches.

A people's administration could offer its own set of "adult education" courses in programs such as health, consumer education, pollution, ecologically-sound life styles, and an introduction to women's liberation. It could offer real history and sociology courses, which tell the truth about American power and social structures to those who need to know it most. It might promote music and drama activities. It could even sponsor a career day, centered around vocations for social change, to which health and social workers, teachers, ministers, nuns, priests, scientists, etc., could be invited to share their knowledge–what their work is really like, what the true economic relationships in the industry are, whose interests are being served, how insignificant are the much-heralded opportunities for advancement, and what workers in these fields are doing together to change the conditions. Participants in these courses might then initiate demands that these courses be given college credit. The possibilities are endless.

As the idea catches on, the creative energy released and thoughtfully channeled could build a truly viable alternative model for a community junior college and an organizational framework for a movement for radical change. Isolated, individual actions on any of these issues should not be discredited. Actions taken by a few teachers on one campus, or by one campus that is part of a larger system, may gain support from, or at least neutralize, some otherwise hostile turf. They can, however, make sense only in the context of a larger struggle–a struggle against education institutions across the country.

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SHAPING AN ENGLISH CURRICULUM TO FIT THE JUNIOR COLLEGE STUDENT

Each Monday evening from mid-January through early May of 1971, not less than three or more than six English teachers from the University of Michigan made a two-hour round trip between Ann Arbor and Detroit to offer a three-hour seminar called "Teaching English in the Community College." At a personal cost of one hundred and five dollars apiece, plus a long Monday evening, approximately twenty teachers from five junior colleges, one four-year college, and several secondary schools attended the seminar for three graduate credits in English. At the time this report was begun, a third of the seminar was done. At the same time, perhaps that fraction of both its faculty and its students was equally done, though almost all continued to meet together on Monday evenings until merciful May brought reprieve.

What went wrong? Nothing less than the basic assumptions of both parties: As university teachers we assumed we could offer a pilot course that would guide us in shaping the program for next autumn's new graduate degree in teaching English at the junior college, to be known as a Doctor of Arts in English. As teachers from neighboring community colleges, our seminarians assumed that participation in formative stages of the new degree program might bring profit to their person and profession alike.

Taken separately, the assumptions seem reasonable; taken together, they were disastrous. The six of us failed to understand that many — perhaps most — teachers attending the seminar wanted methods and materials *now* to use with their own students *now*. No more did they understand our need to build an extensive foundation of rhetorical, linguistic, and literary agreement before we advocated methods and materials for classroom use. We did not understand that a city seminar of teachers who will return next morning to their classrooms is poignantly different from a campus seminar of candidates-in-residence who will not return to their classrooms for at least a year. The misunderstandings on both sides were massive; now, perhaps, the profits of reexamination can be equally large. One area of benefit already apparent is the relationship of classroom rhetoric to teaching English in the community college.

First let me define this particular use of "rhetoric": Rather than limit the word to its present meaning of persuasion in language, I want to re-expand its deflated modern usage into the shape that it held in English for several hundred years after the middle of the sixteenth century. Then it referred to acts as well as words, and one might have spoken meaningfully of classroom rhetoric without being limited to verbal and vocal eloquence.

In this sense of the word, teachers who attend our Monday evening seminar are greatly concerned about two aspects of classroom rhetoric. I discovered their concern when I asked them to write at their leisure to the question of what they would do if they had full freedom to reshape the English curriculum in their schools. Teacher after teacher spoke of the matched problems of teaching *remedial English* in any circumstances and teaching *individuals* in circumstances where individual needs were submerged beneath the flooding demands of large classes. Perhaps most striking was their reiterated belief that their success was inversely proportional to the amount of remediation or individual attention their students required.

Though the common sense of failure in the face of remediative and individual needs is remarkable, it ought not be surprising. I will argue here that "remedial English" is improbable as it is now generally conceived, and that "individual instruction" is not only probable but even unavoidable in every successful English composition class in any community college. Furthermore, I am reasonably sure that English composition cannot successfully be taught by anyone, no matter how inspired, who makes considerable use of lecture-and-large-group-discussion methods. Reasonable surety comes nearer to certainty when those methods are applied to the traditional population of remedial English courses.

I believe that remedial English is often the most ill-conceived course in junior college curricula because it is based upon a misunderstanding as radical as the one that divided our Monday evening seminar. No more than we understood our students' needs in that seminar, do teachers of remedial classes in junior colleges understand the real

needs of their students. The most serious consequence of this misunderstanding is the attempted remediation of symptom rather than disease in students who suffer from the plague of insufficient literacy.

The symptom I refer to is poor performance, while the disease it most often manifests is inadequate motivation. Remedial English teachers have suffered so long from the myopia of perceiving effect as cause that they often perceive their primary function in terms of changing a student's performance rather than changing how he feels about that performance. Yet these are the same teachers who identify one of their most difficult problems as the joyless expectation of their students. Having always done badly in "English," no matter how English was defined, they are students who have no anticipation of success. Knowing themselves inadequate, their self-knowledge reinforced once again by the familiar surroundings of a remedial English class, they become experienced participants in a self-fulfilling prophecy of failure.

The first act in breaking this destructive cycle of ritual action and response is abolition of remedial English both as classroom and concept. Let neither student nor teacher find himself trapped in the relationship of terminal patient and desperate physician. Let such freedom arise from conviction that performance follows feeling as effect follows cause. Give students the lever of self-respect to raise their burden of inadequate literacy. Give it to them by abandoning the homogeneous grouping that surrounds failure with mirrors designed to inflict upon deficiency reflections of itself.

Why are we so slow to make use of all weapons in our war against partial literacy? Which of us has not said that students who can resist teacher and family pressure are the same ones who cannot resist peer pressure? Why do we isolate the worst students from the most effective agents for change by removing them from the presence of their more accomplished peers and by condemning them to the company of those too like themselves? So long as all English composition classes are not heterogeneous, the least will continue to diminish while the best will flourish at their expense.

How to profit from heterogeneity? Let each one teach one; make the more and less competent responsible for each other. Imitate the pair system of waterfront safety. The imitation will be apt, for remedial students are often in danger of drowning, of going down for the last time in the cold sea of homogeneous group instruction. Pair best and worst; each will learn from the other, for nothing instructs the instructor more efficiently than the act of instruction itself. If the effect of student responsibility widened to include another student is a broadened humanity, then all will be the richer for it.

Several teachers in our Monday evening seminar have told me that they suspect a gentle phrase like "broadened humanity" hides a harsh intent which worries them. "Do you believe," they have asked me, "that the bright ones should pay for the dumb ones? Isn't the real effect of heterogeneous classrooms to take us back to the bad old days when we had no time for the bright ones, and they had to look after themselves?" My answer is that "the bad old days" were based upon the abuse rather than the use of heterogeneous classrooms.

"Tracking," "ability grouping," and "heterogeneous classrooms" all have negative discrimination as their common practical basis. In theory, of course, that is not true. The intent of ability grouping, by whatever name, has always been to gather students of like ability in teachable groups. But a theory conceived to profit all students and teachers became a practice that injured many students while benefiting many teachers. For the truth is that very few teachers have ever had to teach a full schedule of incompetent students, except by choice, while incompetent students have no choice at all in a full schedule of association with students no more competent than themselves.

Thus, in fact, the practical effect of ability grouping has been a negative discrimination which condemns the worst to imitate themselves while it frees the best to profit from each other. And it also frees teachers to shape the largest possible number of students in the mold of the teachers' own education – to attain more easily the educator's fulfillment of making *them* like *us*. But the cost of that freedom is nothing less than the spirit and hope of "unpromising" students, who have only to gaze at the mirror images surrounding them to know themselves (even as they are known) as the educationally unfit of our time.

The historical abuse of heterogeneous grouping is founded upon the assumption that one teacher can provide in less than one hour a significant learning experience for thirty to forty students of widely varied ability and motivation. This assumption is tenable only when the teacher is a genius; otherwise, it is ludicrous, and every teacher of remedial English – as well as many teachers of all other subjects – knows it. The solution? Take the problem to the students. Resurrect the body of heterogeneous grouping and infuse it with the spirit of cooperative learning. Students together are far more likely to accomplish what teachers alone have never been able to manage.

Now, about that question: Should the smart ones pay for the dumb ones? For so long as we have had ability grouping, the weak performer has paid for the strong. If immorality is a condition of degrees, then it is more immoral to require the less able to pay the price. In a properly organized classroom based upon paired students of contrasting performance, both members of the pair should share equally in cost and profit. But if one must pay for the other, let us require payment of those who will survive the price.

Exchanging homogeneous for heterogeneous classrooms is a beginning point for true solution of problems which characterize remedial English in the community college. Next stage in the solution ought to be further reorganization of the physical environment to guarantee individualized instruction to each student. Though such a guarantee may sound utopian and extravagant, it is within easy reach of every junior college in the country. Far from being unrealistic, it seems to me the only practical course that English teachers can follow.

Any search for a guarantee of individualized instruction must begin by admitting that such instruction cannot regularly occur within the present pattern of classroom organization. No teacher can give enough individual attention when that teacher is solely responsible for five classes of thirty students. To rely upon the compelling force of this truism as a means to the end of reducing class size and course responsibility is to accept certain failure; reduced class size, diminished teaching load, and the millennium will come together. Until their arrival, we will have to

deal with too many students and too many classes. Within that hard reality, much can be done.

Begin with recruitment—recruit teaching assistants from among the most competent students. In community colleges, not only second-year but second-semester students should be employed. Give the teaching assistant responsibility for six hours a week of tutorials and paper reading with each composition class. Six hours of inexpensive help with each composition class each week for each English teacher could be the best investment in the welfare of both students and faculty that any community college ever made. With such help available, schedules for teaching and learning might look like this:

I *Teacher's two-week schedule:* six contact hours

Two one-hour class meetings on Mondays

Eight half-hour group-of-four tutorials on Wednesdays and Fridays.

II *Teaching assistant's two-week schedule:* six contact hours

Two one-hour class meetings on Mondays

Eight half-hour group-of-four tutorials on Wednesdays and Fridays

Six hours of paper reading.

III *Student's two-week schedule:* three contact hours

M class meeting

W half-hour tutorial one day

F no meeting on other.

Such a schedule is intended to meet many needs. Foremost, of course, is the desire of teacher and student to offer and receive individualized instruction. Each person who has taught and each person who has been instructed in an English composition class knows that such classes are useful generally in proportion to their relative infrequence. In this schedule, teacher and teaching assistant together meet once each week with the entire student group; all other meetings are in groups of four, where individual attention can hope to solve individual problems.

Groups of four are the basis for this two-week schedule because they represent two pairs within the heterogeneous classroom. In such a tutorial arrangement, the teacher can simultaneously instruct all four students while preparing the stronger member of each pair to assist the weaker. In that same arrangement, the teaching assistant can help all four students while receiving help with his task from the stronger members. Given a class size not larger than thirty-two, both teacher and teaching assistant are responsible for no more than the traditional three contact hours per week; yet, in any two-week period, each student profits from the multiple learning experiences of large group, small group, and truly individual instruction.

But what of the student's contact hours? Have we not reduced them by half if we institute such a schedule? We have indeed, and much for the better I think. American higher education has too long force-fed its students and called the process "learning." The actual name of the process is "teaching," which unfortunately can be a very different thing. This schedule is based upon the conviction that students learn best when exposed to a wide range of learning situations, one of which is exposure to self.

Under the title of "Shaping an English Curriculum to Fit the Junior College Student," a large title for a larger enterprise, I have written about problems of remediation and individualized instruction. Both the broad title and narrow range of this essay were deliberate. They reflect my belief that no substantial change can occur in present English curricula until they have undergone significant alterations in form. What those formal alterations must be I have tried to indicate by condemning homogeneous classrooms and historical patterns of large-group, single-teacher instruction. Though my arguments are various, my thesis remains unchanged: If we do not make every effort to shape the curriculum to fit the student, instead of trying to shape the student to fit the curriculum, we will soon discover that our well-shaped courses fit no one but ourselves.

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ERIC

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THE IMPACT OF EDUCATIONAL ACCOUNTS ON JUNIOR COLLEGES

INTRODUCTION

Along with the May and June 1971 issues of the *Junior College Research Review*, this article presents alternatives to present patterns and structures in the junior college. Suggestions from seven other experts were published in the previous issues. Perhaps these eight ideas will spark our readers' imagination and inspire them to offer suggestions of their own. The *Review* staff would welcome subscribers' comments and additional alternatives.

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Let us consider alternative possibilities for educational accounts on the one hand, and junior colleges on the other, as either tied to or free from the current school system. Of the four possible logical combinations, only two are realistic: (1) educational accounts restricted to use in schools, while junior colleges retain their present role in the school system; (2) educational accounts not restricted to use in schools and junior colleges not restricted to their traditional role.

I. Educational Accounts Usable Only for Schools

Educational accounts usable only in schools, including junior colleges, is what we would have if the principles of the Jencks proposal were extended to the college level. This proposal, developed under the leadership of Christopher Jencks at the Harvard School of Education, is sponsored by funds from the United States Office of Economic Opportunity (the "poverty program").[1] It is endorsed, with qualifications, by Milton Friedman.[2] This proposal would put all funds now going directly into the support of schools into the hands of parents—who could spend it, however, only by sending their children to school. This plan would, to some degree, equalize the financial resources of rich and poor parents and would put private schools on an equal footing with public schools. Private schools and parents who prefer them would benefit most from this scheme, and schools with flexible curricula and grade standards would benefit almost as much. Public junior colleges—i.e., almost all junior colleges—would probably benefit more from the principles of the Jencks proposal than would four-year colleges and universities and probably more so than public high schools and grade schools. Parents in control of educational expenditures would be more lenient with younger adolescents reluctant to attend school and more inclined to let the older adolescents delay their baptism of military and economic fire by attending junior colleges.

A proliferation of private four-year colleges would provide the main competition for the junior college, but several major factors would favor the latter. First, most private colleges, although woefully short of funds, still have more money than they have ability to attract good faculty. Under the voucher plan, this problem

[1] *Professor Jencks and his associates have developed a number of specific voucher plans for trial in pilot situations. The above description combines some of the more highly publicized aspects of these plans.*

[2] *Economist at the University of Chicago, economic adviser to the Nixon administration, and one of the original proponents of the voucher system.*

would worsen for all except the small minority of colleges that specialize in snob appeal. Junior colleges also have a problem attracting first-class faculty, but it isn't as bad as that of the typical small private college. One advantage of the junior colleges is that they are essentially urban, while private colleges tend to be located in small towns. The advantage of urban location helps junior colleges to attract not only faculty but also students. In a schooled society, the trend toward cities and suburbs can only continue. Thus junior colleges should favor the Jencks plan for its immediate consequences. The risk it engenders is that parents, once they get nominal control of educational funds, will not be content with only the spending, but will demand actual control as well.

People have not demanded this control in the case of health services, but there are important differences between the two cases. Doctors and hospitals have succeeded in controlling the flow of public funds in support of health care even though the funds are channeled through the hands of clients. There has been little time for the clients of health care to declare their independence of the medical profession and little evidence that they will try. Medical practitioners have certain intrinsic advantages, however, over educators. The most important may be simply that sick people feel unusually dependent. Lawyers and priests also share this advantage with the medical profession: their clients often come to them in times of trouble.

Ignorance does not seem to induce humility except when the seeker of knowledge has immediate need of it—the traveler seeking direction, the boy who wants to learn to swim, the lost soul seeking a guru. These may be humble enough, but for the school system to adjust itself to the needs of such seekers after knowledge would imply a revolution far beyond anything contemplated here. The clients of the school system are seekers of social status and, as long as the schools can maintain control of that gateway, they have nothing to worry about. Just as the Roman Catholic Church lost effective control of the keys to heaven when it lost the power of the state, so the schools will lose their control of social status when they lose control of the purse. For schools have nothing of proven efficacy like smallpox vaccine, penicillin, or insulin, nor do they yet have the power, as do the courts, to use against the pleader who refuses the services of a lawyer. Civil service requirements for government jobs have nearly the force of law, and a socialist regime could perhaps depend on these to keep its school system in business even while putting educational funds in the hands of students and parents. The major appeal of educational accounts is not in socialist countries, however, and where there are private employers, the government can maintain arbitrary employment standards only at the risk of finding itself able to hire only the academic failures. Contrary to private enterprise propaganda, this is not now the case.

II. Educational Accounts Not Restricted to Schools

With junior colleges shifting from their traditional scholastic role to a more viable one under the new funding conditions, having educational accounts not restricted to schools is the more interesting and perhaps the more realistic alternative. At the moment, the Jencks proposal has more support but only because it promises to save the school system for a while longer. His proposal, however, still represents drastic intervention — much like removing the patient's heart and replacing it with a blood machine. This kind of intervention is not seriously considered unless the patient's heart is irreparable and the family wants to keep him alive while they seek a new one. Although interest in the Jencks proposal is an index of the condition of the schools, it will not really be tried. Supporters of the present school are more afraid of the treatment than of the disease, and they are probably right. Today's schools are doomed in any case, but they will probably fight harder and more effectively for themselves than the Jenckses and the Friedmans would fight for them.

What could the junior college do to save itself if public funds for education were funneled into individual accounts that their owners could spend for any legitimate educational purpose? Before an answer can be considered, both the qualifications of account holders and their rights to define education will have to be at least briefly specified.

Suppose that public funds for education in the United States were allocated equally among all citizens regardless of age, sex, or other characteristic. This would give each person $250 per year — $17,000 over an average lifetime.[3] Individuals could either accumulate credit in their personal accounts or borrow against the future, with certain safeguards. They could buy any object or service the community considered to be educational.

That junior colleges would have a strategic option under these circumstances is suggested by their most commonly used alternate name — that of community college. They could become the focus of organization of the educational resources of the community. They could have a real headstart over most competitors for this role if they acted fast. One of their greatest handicaps would be the illusion of some of them that they already are a true educational resource center in their communities.

Junior colleges are probably more democratic and suffer less from ossification than other older parts of the school system, but this is faint praise. They serve only a small part of the population, and what they define as education is referred to by most people only in passing profanity. Next to their illusions, the greatest handicap of junior colleges would be their present commitments — to students, faculty, facilities, and, above all, to certain fixed ideas about schooling. Legally these commitments would be liquidated by the shift of public funds to educational accounts, but whether habits of thought could be dissolved as speed-

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[3] *This is enough to buy everyone an average B.A. degree. The fact that so few now get it is evidence of the extremely biased distribution of public funds for education under the school system. Privileged students are heavily favored.*

ily would be the big question.

What would it mean to orgarize the educational resources of the community for the access of all its members? The following is obviously only one answer among many.

In my opinion, the first step would be to determine the true educational interests of community members. This cannot be done by asking people what they want. It cannot be done by asking experts what the people need. Neither knows. Paulo Freire, the Brazilian educator noted for teaching peasants to read, is the man who has the best approach to such a task. He defines education as learning to know one's true situation in the world, in a manner that makes it possible to act effectively upon the situation, i.e., to change it in one's own interest. Education is usually defined in just the opposite way: teaching people what they need to know to fit into a pre-defined situation. Thomas Jefferson, Alfred North Whitehead, and John Dewey defined education as Freire does. Educational practitioners, following St. Ignatius of Loyola, Johann Gottlieb Fichte, and Horace Mann, usually define it in the second way.

Following Freire means defining educational resources in the broadest sense, and then giving individuals both maximum information about those resources and unrestricted access to them. Educational resources can be conveniently classified as things, skill models, peers, and educators. *Things* include records, devices to make and decode records, all kinds of equipment, and natural objects – everything except people. Everything is, of course, the same as nothing – unless properly classified for ready reference and organized for easy access, taking account of probable demand, availability, cost, etc. This is a matter of applying library principles – with one exception – to the whole world. The exception is that clients be given priority over objects, even at grave risk to future clients. Unless this risk is taken, most clients will get nothing. Since most things do not belong to colleges, it would be a problem to provide access to what they do not control; but if colleges worked effectively with what they *can* control, they would be able to mobilize enormous client pressure to increase their span of control.

Skill models include every member of the community able to demonstrate a skill that any other member might want to learn. Skill models must not be confused with teachers. The person who has just learned to read is likely to be the best skill model for someone who wants to learn. The skills to concentrate on, however, are not just literary or other scholastic skills but also those now largely neglected: learning to take a curve or shake one, to blow a blue note or fake one. Every legal skill should be registered and every potential learner given the widest conceivable choice of people willing to demonstrate the skill he wants to acquire.

Peers are simply fellow learners, people interested in acquiring or practicing the same skill or experience, at about the same level of learning. How important peers are is obvious in chess or tennis, but they are no less important in learning other things; it is merely more difficult to identify them. Players of competitive games will find their peers; others need help. They chiefly need the freedom to choose and the right information. Usually the best source of information will be other people also seeking peers. The organizing task in peer matching is principally one of removing barriers and providing facilities: computers, periodicals, bulletin-boards, meeting places, necessary equipment. As in the case of skill models, the important thing is not to neglect the already neglected: the peer seekers with esoteric interests and those with unattractive personalities are the ones who really need help.

Educators are the least important educational resource, but if they recognize this and subordinate themselves to the greater need for things, skill models, and peers, they can perform a number of useful and important functions. Besides organizing and providing the access outlined above -- without intruding their judgment of what should be learned – they have, at least potentially, two other important roles. In a world where people are free to select what they want to learn, when, with what, with whom, and how, many people will need advice. Stripped of power to make decisions for their clients, educators cast in the mold of the old family doctor could provide useful services and could probably even do well for themselves in the process. Another educational function requires not professional educators but people with thorough knowledge of a specific field. To master the elements of a skill, an interested learner needs only a skill model. To master a field of knowledge, most learners need the help of someone who has attained mastery of it.

One virtue of classifying educational resources as they are here defined is that, in relation to any conceivable demand, none of these classes or resources is in basically short supply. They are presently made scarce by the artificial packaging that schools impose on them and they can be made scarce in other ways. Just as irrational client preferences, based on considerations irrelevant to learning objectives, can create an artificial shortage, so can bad geographic distribution or poor information or arbitrary rules and restrictions. The task of organizing educational resources is essentially the task of recognizing and overcoming such obstacles. For the present, there is no widespread incentive to do this. On the contrary, the current incentive structure encourages the scarcity and maldistribution of educational resources. Under an open system of educational accounts, the present incentive structure would in many respects be reversed. Under such a structure, junior colleges with enough flexibility could become true centers for facilitating access to educational resources, opening the way for all people to find what they need in order to learn. Recognition, in advance, of the fact that the possibilities exist may actually help to bring the new system into being.

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MEASUREMENT AND EVALUATION IN JUNIOR COLLEGE READING PROGRAMS

INTRODUCTION

This issue of the *Junior College Research Review* should be of particular interest to the specialist in reading instruction. He might also like to see the series of Topical Papers issued by the Clearinghouse in May of this year. They were prepared in cooperation with James L. Laffey, Director of the Clearinghouse on Reading, who selected the experts in the field and solicited the manuscripts. Their titles are: *Directions for Research and Innovation in Junior College Reading Programs* (No. 18), *Skill Development in Junior College Reading Programs* (No. 20), *Community College Reading Center Facilities* (No. 21), *Exemplary Practices in Junior College Reading Instruction* (No. 23), and *Training Faculty for Junior College Reading Programs* (No. 24).

All of them can be purchased from the UCLA Students' Store – Mail Out, 308 Westwood Plaza, Los Angeles 90024. Ordering information for other documents can be found on page 4 of this *Review*.

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Measurement and Evaluation

Even though entrance examinations are not used to limit enrollment through cut-off numbers, they are used by college counseling departments for consultation and placement. External tests such as the CEEB Scholastic Aptitude Test (SAT) and American College Testing Program Examination (ACT) are either required or requested by seventy-nine per cent of the junior colleges included in a January 1970 survey [7]. The ACT was reported by fifty-seven per cent, the SAT by sixteen per cent, and other examinations by another six per cent. There was some overlap of the ACT and SAT and a few schools would accept either test. Seventeen per cent reported that no entrance examination was required; another five per cent did not respond to the question.

Over half the junior colleges require students who score below some pre-determined percentile on entrance examinations to take appropriate remedial work, including, in most instances, either developmental or remedial reading with whatever other courses may be recommended.

Eighty-five per cent of the junior college reading programs use a standardized reading test to find the student's approximate position on a norm. These norms and/or the grade-equivalents from the standardized tests are matched with levels of reading ability that have been developed according to a readability formula. With this information, reading teachers can place the student in a sequential reading program at a functional level.

Wall [17:12-16, 22] claims that the readability formulas tend to underestimate reading level and that reading tests tend to overestimate reading proficiency. Pauk [12:2-4, 11] suggests that available reading tests are artificial because the reading sections are heavily weighted toward literature irrelevant to the expository material the student will be required to read and because the vocabulary sections contain many esoteric words that the student will rarely see and seldom use. He also questions the time factor, which may penalize the intelligent but deliberate student, and recommends a realistic reading test that would eliminate the vocabulary portion and substitute a section to measure a student's ability to read textbook material. The word-difficulty levels and readability formulas fail to take into account the abstractness of the selection, the complexity of the sentence, and the student's level of reasoning ability.

The range in reading ability in the junior college is often ten or more grade levels, from grade four or five for some vocational and technical students to grade

fifteen or sixteen for a few bright academic students. Though many tests designed specifically for use in the first twelve grades are available, few are designed specifically for college use and fewer still for the junior college.

The Nelson-Denny Reading Test, Iowa Silent Reading Test, California Reading Test, and Co-operative Reading Test are the four most often selected by the junior college reading teacher. In *An Inquiry on Developmental Reading* [7], the Nelson-Denny Reading Test was mentioned far more frequently than any of the others. The Schrammel-Gray High School and College Reading Test, the Diagnostic Reading Test, and the Science Research Associates (SRA) Reading Record are used for placement, evaluation, and other special purposes. For example, the SRA Reading Record is especially good for older students with low reading abilities, since it provides subscores for such everyday acts as the reading of directories, maps, tablegraphs, advertisements, and indexes, for technical and general vocabulary, and for sentence meaning.

Only twenty-seven per cent of the reading teachers feel that the standardized test given at the beginning of a course is a measure of reading achievement. Sixty per cent consider it diagnostic.

Special reading classes for the foreign, deaf, illiterate, or adult student are usually restricted. They provide extra help and extra time for the handicapped student. For example, the range and complexity of sentence patterns was found by Restaino [13] to be an obstacle among deaf students, as were a limited vocabulary, lack of sound-sense, and an inability to handle verb tense. These and many other special problems are handled routinely in the special developmental reading classes.

A single junior college reading class often includes recent high school graduates, adults who have begun college training after a lapse of several years from schooling of any kind, community patrons taking developmental reading for self-improvement, vocational and technical trainees, and academically weak students who scored low on their entrance examination. This spread in abilities and interests makes a multi-level method of instruction and evaluation mandatory.

The reading teacher ordinarily assigns each student a starting level based on the grade-equivalent of the score made on the initial standardized test. The student is then individually programed and proceeds at his own rate through a reading skill sequence. Ironside [9] recommends that students be involved in the assessment of their reading status and progress. The teacher's assessment of test scores tends to become rigid and repetitive, and he is inclined to respond quickly and definitely to such single factors as a score, an incident, or some other particular aspect of reading. Because he is personally involved, the student can set realistic goals and conscientiously strive toward their attainment. A joint effort by the student and teacher in testing, interpreting test results, describing course objectives, setting starting levels for practice, assessing daily performance, and evaluating overall achievement in the course seems to work best.

Multi-level reading materials, such as those of the SRA Reading Laboratories, are used in nearly all developmental reading classes. Eighty-three per cent of the junior colleges that teach developmental reading report that some sort of multi-level device is used [7]. These laboratories generally require a minimum of teacher supervision and allow the student to evaluate himself. Daily progress charts act as stimuli to maintain high motivation, especially if the student shows continuous improvement.

In fifty per cent of the programs, the developmental reading teacher defines the factors that indicate satisfactory performance at a given reading level. The student is then allowed to change to practice levels of greater difficulty without consulting the teacher. This added responsibility emphasizes the virtue of self-evaluation. In other college reading programs, the student can change levels of difficulty only after receiving approval of the teacher. Without exception, college reading teachers report that they try to keep the student constantly evaluating his own reading performance.

Eighty per cent of junior colleges [1:85-91] give different forms of the same standardized test at the beginning and at the end of their developmental reading courses. In addition to these tests, half of them require a final examination on reading skills and vocabulary.

Sixty-seven per cent of the junior colleges report that the student's final grade in developmental reading is determined by a combination of teacher-made tests and scores on the standardized tests; sixteen per cent report using only a teacher-made test, and two per cent use just the scores on the standardized tests.

Blikre [4] reports that students who still score below the tenth percentile on a standardized reading test after taking one semester in developmental reading have little chance of completing a four-year college program. In his study, all the students scored below seventeen on the ACT. Another study at the University of South Dakota shows that ninety-five per cent of the students who score below seventeen on the ACT fail to earn a C grade average. Students who make extremely low scores on entrance examinations are not likely to be helped much by developmental reading, nor are they likely to be successful college students. Nevertheless, reading departments have observed significant change in the scores of students who have been retested after completing the developmental reading course.

Since reading is a highly individualized matter, and since each student competes, not with other members of his class, but only with himself, a uniform level of achievement cannot be used to measure performance in the junior college developmental reading course. Consequently, reasonable educational objectives must be set for each student and used as the criterion for the evaluation of his progress.

Most junior colleges require students who score below some predetermined percentile on entrance examinations to take appropriate remedial courses. The cut-off percentile varies among colleges, but is usually somewhere in the bottom quartile. For example, Blikre [4] reports that students who score between the tenth and thirtieth percentiles on the Schrammel-Gray Reading Test are required to take remedial reading. Kerstiens [10] reports that students who score below the fifty-sixth percentile on the Purdue Placement Test for English are assigned to a sequential make-up English program.

After the evaluation of a student's credentials, most schools have a counselor decide whether the student should be assigned to a remedial program. In some schools this is done by computer, which is programed to print out a list of students with low scores on entrance examinations and/or other placement tests. The list is referred to the appropriate departments, so that each student can be assigned to the recommended course in a remedial sequence. The computer is being used more and more as a tool for finding students with educational difficulties and channeling them into courses of study where their chances for success are good.

Though much is still to be done in the field of college remediation, it is now possible, with skillful diagnosis and remediation, to change a student's direction from probable college drop-out to probable college graduate.

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JUNIOR COLLEGE RESEARCH REVIEW

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ARE YOUR EMPLOYMENT PRACTICES LEGAL?

A black instructor applies for a position at your college. He meets minimum state certification requirements after interviewing him, the dean and department chairman decide not to employ him. Subsequently a white instructor is appointed to the position, whereupon the black candidate brings suit challenging the procedure that led to his being refused employment. Could you defend your college's employment practices? More to the point, could you show how information gained in a personal interview relates to teaching proficiency?

The present hiring practices of community colleges are not easy to discern. Until recently, junior colleges could not afford to set many employment restrictions because of the shortage of candidates. A 1969 review of documents on teacher recruitment and selection found they focused on the problems of finding *experienced* teachers, evaluating the kinds of experience, and discussing who should select faculty (ED 032 864).

The general requirements for instructors are more obvious. An AAJC publication in 1966 noted that anyone interested in junior college teaching should have: (1) mastery of subject matter, with practical as well as theoretical preparation; (2) ability to communicate the subject matter; (3) interest in the student; and (4) an understanding of the community college, its purposes, and history (ED 032 886). These broad recommendations, however, are qualified in each district and are becoming more specific as the supply of generally suitable personnel increases. For example, Los Angeles junior college districts gather a wide variety of information on candidates before their names can even be placed on the eligible list. These data include: completed application forms, transcripts of all college and university records, verification of California Community College credentials, letters of reference, evidence of good health, Graduate Record Examination scores or other test scores (optional), an interview with administrative and/or faculty recruiters, and evidence of related teaching experience and employment. Points are assigned for each qualification and any candidate whose total score exceeds a certain number is considered eligible (about 50 per cent of all applicants in 1969-1970). The candidate then visits the campus for an interview with departmental faculty and administrators, who make the final selection (ED 046 382).

As the number of eligible candidates increases, so does the questioning about employment and certification requirements. One writer rejected the idea of raising the requirements to the Ph.D. level, but defined a competent junior college teacher as one who had a "master's degree, or a master's plus 15 to 18 semester hours" (ED 038 121, p. 3). He presented no evidence, however, that the number of courses taken in the subject matter area related to the quality of teaching. A study of secondary school teachers, after examining several other studies, concluded that teachers are most effective and satisfied when working with children whose socio-economic background is similar to their own (ED 040 123). Other sources recommended that evidence of previous effective teaching, as demonstrated by causing learning on the basis of defined outcomes, be adopted as a condition of employment (ED 035 416; ED 031 222; Cohen and Brawer, 1972). But a search of the literature revealed no reports of adoption of these recommendations as conditions of employment for junior college faculty. Hiring practices have been adopted for reasons other than their proven relation to teaching proficiency and have been continued, even expanded, without reference to their results.

Could an individual community college district show that its pattern of employing instructors is non-discriminatory?—that its own requirements above and beyond state credential requirements relate directly to job performance?

GRIGGS VS. DUKE POWER COMPANY

This issue of the *Review* examines the potential impact of a recent Supreme Court decision on state teacher certification and local school district employment practices. In the case of *Griggs vs. Duke Power Company* (1), the opinion written by Chief Justice Burger for a unanimous court held that the requirement of either a high school diploma or success in a standardized general education test as a prior condition to employment is prohibited by the Civil Rights Act of 1964, Title VII (1), where the employer cannot establish that either standard significantly relates to competence in the job at issue; (2) where such standards have the effect of disqualifying a significantly higher proportion of blacks than whites (that is, if the effect is discriminatory even where there is no intention to discriminate); and (3) where formerly the jobs were limited to whites under a prior policy of discrimination practiced by the employer. The significant portions of the 1964 Civil Rights Act, Title VII state:

> Sec. 703 (a) It shall be unlawful employment practice for an employer, (2) to limit, segregate, or classify his employees in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin.
>
> (h) Notwithstanding any other provision of this title, it shall not be an unlawful employment practice for an employer... to give and to act upon the results of any professionally developed ability test provided that such test, its administration or action upon the results is not designed, intended, or used to discriminate because of race, color, religion, sex or national origin . . .

American jurisprudence depends a great deal on precedent as an ordering factor; that is, a judge will tend to look to the customary patterns of judicial findings within the court's history to aid him in deciding the case at hand. This is a consequence of the strong Common Law tradition in the system and stands in marked contrast to the situation existing in Civil Law jurisdictions, where the influence of prior decisions plays little part.

Frequently judgments are handed down that alter the traditional patterns. They perform two functions within the legal system: (1) by overruling a line of specific opinion within that court's history, they act to bring the main body of the law on the point at issue in line with trends (often already apparent in the opinions of judges in the lower courts or in other jurisdictions) reflecting prevailing social realities; (2) where the court is presented with a novel situation, they begin a new tradition. Thus the law is provided with a means by which it can slowly evolve. *Griggs* fulfills the second function.

The facts on which the Supreme Court based its decision in *Griggs* were as follows: The Duke Power Company operated a power generating station at Draper, North Carolina, called the Dan River Steam Station. The plant was organized into five departments: (1) Labor, (2) Coal Handling, (3) Operations, (4) Maintenance, and (5) Laboratory and Test. At the time the legal action was begun, the company had 95 employees at the station of whom 14 were black. All the blacks were employed in the Labor Department, where they were paid less than the lowest-paying job in any other department.

In 1955 a policy was instituted at the plant requiring a high school education as a condition for employment in any department except Labor and for transfer to any "inside" department. However, whites without a high school diploma who were hired prior to the institution of this requirement and who continued to do a satisfactory job, could achieve promotion. The 1960 census statistics revealed that, although 34 per cent of whites had completed high school in North Carolina, the percentage for blacks was only 12.

Prior to July 2, 1965, the effective date of the Civil Rights Act of 1964, the company openly discriminated on the basis of race in its employment and transfer policy at the Dan River operation. All this had ceased, however, by the time *Griggs* was instituted. After July 2, 1965, the company further required new employees to score satisfactorily on two professionally prepared aptitude tests to qualify for placement in any department except Labor. In September 1965, black or white employees who lacked high school diplomas were permitted to qualify for transfer from Labor and Coal Handling departments into the more desired positions by passing the *Wonderlic Personnel Test* and the *Bennett Mechanical Aptitude Test*. Neither test was designed to rate the performance of the prospective employee for a particular job or category of jobs. Fifty-eight per cent of the whites received passing marks on the tests while only 6 per cent of the blacks did so.

On the basis of these facts, the court found that, although the practices of the company were on their face neutral and not performed with any intention to discriminate on the basis of race, they operated to "freeze" the *status quo* of its prior discriminatory employment practices. This effect, Justice Burger maintained, was prohibited by the Civil Rights Act.

When required to interpret a statute that, on its face, is ambiguous or silent on its application to the facts presented, a court may resort to one or more of several strategies available for this purpose. The Civil Rights Act of 1964 does not specifically demand job-relevance for a pre-employment testing program that has the effect of discrimination. Yet the question presented to the court was whether, despite the absence of specific wording in the Act, such a requirement would be a proper interpretation. Chief Justice Burger chose to resolve the issue by determining the intention of the legislature in passing section (h) of the Act. To do this, he reviewed the extended Senate debate on that section and found that the intention of the legislature was that professionally developed ability tests be job-related wherever they fall under the control of the Act.

IMPLICATIONS

Reports of landmark rulings by the Court in cases such as *Griggs* frequently prompt interpretations of their possible effects – effects that go far beyond those indicated by a strict reading of the Court's opinion. Imminent fundamental alterations in the operations of some segment of society are predicted. For example, Ivan Illich, a persistent and insightful critic of established education has hinted that *Griggs* may even signal the beginning of the end of institutionalized schooling:

> This case may set us on the road to legal recognition that schooling requirements, in and of themselves, constitute a discrimination which hampers social advancement and so violates public policy. We are told that the offer of "equal opportunity" subject to irrelevant educational standards (that the classes protected by the statute are less likely to meet) can be compared to the fabled offer of milk to the stork and the fox (Illich, 1971).

There is no reason to go quite that far in assessing the probable consequences of the decision, for nowhere does the court suggest that such non-job-related requirements are inherently discriminatory and prohibited by any statute or law. Although it may appear to some that such a holding is only a slight extension of the reasoning of the opinion, the law literature is loaded with speculation forecasting an impending attack on one established citadel or another that never quite arrives.

The decision seems clearly limited to the prohibition of "diploma or testing" requirements as a condition to employment where they tend to operate to the disadvantage of certain identified classes by preserving pre-existing patterns of discrimination and where it can be demonstrated that they do not measure the prospective employee's ability to perform the job in question (2). Nothing in the decision would, for example, prohibit an employer from maintaining such requirements for whites and waiving them for the class discriminated against until the pre-existing discrimination patterns had altered and racial balance had been established. Then the procedure could be reinstated for all employees without fear of judicial interference. In fact, where there is no evidence that the requiremnt operates or has operated to disqualify the protected group at a higher rate than whites, it is permitted (3). It was not the intention of the legislature to hamper business discretion except in such extremely limited circumstances as those presented in *Griggs*.

What, then, is the effect of *Griggs* on state certification requirements and on local school district employment practices?

The courts have considered credentials to be licenses, much like hunting licenses or building permits. They have found in them none of the elements of a contract protected by the Fourteenth Amendment to the Constitution. They merely confer a personal privilege on the applicant – in this case, the right to teach in the schools if he is able thereafter to secure employment. The state legislature, in the proper exercise of its discretion, may provide for a general system of licenses or certificates for a person qualified to teach in the public schools and may likewise provide for revocation of such licenses at its pleasure. Once the authorities have discovered that the applicant possesses the qualifications required by the legislation, the power to exercise discretion is exhausted and performance of the ministerial act of issuing the certificate becomes mandatory and may be compelled by the appropriate procedure.

So far we have discussed only the issuance of a license to teach and not the employment of teachers. Obviously the licensing of teachers itself lies outside of the scope of the reasoning in *Griggs*. The fundamental issue was discrimination in employment. Thus a court action against the certification agency, designed to prohibit the issuing of credentials

on the basis of the *Griggs* reasoning, would be as if *Griggs* were originally brought against the school system in an effort to force it to issue the diplomas or abolish the granting of them because, although the plaintiffs were otherwise qualified for the positions, they could not get them without possessing that particular scrap of paper. However interesting such an approach might be, it certainly was not the one taken by the parties in *Griggs*.

Therefore, there appears little hope that the practice of issuing teaching credentials as it now exists will be prohibited through any direct attack in the courts, any more than the practice of issuing diplomas by schools will be prohibited by a direct attack – despite the fundamental unfairness possibly inherent in both procedures. More than likely, where the requirements limit the protected class from entering the profession on an equal basis with the previously favored class, the Court will recognize the license attributes of the credential and order the certifying agency to issue the certificate in such a way as to assure that any pre-existing discrimination patterns in teaching faculties are not perpetuated. In a 1967 decision, for example, later affirmed by the Supreme Court, the superintendent of schools in Alabama was ordered to apply certification requirements without discrimination by race and also to apply them or grant provisional certificates in a manner that will not tend to perpetuate faculty segregation or avoid faculty integration (4).

Suppose, however, a circumstance arises where a school district refuses to hire a member of one or another minority group (who is an otherwise qualified teacher), or even to transfer him from the position of teacher's aide to teacher on the sole grounds that the applicant lacks credentials. Also assume that there is evidence of *de facto* segregation in the teaching faculty of the school, resulting from prior policies of the school board discriminating against the group; and finally, that the credential requirement appears to limit full participation by any group in the profession. These conditions may be sufficient to make out a situation like that in *Griggs*. If that rationale applies, the school district would be compelled to demonstrate the connection between the requirements and the subsequent proficiency displayed by the teacher or would risk being ordered to abolish them. However, *Griggs* itself is not controlling. It purports only to interpret the Civil Rights Act of 1964. The Act specifically excludes a state or political subdivision of a state as an employer affected by its provisions. It is the Fourteenth Amendment to the Constitution that applies to state activities that may discriminate by race or color. The courts have consistently resorted to the Amendment whenever they reviewed state employment practices on this basis (5). There is no reason, then, to doubt that a result similar to *Griggs* would obtain in an action brought against a state or a state agency on similar facts.

The equal protection clause of the Fourteenth Amendment makes unlawful a distinction on the grounds of race or color in awarding state employment. Also, where the hiring practice of a public agency, even without conscious intent, has the effect of producing a *de facto* pattern of racial discrimination, such discriminatory effect renders the method of selection sufficiently suspect to make out a *prima facie* case of unconstitutionality. (The courts have not yet decided that the effect renders the method of selection actually constitutionally defective.) Under such circumstances, the public agency has the burden of justifying the use of such hiring practices by showing some rational connection between the requirement and the actual demands of the job to be performed. One's capability may be shown merely by producing evidence of prior employment as a teacher on a level with the same qualifications and skills generally demonstrated by white teachers.

Therefore, although *Griggs* pertained to employment practices in the private sector that tended to perpetuate pre-existing discrimination patterns, there seems no reason to expect a result much different from that in an action based on facts similar to those presented in our example, begun against a local school board. Should such a case actually be commenced and the defendant fail to demonstrate a reasonable connection between the requirement and the job of teaching, the requirement would be prohibited for that district. Teacher requirements would then, in effect, be set on a district-by-district or even school-by-school basis. The state might then find itself under intense pressure from both the public and (perhaps) the courts either to waive the requirements for all or to find a method that reasonably measures the person for the job.

In summary, the *Griggs* opinion confirms a tradition that prohibits employment procedures that discriminate against a protected class by prolonging a pre-existing pattern of discrimination. It is not a ruling that non-job-related conditions for employment are inherently discriminatory and prohibited. Thus state credentials and job requirements that are a precondition to employment within a school system may not be directly attacked on the basis of the *Griggs* rationale. However, in a school district where a particular racial group fails to achieve positions as teachers, in some reasonable relationship to their numbers, solely because they have been unable to obtain credentials and where the applicants from that group are otherwise qualified (assuming all other pertinent facts also to exist), then a *Griggs* fact pattern exists.

Should the employment practices or the credential requirements prove not to be a fair test of an applicant's qualifications for and performance on the job, then the Fourteenth Amendment to the Constitution may compel the requirements to be set aside and the applicant hired. Thus, community college districts may well soon be challenged to show how their own employment procedures and requirements relate to job performance. Do grades made in college relate positively to skill in teaching? Do letters of recommendation from previous employers or from graduate school professors predict teaching proficiency? The educational researchers, who have been asking these questions for years, have reached only negative conclusions or, at best, non-significant relationships. Now these same questions are due to be raised by other groups. It is not too early to begin to seek justification for the requirements. Better still, it is not too early to abandon them in favor of a rational method that can be shown to relate to effective teaching.

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NOTES

1. Willie S. Griggs, et al., Petitioners v. Duke Power Company, United States Law Week, Wash., D.C., (38): LW, 4317-4321, 71.03.09

2. See also, Hicks v. Crown Zellerbach Corp. (DC La. 1970) 319 F. Supp. 314, where the imposition by an employer of new testing requirements was held unlawful under 200e (2) where its impact was primarily to the disadvantage of formerly segregated blacks wishing to improve their job status.

3. Rios v. Enterprise Assn. Steamfitters Loc. U. No. 638 of U. A., 326 F. Supp. 198, (DC NY 1971) where plaintiff was denied a preliminary injunction restraining the union from denying him membership because it was not shown that the test, which he was required to take and failed, operated to disqualify Negroes at a higher rate than whites.

4. Lee v. Macon County Board of Education (1967 DC Ala.) 267 F. Supp. 468, affd, Wallace v. United States, 389 US 218 19 L. Ed 2d 422, 88 S. Ct. 415.

5. Kerr v. Enoch Pratt Free Library (CA Md.) 149 F2d 212, cert. denied, 326 US 721; Reynolds v. Board of Public Instruction (CA Fla.) 108 F. 2d 759, cert. den. 326 US 746; and many others.
See also Youngblood v. Board of Public Instruction of Bay County Fla. (CA Fla. 1969) 419 F2nd 1211, in which it was held that in no case must teachers and others who work directly with children at a school be assigned so that the racial composition of the staff indicated that the school was intended for black or white students.

6. See US v. Local No. 86 Intern. Assn. of Bridge, Structural, Ornamental and Reinforcing Iron Workers (DC Wash. 1970) 315 F. Supp. 1202, where prior employment as a journeyman was *prima facie* evidence of journeyman's capability.

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ANNOUNCING TWO NEW CLEARINGHOUSE BOOKS

We should like to call our readers' attention to two new books prepared by the Clearinghouse staff.

The first, *The Constant Variable: New Perspectives on the Community College*, will be published this month by Jossey-Bass of San Francisco. The principal authors are Arthur M. Cohen (Director of the Clearinghouse), Florence B. Brawer, and John Lombardi, assisted by John R. Boggs, Edgar A. Quimby, and Young Park. The foreword is by Raymond E. Schultz.

This analytical review is addressed to junior college administrators and researchers, examining the literature on students, faculty, instruction, curriculum, institutional research, and vocational education. It questions the prevailing wisdom of the field, making recommendations for new directions in curriculum development, organizational patterns, and the study of students. Over 400 documents are cited.

The second book in the Clearinghouse series is *Confronting Identity: The Community College Instructor*, by Arthur M. Cohen and Florence B. Brawer. With a foreword by Nevitt Sanford, this one will be published in January 1972 by Prentice-Hall. Written for the community college faculty member in practice or in training, it discusses the issues pertinent to the definition of the instructor's personal identity and how this affects his professional as well as personal development.

Both books may be ordered now from the publishers.

JUNIOR COLLEGE RESEARCH REVIEW

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NEW DIRECTIONS IN CURRICULUM STUDY

Since curriculum development is a special concern of the ERIC Clearinghouse for Junior Colleges, previous issues of the *Junior College Research Review (JCRR)* have touched on different aspects of it. An expanded issue of the *JCRR* (February 1970) dealt with the lack of a rationale for junior college curriculum development. In more recent issues (May, June, and September 1971), other views were expressed on possible alternatives to present curriculum patterns. This issue directs attention to various research reports on curriculum added to the ERIC collection during the past year. The documents are discussed under separate headings, such as State and National Studies, Articulation, Innovations, etc., followed by a note on current trends.

State and National Studies

State and national surveys undertaken during the past year have sought to identify post-secondary needs and have attempted to project curricular trends in the junior college. A statewide study was conducted by the Oklahoma State Regents for Higher Education to determine the current and future junior college needs of Oklahoma (ED 038 971). Data were collected on population trends, manpower distribution and needs, student enrollment, economic patterns, existing and required educational services, and financing. Articulation between two-year and four-year colleges was also an important part of the study. The recommendations included a reduction of program offerings and increased coordination among institutions of higher learning.

A survey by Smith (ED 038 972) of 758 junior colleges considered the nature and frequency of curricular offerings at these colleges. Courses were classified as transfer, occupational, and comprehensive. Comparing the figures with a similar study made in 1962 of 639 junior colleges, he found that, although occupational courses had increased, transfer courses were still clearly emphasized.

A committee of the Music Educators Conference conducted a survey (ED 042 437) to review the role of music in the junior college. Data collected included the organization of the music department, faculty, teaching load, curriculum, and community relationships in 586 institutions. The report suggested guidelines for development of junior college music programs, including staff qualifications, program administration, and program and transfer requirements.

Articulation

Articulation between junior and senior colleges mainly concerns transferability of courses, but other aspects of intercollegiate relations also have a direct bearing on curriculum development. The University of Florida and the Florida State University were consulted by the Illinois Junior College Board and made recommendations for articulation planners in that state. The results of the study were reported by Darnes (ED 045 063). As a first step, they recommended uniform general education requirements among all institutions to facilitate transfer. Other recommendations touched on admission policies, advanced placement and transfer, state planning, and junior college research.

Subject-matter articulation also concerns junior colleges, as shown in a study by Jansen (ED 045 082) of transfer policies of 22 agricultural colleges. It was found that credit in agricultural courses taken in junior colleges outside the state will transfer to a state university more readily and with fewer restrictions than will credit earned in the same state. This study could be significant for states other than Illinois.

An overall report of articulation was made in a nationwide study by Kintzer (ED 045 065), in which he summarized current articulation efforts in all fifty states, based on data received by both state and college officials. Background information, transfer philosophy, transfer policies and procedures, articulation problems, and a projection of future practices in each state's higher education system are included in the study.

An extensive study of the development and current objectives of the junior colleges in the state of Washington was undertaken last year. The Washington State Board for Community Colleges published its findings in three volumes (ED 046 374), (ED 046 375), (ED 046 376). Important decisions on curriculum development included individually paced instruction, continuous enrollment, and a systems approach to instruction.

Innovation in Curriculum

Innovation is a byword in all segments of modern education, and no less so in curriculum development. Many innovative practices are followed in classroom instruction, but the effects on the curriculum in general are sometimes more far-reaching than on teaching. A good example is a study by Hunter (ED 040 696). This project concerned developing, demonstrating, and evaluating a systems approach for general college chemistry, general psychology, and developmental English at Meramec Community College. A course outline, instructional rationale, and materials for workbooks were a part of the project.

Since audio-visual equipment is essential to much curriculum innovation, a general survey of educational media in Illinois (ED 042 439) was conducted by Butler and Starkey. They found that opaque projectors, silent filmstrip projectors, phonographs, audiotape recorders, and 16mm. projectors were the five items most used in the past, and that A-V materials such as charts and maps, phonographs, 16mm. projectors, overhead projectors, and silent filmstrip projectors are most used at present.

Audio-visual materials are vital to the development of autotutorial instruction, as noted in a study at Diablo Valley College (ED 042 452). The study surveyed 91 California colleges and 25 in other states to determine how widely these methods were being used. Seventy of the California colleges indicated they are or will be using them. It was further noted that instructors are provided with greater opportunity to manage their educational environment by curricular restructuring.

The direct results of multi-media instruction on the curriculum were studied by Banister (ED 044 098). He presents a rationale for the design and maintenance of a multi-media instructional system with suggestions for developing instructional packages, behavioral objectives, equipment, facilities,

and financial support.

What may be the ultimate in instructional media, the computer, is treated in a report by Brightman (ED 045 078). He discusses principles, curriculum development, and specific courses for the computer curriculum. Issues and problems identified include staffing, articulation between high schools and junior colleges, evaluation, and course objectives.

Another form of curriculum and instruction innovation – self-directed learning – served as the basis for an experiment conducted by Hunter at Meramec Community College (ED 045 081). From a questionnaire distributed among students and instructors, it was concluded that traditional concepts of courses and instruction should be questioned further and that the self-directed learning program should be expanded.

Researchers and junior college staff members interested in further studies on innovation in the curriculum are directed to a comprehensive bibliography compiled by Davis for the years 1966 to 1969 (ED 044 107). It includes 165 articles, books, and reports, arranged in four sections: General Curriculum, Academic, Vocational, and Miscellaneous (which covers articulation, community services, disadvantaged, remedial, inner city, international and foreign).

Basic Studies

Important to the junior college curriculum has been the growth of Basic Studies or General Studies. These remedial courses go a step beyond the "Subject A" courses. The development of such a program in business education at Kapiolani Community College is reported by Taniguchi (ED 042 447). The study focuses on English, mathematics, accounting, shorthand, and typing, and notes an increased concern with individual development, a trend toward thematic rather than single subject-matter orientation, and more independent studies.

Mathematics, a basic subject in any remedial curriculum, is the subject of a survey made by Beal (ED 043 335). Responses from 98 junior colleges show that the reason for remedial mathematics is to enable students to continue in regular college math courses. This is contrary to the study made in Hawaii, noted above. Remediation is still considered in the traditional manner in most junior colleges – namely, boning up for a prerequisite hurdle. It was also noted in Beal's study that only 26 colleges made any effort to evaluate their remedial mathematics program.

A more encouraging report on basic studies was made by Johnson (ED 044 104). He describes the progress of the Basic Studies Program at Tarrant County Junior College. The Tarrant program is a one-year curriculum designed for students who rank in the lowest quarter of their class. Communications, humanities, social science, natural science, career planning, and reading are the six study areas taught in an interdisciplinary context by a team of six instructors, each responsible for 100 students. It was found that students in basic studies persist in college at higher rates than those who have similar academic characteristics but who are in other programs. The success enjoyed here forms a basic rationale for the creation of a special curriculum division in the junior colleges.

Similar success with a basic studies curriculum is reported by Heinkel (ED 039 881). He examined the San Diego City College General Studies Program and described the rationale, methods of selection, testing, and evaluation of the program. He found that the San Diego students, like those in the Tarrant study, persisted in college and that minority students in the program achieved greater success.

The general, or basic studies, program often reflects the ideas commonly associated with the "core" curriculum. The core curriculum and curriculum development in general were topics at the Northern Illinois University Community Colleges Conference, 1969-1970 (ED 042 445). Another important part of the conference was the discussion on the incorporation of general education requirements into the core curriculum.

Closely associated with the basic studies curriculum is the "compensatory" curriculum, now heavily supported by the federal government. Compensatory education is part of the government's effort to expand educational opportunities for underprivileged students. Florida has been a leader in this field and its efforts are reported in two major studies. The Florida Community Junior College Inter-Institutional Research Council reported a study of two Florida junior college compensatory programs (ED 041 581). It includes descriptions of tests, ways to evaluate achievement, and the identification of students' psychological problems.

The second report, by Schafer and others, is a more complete study of compensatory education (ED 046 370). The 24 junior colleges included were studied according to the planning objectives, implementation, and evaluation of existing programs. The data revealed that 11.6 percent of the students in Florida's junior colleges were disadvantaged and that a thorough evaluation of the programs is needed.

Black Studies

In addition to basic studies, ethnic studies and ethnic problems are becoming a permanent part of the junior college curriculum. Black or African-American studies can be considered either as separate subject matter or as part of a basic studies program. Chicago City Colleges' treatment of urban problems in black areas is reported by Baehr (ED 039 870). Major features of the program are outlined and its operation and evaluation considered. A follow-up study of the 37 students' attitude toward the program was made and their performance was compared with students on other campuses in Chicago.

A more extensive effort to deal with the black community through the junior college is reported by the Southern Regional Education Board in Georgia (ED 046 380). Several "action" programs illustrate innovative procedures that show promise of increasing the enrollment of black students and providing programs of such value as to keep them in school. Important considerations were found to be recruitment, special services, a special curriculum, and new instructional methods.

The most comprehensive examination of black studies has been made by Lombardi (ED 048 851). He states that black studies in the curriculum may be the most far-reaching reform in the history of the junior college because it has forced a reexamination of its fundamental philosophy. He bases this view on a national survey, undertaken in 1970, that revealed that virtually every type of junior college offers black studies and that some 242 institutions offered at least one course in black studies. Lombardi discusses political considerations, ethnic studies in general, differences in types of black studies, and the social-economic factors affecting them.

Vocational Education

Vocational, occupational, and technical education have recently received a good deal of attention from researchers. Especially notable are the reports on cooperative work-experience programs. Boyer reviewed various aspects of this kind of curriculum in the October 1970 *Junior College Research Review* (ED 042 455), where she looked at the value of work-experience education and the promotional responsibilities of the college, and surveyed existing work-experience programs.

Cooperation between industry and junior college was reported on by the American Hospital Association (ED 045 086). The survey included 5,372 hospitals in the United States and Puerto Rico. Information was sought on the types of health occupations students are preparing for, the types of curricula in hospitals of different sizes, the number of curricula in each hospital, and the geographic distribution of hospitals.

Cooperative education was the subject of a dissertation by Basseri (ED 046 387). He proposed that mid-management training be undertaken by the junior college and offered a curriculum plan. Critical needs in cooperative education and job requirements for management positions were identified.

Many new occupational programs have been added to the curriculum, supporting the study made by Smith noted above, and many have been proposed and/or evaluated in research

reports. One such program was reported by Fox (ED 045 085). He calls for more effective programs for semiprofessional personnel in the field of corrections. His report discusses the competencies needed, the jobs and the necessary training, and a variety of degree programs.

Another special occupational program is reviewed by Favreau (ED 046 367). The author covers the many problems and needs in fire service education and details the special skills that should be included in the curriculum. The study revealed that the number of junior colleges offering this program has increased 50 percent in the past five years. The suggested programs are designed to lead to a Fire Science Associate Degree and Fire Science Certificate.

The newly prominent public service occupations, such as health and fire, are becoming more sophisticated and will soon reach the point of being sciences. Law enforcement is another of these areas. Pace (ED 046 368) offers the junior colleges and law enforcement agencies alternative ways to merge resources to improve police training and education. The report includes suggested curriculum; division of responsibilities between colleges, police academies, and advisory committees; and five examples of successful programs.

Vocational curricula are constantly undergoing evaluation of both their learning and financial accountability. Henderson offers suggestions for program planning and evaluation through the use of surveys (ED 045 087). He maintains that surveys will provide valuable information on student characteristics, manpower needs and projections, accountability, and financing, and suggests types of surveys, persons to be surveyed, and how to obtain feedback.

Trends in Curriculum Development

1. *Growth of a third major division in the junior college curriculum.* Basic/General Studies is fast becoming a third part of the general curriculum in many junior colleges. Unlike the traditional remedial programs, it is a comprehensive coverage of subject matter. English, mathematics, and other subjects are being combined into a coordinated curriculum, similar to the core curriculum and closely associated with compensatory education. The latter, heavily financed by the federal government, attempts to deal with urban and other educational problems resulting from social and economic imbalance.

2. *Greater influence from social-political upheavals.* The junior college acknowledges some of the social and political issues of modern society in its establishment of ethnic studies. Of special note is the addition of Black Studies courses to the curriculum.

3. *Expansion of vocational-technical curriculum.* The number of occupational programs is increasing, especially those funded by the federal government. In addition to the reports submitted by the junior colleges, many generated by the ERIC Clearinghouse for Vocational-Technical Education provide information on a number of occupations. Although the number of vocational-technical programs has increased, the heaviest emphasis in the junior colleges is still on the transfer curriculum. The conflict between traditional academic prestige and the need for a practical "less-than-collegiate" curriculum continues.

4. *Continued innovation.* Two major areas of curricular and instructional innovation receive attention — audio-visual materials and auto-tutorial methods. Computers and self-instructional materials are becoming more widely used. There is also a trend toward moving innovative practices directly into curriculum development, rather than confining them to classroom instruction.

5. *Use of instructional objectives in curriculum development.* Concurrent with the application of innovations to curriculum development is the use of instructional objectives as the basis for curriculum. There is some concern with the administrator's role in curriculum development, both negative and positive, and with the orientation of deans of instruction to the use of instructional objectives. The use of objectives may also result from the demand for accountability, although "accountability" is usually used only in its narrow financial sense.

6. *Articulation.* Transferability of courses and a smooth transition from junior college to the university are still problems — just as they are between high school and junior college. State governments are becoming more involved in statewide educational planning, possibly indicating the failure of the junior colleges to take the initiative in articulation.

7. *Evaluation.* Of several broad areas in curriculum development that deserve further study, the first is research on evaluation. With the rapid expansion of the junior college curriculum, a closer examination could be made of the existing curriculum, in terms of achievement and purpose, and of individual courses and programs.

Closely related to evaluation is the problem of establishing a rationale for curriculum development. Some efforts toward the development of a rationale are noticeable in the development of instructional objectives. They are being used for individual courses, but few have been developed for the curriculum in general.

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DECISION MAKING IN THE MULTI-UNIT COLLEGE

In all of higher education a most perplexing concept is institutional organization and administrative control. With increasing frequency, leaders of expanding institutions are forced to make crucial operational decisions before the philosophical framework has been carefully thought out. The first problems to appear are often those directly associated with the degree of autonomy allowed local administrators, the amount of centralization or decentralization of authority, and the lack of communication.

Need for a philosophical basis becomes particularly vital in institutions when multiple units replace single campuses — when a university becomes a multiversity, when a senior college is divided into cluster colleges, or when, as in the case of the community college, two or more colleges replace a single large institution. Administrators are the first to realize that, without a conceptual master plan, intelligent decisions consistent with the institution's basic mission would hardly be forthcoming.

Evidence is growing that the multi-educational systems are threatening the solidarity and cohesion of individual units. Problems are becoming much more complicated on the individual campus. The local president is less and less able to carry his own case to the press, and less and less able to build a supportive constituency. Flexibility, differentiation, and individual responsiveness are gradually diminishing. Political safety, rather than education leadership, is becoming the vital concern (11:32-35). What can be done to reverse this course?

The caption, "unprecedented crisis for higher education," was recently used to introduce the federal administration's major higher education legislative proposal. The report, prepared by a special task force and featured in *The Chronicle of Higher Education,* described the multi-unit style of administrative organization as one of the pressures that has "accelerated the trend to homogeneity, diminished the sense of campus identity and solidarity, eroded the role of the president, encouraged the rise of system-wide interest groups, and set the stage for the politicizing of the university."

"The growth of these systems [the report continues] and the resulting budget and political problems make it ever more difficult for even the most enlightened state administration to avoid a damaging and self-reinforcing cycle."

The task force concludes this portion of its argument for reform with several hard-hitting questions. What gains (and risks) would there be in breaking up large systems? Short of casting them aside, how can large systems be more effectively managed? Finally, the team begs the question by asking: What can be done about reversing the trend toward central control within systems? (10:4-6).

This paper focuses on the development and presentation of a pattern or model for decentralizing the decision-making process in multi-unit educational systems. It will emphasize, and draw its illustrative material from, community college administration.

MULTI-UNIT SYSTEMS IN HIGHER EDUCATION: AN OVERVIEW

The Multi-Unit Community College District

The generic term, "multi-institution or multi-unit community college district," is defined as: A community college operating two or more campuses within its district under a single governing board, with each campus having a separate site administrator. The multi-unit community college district is not to be confused with a university-operated system or a state system, although similarities are readily apparent (4:103; 5; 7; 9).

The late 1960s and the 1970s are likely to be known as the years of multi-unit development — a period when single colleges (usually districts) reorganized into two or more institutions. Reasons for changing the administrative pattern range from the simple necessity of economic survival to the more laudable reason of equal student access to better educational opportunities. While this pattern is not exclusive to large urban centers, it has expanded most rapidly in the big cities of the nation. The critical issues of this style of administration are therefore directly related to the pressures generated by big city governance itself.

The multi-branch. A multi-unit district operating as one legal institution with two or more branches or campuses within the district. Branches, usually headed by a second-level administrator, but often coordinated by an assistant superintendent or vice-president at the central office, specialize in technical curricula, in adult education (extension centers), or in specific subject matter divisions.

The words "legal" and "branches" establish the tone of this organizational style. Controls are more frequently centralized at the district office, which therefore carries a larger administrative staff. In extreme cases, the super-organization tends to stultify much of the individuality of the branches, and the campus administrators (occasionally, several "deans" of equal authority have joint responsibility) are little more than "building principals." Close cooperation among the branches and dispassionate coordination by central office officials are vital to the success of this pattern. According to the logic of an identical-twin relationship, the campuses offer instruction of uniform quality. Operating costs — instruction, maintenance, etc. — would also be comparatively small.

The multi-branch concept, in theory, provides opportunity for a more economical and efficient management and a minimum duplication of space, equipment, and staff. We would argue against the tendency toward centralized control inherent in this system.

The multi-college: A multi-college operating two or more individual colleges within its district. Individuality is the distinguishing feature of this pattern. Under the multi-college philosophy, the colleges operate with maximum autonomy. The leaders, ordinarily called presidents, are delegated greater authority; they are the official spokesmen of their colleges and represent their constituency before the board of trustees.

While individual colleges live within the framework of district policy, they are more likely to reflect the individuality of their particular communities – including, of course, the student body, the faculty and administration, and the general community. This framework of individuality implies greater opportunity for experimentation and innovation in a variety of services. Central office responsibilities are kept to a minimum. According to the philosophy supporting this pattern, an institution is best governed by the individuals who belong to it – by the administration, faculty, and students who identify closely with its history and development.

The chief executive of the community college district, most often called "The Chancellor," is largely involved with the district board of trustees and with such functions as district-wide master planning. His role of district representative within a rapidly growing higher education bureaucracy at the state level absorbs more and more of his time and energies. Ever-widening interest in higher education by the federal government adds both a blessing and a curse to his total responsibility as an educational leader.

Activities in federal and state government, however, are diluting as well as negating the tendency to decentralize community colleges. The belief is growing that "the time to reverse the present trend . . . is now, or the chance will be lost for a long time" (10:6).

The multi-college style, with its implied advantages of democratic relationships, decentralized authority, and potential for extending communication is growing in favor. Credit for this trend should, in part, be given to regional accreditation agencies, which are progressively seeing the incongruity of presuming to evaluate all campuses by a single yardstick. In a number of states (including California, Illinois, and Michigan), teams have openly and determinedly challenged the sense of this notion.

The Multiversity

Kerr describes the large university as "a whole series of communities and activities held together by a common name, a common governing board, and related purposes" (6:1). He calls the university "an inconsistent institution." While serving many communities "almost slavishly," it criticizes the society "sometimes unmercifully." While "devoted to equality of opportunity, it is itself a class society," where rather than a concert of common causes, these interests are "quite varied, even conflicting" (6:19).

As a community college increases in size and complexity, administration, similar to that of a multiversity, tends to become more formalized and separated as a distinct function in the effort to hold together a complex organization. With the development of systems of coordination, the location of institutional power shifts from inside to outside the original community, encompassing a diversity of community groups. The world, which was once external and comparatively unrelated, becomes an integral part of the institution.

The role of the president shifts to accommodate institutional changes. Like his university colleagues, the community college superintendent or chancellor faces in many directions. In Kerr's classic statement, the president of a multiversity (or a multi-unit community college) becomes a leader, educator, creator, initiator, wielder of power, pump; and (almost facetiously) he is also officeholder, caretaker, inheritor, consensus-seeker, persuader, bottleneck. But he is mostly a mediator (6:36). He "should sound like a mouse at home, and look like a lion abroad." The president, Kerr concludes, is "one of the marginal men in a democratic society . . . but at the very center of the total process" (6:30).

Kerr's representation is basically the traditional concept of the university chief executive's role. Very few perform well in all the categories described, but in this day, those who survive must be successful as coordinators, arbitrators, and providers of services to faculties and students.

The Cluster College

The cluster college concept introduces specific analogies to the multi-unit community college district. Doi describes two elements common to senior institutions engaged in developing the cluster idea: (1) a search for attainment of "the best of two worlds, the world of smallness and the world of bigness;" and (2) a search for a system "to develop and to maintain a distinctiveness in each unit" (1:390). The author also mentions the "first and major task" of the cluster college administrator, namely, to establish a linkage system and clarify the relationship among members of the system (1:390).

Doi's comments, which concluded a Conference on the Cluster College Concept held in March 1967 at Claremont Colleges (California) under Carnegie Corporation sponsorship, could be literally translated into purposes of the multi-unit community college district. His identification of reasons for and the importance of clustering is applicable to two-year as well as to four-year colleges:

> The importance of the clustering concept to a given college or university depends in large part on whether it sees it as a strategy for survival, a strategy for expansion, a strategy for the reform of education . . . . I think it important for an institution to have a clear consciousness of why it chooses to become a part of a cluster (1).

Community colleges are adapting the cluster concept to other than administrative organization. Curriculum departmentalization, particularly in occupational programs – planning curriculum for "clusters" or "families" of jobs, as Harris recommends – is widely practiced in community colleges within multi-unit districts. A common core of studies in each family is provided in the first year with specialization in the second year to match employer demands (2:42). The Cypress College House Plan (North Orange County Community College District, California) illustrates the cluster concept in another dimension. Similar in some respects to the Stephens College idea, the key to the plan is decentralization – in food services, lounges, relaxing areas, and library services – as well as in student government and student activities. The Cypress Plan also provides opportunities for independent study, for auto-tutorial programming, and for student dialogue and discourse with faculty, counselors, and advisers (13:26-31).

If one accepts the values inherent in individuality and sees advantages in the spirit of competitiveness and belonging, one is obliged to support the concept of decentralized responsibility and function. The question most vital to this paper, then, is how these concepts can be maximized *within* a central agency. More specifically, how can the multi-college style be implemented within the framework of the multi-unit community college district?

MORE LOCAL AUTONOMY

Every educational institution, no matter what it claims as its specializations, should have as its prime purpose the development of an environment of learning, to provide students with opportunities to acquire knowledge and skills that are meaningful and easily available to them. The development of such an environment – the distinctive goal of colleges and universities – is a major function of leadership. How much autonomy should be allowed the administrator who seeks to build a learning environment? "When [in Selznick's words] should an activity be thought of as distinctive enough to be allowed a relatively independent organizational existence?" (12:138-9).

Clues to a pattern or model for effective decision making in multi-unit systems are provided in Selznick's discussion of the

functions of institutional leadership and their relationship to a theory of professional or elite autonomy. If an organization is to function effectively, four key tasks in leadership must, in Selznick's judgment, be understood and implemented:

1. defining the institution's mission and role
2. building the institution's purpose into its social structure
3. defending the integrity of the institution
4. gaining the consent of constituent units, ordering internal conflicts, and maintaining "a balance of power appropriate to the fulfillment of key institutional commitments" (12:62-64).

As a new multi-unit system identifies and develops these functions – beginning with role definition and progressing through the more complex tasks of balancing internal and external power structures – decentralized decision making normally increases. In the early stages of its work, the administrative group is subjected to tighter controls, i.e., given less autonomy by the chief executive and his board of trustees. More responsibility and authority are granted as the staff matures in its assignment – when it shows evidence, for example, of being able to resist both outside pressures (doubts and misunderstandings circulating in the larger community) and jealousies from within the organization.

Attention is given to this continuum in the following brief discussion of each of the four functions posed by Selznick.

1. Defining the Institution's Mission and Role

Development of institutional goals is the first order of business for the chief executive in a newly formed multi-system. A highly centralized structure is appropriate during this formative period when the top leadership – the community college district chancellor, presidents of the developing campuses, deans of students, and possibly librarians – defines institutional goals. At the outset, centralization permits what Selznick calls "the autonomous maturation of values" (12:113), a time when the leadership establishes philosophy and attempts to unify the initial administrative group in a series of common understandings.

At this stage of the new institution's development, the chief executive should look for signs of maturity. How successful is the president of a newly organized campus in the system in achieving major tasks assigned to him? Is he systematically fulfilling institutional goals, or is he wavering indecisively? Is he allowing his newly elected staff and faculty enough freedom to maximize initiative and creativity in their planning? Are students and community leaders involved in the planning and, if so, does morale appear to be high? How successful has he been so far in defending the integrity of the institution? Unfortunately for the chancellor, much of the evidence he gathers to answer these questions comes secondhand and is largely subjective. Except for some obvious guidelines, his judgment is mostly intuitive.

When an understanding of institutional goals is thought to have been achieved, the chief executive may logically relinquish controls and delegate responsibility with increasing rapidity. Put another way, maximum direction from the central office decreases as the homogeneity of line and staff officers increases. Documentation of this unification effort is reflected in the first broad policy manual of board policies and supporting administrative procedures.

2. Building Institutional Purposes into Its Social Structure

In the initial months, the district administration should provide maximum direction and services. As the colleges develop techniques for meeting their local service requirements, the central office should relinquish control of services – maintaining only those that are more economically supported at "headquarters."

Matching purposes with the social structure implies knowledge of the various communities represented in the college district. This task, to be accomplished primarily by the leadership in individual colleges, is a highly creative one. It requires shaping the character of the particular institution and, according to the personality of the community to be served, sensitizing the staff to appropriate ways of thinking and reacting.

Community ideals should be determined through use of advisory committees and local resources and capabilities should be analyzed to give direction to the development of the initial curricula and physical plant planning for the two or more institutions.

At this stage, the college administrations should be allowed to select staff who, in addition to being committed to the district philosophy, seem most likely to fit, and perhaps to effect changes in, community values. Thus, in selection of personnel, both professional and non-professional, the colleges rather than the district office should have the final decision.

In curriculum development, however, shared responsibility (between central office and campus administrators) is advisable, particularly in the matter of deciding where in the total service area expensive occupational or technical programs should be located. Matters relative to course content and organization, and to textbook, library book, and periodical selection clearly are within the province of the individual colleges.

3. Defending the Integrity of the Institution

One of the least understood responsibilities of institutional leadership, this function refers specifically to "maintaining values and distinctive identity." Success in protecting the particular set of values embodied in the community college system depends largely on the accuracy of goal definitions and the level of support now given to them by the new staff. A greater degree of institutional autonomy is needed in districts where colleges are located in comparatively isolated areas, in contrast to those established in a single large city composed of similar communities.

At this point in the system's development, the character of the district organization is supposedly established; each unit, under increasingly autonomous leadership, has a recognizable personality of its own. Devices such as the college catalogs, other descriptive publications, faculty handbooks, and student handbooks reflect this individuality and commit the colleges in writing to prescribed action programs.

4. Gaining the Consent of Constituent Units

Implicit in this function are the ability of the organization as a whole to protect itself against internal conflicts and competing community groups and also its potential for effecting change. Although other styles of internal governance may be advisable to handle particular situations during an organization's initial years, the goal should be a sharing of authority among decision-making groups in an environment of free-flowing communication among administrators, faculty, and students alike. Each of these groups has substantial power that should be concentrated to provide an environment for more effective learning – an environment identified by Millett as a "community of authority" (8:260). Maintaining a balance of power among these groups is necessary if the district is to fulfill its mission.

Unfortunately, there are times in decision making when authority-sharing is neither possible nor feasible. Time considerations and other complicating factors occasionally prohibit consensus decision making. On these occasions, sub-administrators, recognizing the need for a decision, must, in good faith, be willing to accept the chancellor's action. The district executive – realizing that 'the ship must stay afloat" – should move swiftly and decisively on such matters. He must, himself, accept and assume (even if only minimum faculty consultation is possible) the heavy and often onerous duty of top leadership.

The chief executive officer needs further to recognize that the quality of decision making is closely related to the amount of relevant information available and that, while he can and should delegate decision making to subordinates, he cannot relinquish or sidestep the legal authority that is his and his alone (3:230).

Open and continuous communication with community leaders is vital to institutional stability. The district executive is constantly testing community reactions to the developing educational enterprise through the board of trustees and citizen advisory committees. An organization's ability to fulfill key commitments depends on a delicate balance of internal and external power groups – a basic responsibility of the chief administrative officer.

It is axiomatic that the effectiveness of any organization is closely related to the quality of leadership found in the chief executive – leadership that is able to maintain a high productive output throughout the organization and to maximize external communication with the most significant of the power groups. Strong *central* control can result in maximum efficiency, economy, and impartial treatment of institutions, but it risks depersonalization, avoidance of responsibility, and lower morale. Maximum *local* control can encourage creativity, increase program relevancy, and further morale, but it can result in inefficient handling of matters of organization-wide concern, in interinstitutional competition, and in communication problems.

No precise pattern of decision making can realistically be announced for multi-unit educational systems. This is particularly true in the case of the community college, which is primarily a locally "owned," locally governed, and community-oriented enterprise. The proper balance of central office and local college strength will therefore vary according to community characteristics as well as to the administrative style of the chief executive. As for task responsibility: fiscal, property, and personnel management are probably best handled in the central office; curriculum development, instructional methods, and student personnel services are more within the jurisdiction of the individual colleges. Above all, a spirit of cooperation, district awareness, and institutional pride are essential in achieving the appropriate balance of decision-making responsibility.

There are, of course, no easy solutions to the complex issues raised in the opening paragraphs of this paper. The model presented is no panacea for all the management ills of higher education. Agreement on the rationale proposed for the model and adherence to the described principles, however, could help to reverse the trend toward central control within educational systems.

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The Case for Vocational Education in the Junior College with an Introductory Review of Recent Research

The Research

The development of vocational-technical education, often referred to as "career education," has had a tremendous effect on all levels of education, especially as the federal government places greater emphasis on its development. The *Junior College Research Review* has reported research studies of individual vocational-technical programs. This issue is on the general planning of vocational-technical education and amplifies the special report, "The Case for Vocational Education in the Junior College" by Melvin L. Barlow.

Vocational-technical education today must consider realistic programs for the disadvantaged, a subject covered by Schultz in *Occupations and Education in the 70's* (ED 047 678). Issues raised by Schultz include traditional programs vs. the new occupational curriculum, alternatives to the associate degree, and occupational education as a "touch of reality."

Preliminary exploration is urged by the Illinois Research and Development Coordinating Unit in a report to state educators, *A Master Plan of Research: Developmental and Exemplary Activities in Vocational and Technical Education* (ED 047 135). Activities that should precede master planning include: (1) K-14 articulation, (2) educational programs in all occupational areas, (3) programs for the disadvantaged, (4) in-service training to up-date instructors, and (5) evaluation.

Evaluation and pre-planning through community surveys are the subject of Henderson's study, *Program Planning with Surveys in Occupational Education* (ED 045 087). Surveys provide information on student characteristics, manpower needs and projections, accountability, and financing. They are also useful as on-going means of evaluating the programs to see if they are meeting the needs of both the employer and the potential employee.

A state plan for vocational education using a systems approach is offered by Hilton and Gyuro in *A Systems Approach—1970 Vocational Education Handbook for State Plan Development and Preparation* (ED 045 829). It outlines a plan for vocational education that can be applied in any state. It is intended for use by boards of education, advisory councils, school administrators, and vocational directors.

Planning Facilities and Equipment for Comprehensive Vocational Education Programs for the Future (ED 040 293) by Larson and Blake provides information on new approaches for those planning vocational education facilities. Recommendations include: (1) more research on facilities and equipment; (2) development of visual aids for facility planning.

Eight papers, collected in *Essays on Occupational Education in the Two-Year College* (ED 037 210) and edited by Gillie cover curriculum development, the needs of alienated youth, and the creation of a 6-4-4 configuration of six years in the elementary school, four in secondary, and four in the junior college. It may have merit for a coordinated program within the framework of "career education" espoused by Commissioner S. P. Marland, Jr.

Several major concerns are discernible in these reports: first, vocational education for the disadvantaged; second, planning coordinated from elementary school through the community college; and third, alternatives to the traditional degree programs. Finally, research is considered a requisite to planning, whether for curriculum or for physical facilities.

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ED 047 135 *A master plan of research,* by Illinois Research and Development Coordinating Unit. Springfield, Jan. 70. 14pp.

ED 047 678 *Occupation and education in the 70's,* by R. E. Schultz et al. Washington, D.C., AAJC, 1970. 39pp.

The Case for Vocational Education in the Junior College

Education for employment should be the main purpose of the educational enterprise, and the junior college should occupy a dominant position in this preparation. Neither condition exists, but both are worthy goals.

While it is easy to criticize vocational education in the junior colleges, they do have many exemplary programs. Criticism, if justified, must center around comparative enrollments and the attitudes of policy makers.

The idea of the junior college's basic role in vocational education grew concurrently with the junior college itself. Over 40 years ago, Eells, writing in *Red Book*, observed that young men and women were finding adequate preparation "for many life occupations" in the two years of junior college. The same observation can be made today with even more relevance, for the opportunities have been greatly expanded. The junior colleges, however, have only begun to scratch the surface of their potential for occupational education.

To analyze this potential, let us review a number of problems and concepts that bear on the development of vocational education. A brief historical note will keep things in perspective.

Vocational Education—Origin and Change

Vocational education is largely a product of twentieth-century educational needs. Its formative period was from 1906 to 1917; it culminated in the passage of the Smith-Hughes Act in 1917. The vocational program was organized for high school students and employed adults. At that time, it would have been folly to develop it around the junior colleges, for only 76 of them had been established (16 in California) and the possibility of their contributing to the vocational needs of youth and adults was less than nil. Organizing vocational education around the high school was a daring move in 1917, because only about 20 per cent of those of high-school age were actually in high school. Vocational education zeroed in on the drop-out, who, in those days, was the eighth-grade drop-out, not the high school drop-out of today. Thousands of students left school to go to work. What the labor market needed then was a strong back—a weak mind was no drawback.

Over the years, many changes have taken place. The Vocational Education Act of 1963 and the Amendments of 1968 represent two of the most constructive pieces of legislation ever passed by Congress. Current legislation considers "all people of all ages in all communities" as proper targets for vocational education. This means:

1. youth in high school
2. youth in high school with special needs and problems
3. youth and young adults in junior colleges and other post-secondary institutions
4. employed and unemployed youth and adults.

The word "all" means exactly what it says. Vocational education is concerned with *people* and *work*—nearly all people and nearly all occupations. Much of the concern must be shared by the junior college.

A Popular Dichotomy

Vocational education was conceived of as part of the total educational structure — *never* have the vocational theorists thought of it in any other way. Although vocational education, in both theory and practice, has sought to protect the right of an individual to his cultural heritage and his right to (and need for) a basic education, the situation has been getting out of hand.

We have so over-sold the "go-to-college" concept that few ever think of the purpose of it—they just go to college. The college preparatory program in the high school—and in the community colleges—is probably the greatest farce ever perpetrated on the public. Despite opinions to the contrary, there *is not* and *can not be* any dichotomy between the general goals of education and the vocational goals. These equally important parts of a person's education must find equal expression at the post-secondary level. The institution that does not concern itself with the occupational future of students is not meeting its obligation to contemporary society. This failure is akin to an act of treason against the educational dream of America.

What's in a Name?

Recently interest has been shown in changing the name of vocational education to "occupational education" or "career education." Some want to call it "anything but vocational education." Among junior college educators, "occupational education" has found favor, but *why* this is so is not clear. Vocational education is not suddenly more important under the new term. Energy devoted to changing the name is wasted.

Many use the words "vocational" and "occupational" almost synonymously. One could provide some distinction by appropriate definition, but why do so? Of all the things that ought to be done in education, changing a name ranks low on the list. Effort devoted to name changing should not replace effort devoted to providing the education and experience that give a person something to offer in the labor market. The issue is providing a program that will solve some of the nation's need for qualified manpower.

The term "career education," currently sweeping the nation, connotes preparation for the world of work At the early grade levels, the emphasis is probably on *awareness* of careers, on the many options open to individuals, and on making the students realize that work is still in vogue. Later on, career education should narrow the work interests of students to a few options—a family or cluster of occupations. At this time, the student should be allowed to *explore* the real world of these occupational families. Still later, at the senior high school for some and at the junior college for others, students must have a chance to select a group of jobs and begin actual *preparation* to help them enter those occupations. This phase of career education is *vocational education.*

It is incorrect to eliminate the term "vocational education" and call it "career education." This disposes of what career education is ultimately attempting to do. It seeks to have all youth become career-conscious and to obtain enough salable skills for the work society wants done. The actual preparation—the part that determines whether or not a person is employable—is vocational education, part of the total career education effort.

National Studies

The vocational movement began in the high school many years before post-secondary programs were emphasized. The need for post-secondary vocational education was demanding attention long before it attracted leaders in the junior college. It is difficult to cite the precise time of its start, but the post-World War II technological revolution provided fertile ground for the idea's growth. The need for technicians in national defense was a major motivating force. Toward the end of the 50s, a number of regional conferences directed massive attention to post-secondary vocational education programs. Four of them are described below.

1. *Panel of Consultants on Vocational Education.* During 1961-62, the President's Panel gave a significant push to vocational education in the junior college. Its report, *Vocational Education for a Changing World of Work*, made it clear that among the people to be served were those attending junior or community colleges and technical institutes. The junior colleges provided for an orderly progression of career development beginning in high school and for the vocational preparation of out-of-school youth and adults.

> The prestige of the post-high school institution facilitates the enrollment of persons who do not want to go back to high school for their further education . . . retraining adults to reduce unemployment is generally easier in institutions beyond the high school (5:133).

The report of the Panel emphasizes that an expanded economy requires trained personnel and that vocational education beyond the high school can do much to provide them.

The Panel also recognized that vocational programs on the post-secondary level were in a good position to react to changes in social and technological conditions. One recommendation was that "... the Federal Government provide funds to assist States in developing and operating vocational and technical education programs at the post-high school level" (5:259). The Vocational Education Act of 1963 encouraged the development of post-secondary vocational education programs.

The Panel also issued a report by Lynn A. Emerson that cited repeatedly the potential of the junior college in vocational education (6).

2. *The Advisory Council on Vocational Education, 1967-68.* The Act of 1963 provided that national studies of vocational education be undertaken at five-year intervals. The first of these studies was completed by the President's Council appointed in response to the Act.

Despite the fact that post-secondary institutions had had only a short time to respond to the provisions of the Act, the Council reported a 156.7% increase in enrollment for 1964-66. This supported the contention of the theorists that a vast need still existed for post-secondary vocational education.

The Council accepted the principle of expansion and suggested the following legislation:

> IT IS RECOMMENDED, That the act provide for at least 25 per cent of the funds appropriated for allocation to the States to be used for the intent set forth in purpose (2), post-secondary schools, and (3) adult programs of the Vocational Education Act of 1963 (7:199).

3. *American Vocational Association/American Association of Junior Colleges Seminar.* The AVA and AAJC, recognizing their common interests in post-secondary occupational education, held a seminar (May 1970) to explore means for positive action. National leaders from Congress, from vocational education, and from junior colleges studied the issues of administration and planning, continuing opportunities for occupational education, accountability, professional bonds, accreditation, and quality in occupational education (1). These two associations agreed that "community colleges should adopt the philosophy of preparing people to earn a living," for they could provide a reliable delivery system for vocational, technical, and manpower education.

4. *National School Public Relations Association.* The Association presented a summary of the innovations that appear to revolutionize career training and repeated the mandate of Congress: "Clearly, educators are being told, vocational education is a matter of national concern" (4:2).

Summary

National studies have shown beyond all doubt that the vocational needs of people are a high-priority issue. The role of the junior college has been clear over the past decade, but the junior college has been slow to accept its responsibility. Legislation now (October 1971) under discussion by Congress could provide substantial incentive.

So What?

Information to substantiate the effort of the junior college in vocational education has not been definitive; perhaps future data will remedy the situation. The Council study in 1967 found that 92 per cent of the schools offering vocational education were secondary schools. Of the post-secondary institutions examined, fewer than half were designated junior or community colleges. It is possible that these percentages have not changed significantly.

The history of vocational education shows that roughly half the enrollment has consisted of out-of-school youth and adults. These groups have become prime targets for vocational education because of the direct relationship of their needs and wants to the social and technological well-being of the nation.

The old axiom, "when institutions fail to meet the needs of society, new institutions arise to take their place," is relevant to post-secondary vocational education. Within a decade, a vast network of area vocational and technical schools has developed throughout the nation. Most are excellent and are meeting the needs of thousands of youth and adults. Did they develop because the junior colleges were blind to the vocational needs of the people?

It is easy to berate the junior colleges, using such words as snobbery, intellectualism, élitism, and academic traditionalism, but the point is not the *shortcomings* of the junior college, but its *potential.*

This potential has been recognized at the national level, but, although the junior college has been committed to the challenge of vocational education, on-site dedication is yet to be achieved. An obvious need is a general policy on preparation. It is not known exactly how many junior colleges have such a policy; unfortunately, some have none.

In 1971, California added Section 7504 to its Education Code:

> . . . it is the policy of the people of the State of California to provide an educational opportunity to every individual to the end that every student leaving school should be prepared to enter the world of work; that every student who graduates from any state-supported educational institution should have sufficient marketable skills for legitimate remunerative employment; and that every qualified and eligible adult citizen should be afforded an educational opportunity to become suitably employed . . . (2).

These are powerful words of policy, matching the preamble to P.L. 90-576, in which Congress declared "that persons of all ages, in all communities of the state . . . will have ready access to vocational training or retraining . . .of high quality, . . . realistic in the light of actual or anticipated opportunities for gainful employment, and . . . suited to their needs, interests, and ability to benefit from such training" (3).

Career education, now high on the priority list, will fall far short of its goals unless the junior college is able to offer vastly more options to high school graduates and to out-of-school youth and adults. The key to the whole situation is cooperation, not competition, among the vocational education institutions.

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HOW TO SEARCH THE ERIC FILE

In a broadly-based information system such as the Educational Resources Information Center (ERIC), with more than 90,000 citations in its principal files, it is important that its present and potential users understand both the products of the system and the procedures of information retrieval. The ERIC information system is designed for computerized information storage and retrieval, and the number of computer centers offering search services to users in the field is growing rapidly. Furthermore, such centers either have or soon will have the ability to search the entire ERIC document collection (through *Research in Education*) and the resources of many education periodicals (through *Current Index to Journals in Education*). While the computer obviously plays a vital role in facilitating reference searching of large literature collections or data bases, practice shows that manual searching, though tedious and time-consuming, gives the user skills and expertise that are essential to the effective use of the computer.

For background, a brief explanation of the nature of the documents in ERIC and their relevance to junior college educators (e.g., teachers, administrators, trustees, librarians, counselors, or others) is appropriate. Among others, the ERIC file includes reports on innovative programs, research and evaluation results, interpretive summaries, research reviews and reports of conferences. For junior college faculties and staffs, many titles are significant but only a scant sample must suffice here: for example, *Strategies for Change: A Case Study of Innovative Practices at the Coast Community College District* (ED 051 806); *Experiment and Research in the Use of a Writing Laboratory* (ED 041 576); *Research and Compensatory Education: What Are We Doing?* (ED 041 581); and *One Institution: Six Alternatives* (ED 048 857).

Exactly how is information stored in the ERIC files or data bank, and what tools must one use to review the literature? Twenty subject-focused clearinghouses are responsible for acquiring and screening reports to be disseminated through ERIC. Each is responsible for acquiring the literature in its special field, including unpublished documents, reports, and appropriate periodical articles. Professional subject-matter experts then select the most relevant items and prepare brief abstracts or summaries of their contents. After they are indexed by topic and by author, the information is made available through two monthly publications – *Research in Education* (RIE) and *Current Index to Journals in Education* (CIJE). The ERIC facility, operated by a private contractor, gathers the information about the reports submitted by the clearinghouses and converts it to a computer tape record that is then used by the Government Printing Office to produce *Research in Education*, the announcement journal for new reports. Copies of the original documents are transferred to the ERIC Document Reproduction Service, where they are made available both on microfiche (a flat 4 x 6" sheet of film) and in full-size reproduction. At the same time, information about the published literature appearing in more than 500 education and education-related periodicals is made available monthly through the *Current Index to Journals in Education*, a computer-generated index that is a joint venture between Crowell, Collier, Macmillan Information Corporation, and ERIC. It is important to remember that, although both these reference tools are produced by computerized processes, each is available in "hard copy" on a subscription basis.

All documents in both files are stored as "citations." Although there is some difference in the arrangement and depth of information given on reports and journal listings, a citation generally consists of the following elements: the title of the report or journal article, the author's name, the facility where the work was carried out or the bibliographical information for a journal article, and a consecutive identifying number. This is followed by a list of descriptors (subject headings) or index terms, which actually are the subject key to the store of information. In the hard copy of both reference tools, certain of these terms or descriptors are designated with asterisks (*), meaning that only those terms can be searched for manually. For users of *RIE*, an abstract or summary of the contents of each document is included, and for those using *CIJE* for the journal literature, a one- or two-sentence annotation is often found with the citation.

THE TOOLS OF ERIC

(1) *Research in Education* (RIE) is made up of document resumes and subject, author, and institution indexes. These resumes (abstracts) highlight the significance of each document and are listed sequentially in the Document Section by ED number. The indexes, which follow the resumes, cite each document by title and ED number. For the full bibliographic citation, the user must return to the Document Resume Section. The subject, author (investigator), and institution indexes are cumulated annually in a single volume. The resumes are not cumulated, and therefore, in searching this file, one must proceed from the annual indexes to the monthly issues of RIE to locate specific resumes.

(2) *Current Index to Journals in Education* (CIJE) now covers 530 publications, which represent the core periodical literature in the field of education. Citations to journals in a particular issue of *CIJE* represent the titles received by the various processing centers during the month previous to publication. *CIJE* is arranged in four sections: three indexes – subject, author, and journal content – and a Main Entry Section. The indexes cite journal articles with the appropriate bibliographical information. The Main Entry Section is arranged in broad subject categories and includes all of the information presented in the indexes and brief annotations as needed. Compatibility with the ERIC information retrieval

system is achieved by assigning an EJ (ERIC Journal) accession number to each main entry. As with *RIE*, the various indexes and the main entry section cumulate annually and semi-annually.

(3) *The Thesaurus of ERIC Descriptors* is a vocabulary developed by subject specialists and used for indexing the various documents, projects, and journal articles entered into the ERIC information system. Since all descriptors (terms, subject headings) in the *Thesaurus* have been derived from documents or articles previously in the ERIC system, this list of topics represents an up-to-date subject index to the ERIC files. The *Thesaurus* is thus an authoritative list of terms that helps a user label the concepts or ideas in his statement of needed information and identify new ideas in the same subject search.

Two types of terms are included in the *Thesaurus:* descriptors and synonyms or near-synonyms. As noted before, descriptors are terms used for indexing and for searching the resources of the ERIC system. They are arranged in alphabetical order in the *Thesaurus*. Synonyms or near-synonyms of descriptors are displayed with the appropriate descriptor and with notations indicating their relationship.

Two divisions of the *Thesaurus* are particularly helpful in developing search strategies. The *Rotated Descriptor Display* is a generic list of every descriptor rotated alphabetically instead of being separated in the traditional alphabetical arrangement as in the main body of the *Thesaurus*.

For example: Scientific Manpower
Manpower Development
Manpower Needs

As another example, "Visually Handicapped" would occur in a different location from "Mentally Handicapped." The *Rotated Descriptor Display* solves this problem by alphabetizing the word "Handicapped," regardless of where it occurs in a multi-word descriptor. It is an alphabetical index to all significant words that form descriptors in the *Thesaurus*. Using this *Display*, one may select pertinent descriptors and proceed to the *Descriptor Listing*, another important division of the *Thesaurus*. It is structured to give complete information about the intended scope and usage of each descriptor.

For example: Junior College Students
BT College Students
(Note: BT means Broader Term, directly related to the Descriptor)
RT Community Colleges
(Note: RT means related terms to examine)
Higher Education
Junior Colleges
Post Secondary Education

It should be noted that the use of the *Thesaurus* in an initial search of ERIC may not be essential. However, as one defines and redefines his needs for information, as with any subject heading list, it becomes an increasingly important tool.

STEPS TO BE FOLLOWED IN DOING A SUBJECT SEARCH OF THE ERIC FILE

Step I—Statement of the Problem

Whether one approaches the ERIC data base manually or through a computerized system, it is important to establish a clear and concise statement of the problem or information need. This should include the major topical area, specific subtopics, the instructional level (e.g., junior college), and the type of information sought (e.g., research, methodology, bibliography, summary review, or other). The following is an example of an information need:

Problem Statement: What research has been done to assist junior colleges in determining vocational education or occupational training programs most essential to the manpower development of local communities?

By underlining the key concepts or phrases of this statement, one immediately identifies subjects and possible searchable terms.

Example: *junior college* (level of instruction)
research (type of information)
methodology (type of information)
vocational education (major topic)
occupational education (major topic)
manpower development (specific subtopic)
community (specific subtopic)

Step II—Manual Search by Subject Index

Several steps may be followed here, either with or without the use of the *Thesaurus*. For the sake of consistency in preparing for a computer search, however, emphasis will be placed on the use of the *Thesaurus*.

(1) Determine the descriptors covering the Problem Statement from the *Thesaurus* by (a) using the *Rotated Descriptor Display* and looking up the major topics (Vocational Education; Occupational Training); and/or (b) using the *Descriptor Listing* section of the *Thesaurus* and looking up the topics to determine whether they are used as ERIC Descriptors (if they are not, a cross-reference may direct you to a synonym, e.g., Occupational Training *use* Vocational Education); or (c), scanning the array of related descriptors listed below each main descriptor (in boldface type) to be sure that you have chosen the most specific for your needs. Note that, of the searchable elements in the Problem Statement presented here, the *level* and *type* descriptors are seldon useful in manual searching because of their general nature. In fact, "Junior College" is used with each document submitted by the ERIC Clearinghouse for Junior Colleges to separate out that segment of the literature, but *level* and *type* are critical terms in an automated search on a specific topic.

(2) Using the latest cumulated issue of the indexes (*RIE* and *CIJE*), search the subject indexes for the descriptors you have chosen. For current listings, search the latest monthly issues of the indexes. List the ED or EJ numbers in columns under each descriptor as below. These accession numbers may be used for cross-reference, document location, and document ordering.

Manpower Development	*Vocational Education*
ED 043 725	ED 043 725
ED 044 782	ED 044 782
ED 047 677	ED 047 667
ED 047 100	EJ 028 091
	EJ 028 093
Manpower Needs	*Junior College*
ED 044 782	ED 047 667
ED 043 753	ED 046 637
ED 044 767	ED 047 678
ED 044 519	EJ 028 091
Community Relations	
ED 047 100	

It is likely that the accession numbers (ED or EJ numbers) will appear under more than one of the descriptors being searched. In the example above, ED 044 782 is found under Manpower Needs, Manpower Development, and Vocational Education; EJ 028 091 is found under both Junior Colleges and Vocational Education. Such cases are instances of descriptors being assigned to document and course listings for the purpose of "tagging" or "labeling" concepts in the literature so that they may be retrieved more easily. In the ERIC program, descriptors (indexing terms) are assigned to be used either together or separately in the search process. In many cases, the relationships between terms have already been determined, as with Manpower Needs or Part-time Students. Much the same procedure is followed when a retrieval specialist asks for a computer search using such appropriate

terms as Manpower Needs, Vocational Education, and Junior Colleges. In both cases, an identical number under two or more index terms may well mean that the most revelant information is contained in that particular document.

Step 4—Review of Document Resumes and Article Citations

In the case of *Research in Education*, arrange the ED numbers in sequential order and go to the listings in the Document Resume Section of RIE. Search for the ED numbers, evaluate the resumes, and note those that appear to satisfy the Problem Statement. Documents in the *RIE* file may be ordered in microfiche or in hard copy from the following agency:

ERIC Document Reproduction Service
LEASCO Information Products, Inc.
P.O. Drawer O
Bethesda, Maryland 20014

Many universities, state departments of education, and local school districts subscribe to the entire ERIC file for all to use.

For complete journal citations, look up the EJ accession number in the Main Entry Section of the *Current Index to Journals in Education*. The journals are also available in many libraries.

SEARCH STRATEGIES USING THE COMPUTER

The advent of the computer has led to numerous changes in the method of storing and retrieving information. As noted elsewhere in this document, the principal ERIC tools for retrieving information, *RIE* and *CIJE*, are available in machine-readable form on magnetic tapes. The tape files, identified as Report Resume Files (RIE) and Journal Article Resume Files (CIJE) consist of all numbered ED documents and all EJ accessions in the ERIC file. Each file is kept current by quarterly up-date tapes. The tapes are prepared in IBM OS/360 format for either direct use or for conversion to a special format.

For the information seeker, subject access to these bibliographic data bases via the computer depends on many of the procedures discussed earlier, namely, the production of a refined Statement of the Problem and the translation of this information need into the language or vocabulary of the ERIC system. The next stage is combining the terms or descriptors of the vocabulary into groups, so that only the most specific and relevant citations will be located by the computer. In the ERIC program, which uses coordinate indexing, documents are described by specific index terms as opposed to the broad subject headings usually used in a library. This allows the user (searcher of information) to build his own subject headings at search time by specifying desired *and, or,* and *not* relationships between descriptors. This may be explained best by examining the original Problem Statement again, recasting it as necessary to comply with the terminology given in the *Thesaurus of ERIC Descriptors*, and then establishing the appropriate relationships between the descriptor groups.

Problem Statement: What research has been done to assist junior colleges in determining vocational education or occupational training programs most essential to the manpower development of local communities?

Among others, two statements or queries would best describe this information need:

Query 1 – Vocational Education *and* Manpower Needs *and* Community Surveys *and* Junior Colleges

In this instance, using the *and*, a citation found by the computer will result in a printout *only* if all of the four descriptors listed above have been used as index terms for the same document.

Query 2 – Vocational Education *or* Trade and Industrial Education *and* Manpower Development *or* Manpower Needs *and* Community Surveys *or* Occupational Surveys *and* Junior Colleges *or* Community Colleges

This query, making use of both *and* and *or*, has been expanded by using the *Thesaurus* more thoroughly, noting synonyms and hierarchical relationships between main descriptor entries and those of other classes.

When several queries have been developed, they usually are batched, key-punched, and fed into the computer. The results are then separated by query and returned to the user for review.

In summary, four steps must generally be followed to prepare and complete a computer search of the ERIC files:

1. refining the Problem Statement (or information need)
2. identifying and selecting the appropriate ERIC descriptors
3. combining or relating index terms (descriptors) by *and, or,* and *not,* to define an appropriate search expression
4. evaluating the results of the search and modifying the original query as necessary.

Computerized searches of information files depend on the programs or instructions a computer must receive to accomplish a desired task. Several versions of such programing systems are available for the ERIC file, and the choice will govern which data elements in each bibliographic record may be scanned. Suffice it to say, one obviously may do a subject search (as illustrated in this document) or a search for author, institution, ED or EJ numbers, among others.

Whichever type of retrieval is undertaken, it will still be necessary for the user to go with his computer-generated references to the actual documents – probably in a library – or to order the documents directly from ERIC. The next development in the state of the art will probably see an automatic linking of reference retrieval with actual document retrieval. The fact that the complete ERIC document collection is available in microfiche form now takes on added significance since mechanized retrieval of microfiche is already a reality.

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INSTANT INFORMATION: A DEMONSTRATION

The number of possible uses for information available in the ERIC system is exceeded only by the need for information. The major problem is to bring the practitioner and the material together in some efficient, immediate manner. Practitioners may obtain information in a number of ways on all of the documents in the ERIC system by use of *Research in Education*. The manual search described above is the most direct method, and is sufficient for the researcher compiling data for reference use.

Often, however, the practitioner needs instant information. Instant information can serve two purposes. One, it is immediate; and two, it tells the user if any of his requested data are not available. Many may feel that this is a luxury – but is it? Can decision makers rely on telephone calls to friends for possible information, or take the time to search through volumes of writings only to find that the information is nonexistent?

The fact is that instant information is available, and can be obtained either through a computer printout or a video display. The latter requires a computer, ERIC tapes, and a terminal. Documents are also available in microfiche and can be searched and found instantly by the automatic fiche retrieval machine.

Information acquisition by computer tapes and a fiche retrieval unit will be demonstrated at the AAJC convention in Dallas, February 29-March 1, 1972. There, users may request a search for documents that will be relayed, via telephone lines, to the computer at UCLA. The resulting document identification will be transmitted to Dallas, then used to obtain the fiche by means of the automatic fiche retrieval unit.

Although this is an eye-catching demonstration, novelty is not the basic reason for its use. It is the objective of this Clearinghouse effort to alert the practitioner to the fact that instant information is available in many forms, including the use of the computer, for he often overlooks the point that all information originates from the same source. To use the computer in the ERIC demonstration at the convention, the same ERIC reference materials as used in the manual search method, namely the RIE, must be used.

Indeed, all materials used in an ERIC search are the same. The form in which the data are eventually produced varies, as does the speed, but the essential tools of reference are identical for any document search. All these reference materials will be on display at the AAJC convention.

For the cost of an annual subscription to RIE, practitioners are able to avail themselves of instant information. Duplication of the model to be shown in Dallas would be expensive, but the concept to be demonstrated and the materials used cost less than $30 a year—certainly well within the means of most practitioners.

Young Park
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ERIC CLEARINGHOUSE FOR JUNIOR COLLEGES

ARTHUR M. COHEN, *Principal Investigator and Director*

The Clearinghouse operates under contract with the U.S. Department of Health, Education and Welfare, Office of Education.

Abstracts of the ERIC (Educational Resources Information Center) Documents can be found in *Research in Education (RIE)*. This publication of the Department of Health, Education and Welfare is available from the Government Printing Office, Washington, D.C. 20402 at $1.75 for a single issue or $21.00 for twelve issues yearly. The index to it is cumulated annually and semi-annually.

The ERIC Documents (ED's) may be purchased on microfiche (MF) or in hard copy (HC) from ERIC Document Reproduction Service, P.O. Drawer O, Bethesda, Md. 20014. MF prices are $.65 per document, regardless of size; HC costs $3.29 per units of 100 pages or less. A handling charge is not required.

The *Current Index to Journals in Education (CIJE)* indexes articles from more than 500 current journals and periodicals. It is available from CCM Information Corporation, Inc., 909 Third Avenue, New York 10022 at $3.50 per copy or $39.00 for twelve issues annually.

The *Junior College Research Review (JCRR)* is compiled and edited at the ERIC Clearinghouse for Junior Colleges, Room 96, Powell Library, University of California, Los Angeles, California 90024.

The *JCRR* is published ten times per academic year. Subscriptions are available at $3.00 each from the American Association of Junior Colleges, One Dupont Circle N.W., Washington, D.C. 20036. It is published and copyrighted by AAJC; copyright is claimed until March 1977.

Besides processing documents for the ERIC system and issuing the *Junior College Research Review*, the Clearinghouse publishes two other series of its own. The Monographs are in-depth studies or interpretations of research on junior colleges. They are available from AAJC at $2.00 each. The Topical Papers are either research models useful for general junior college testing or items of occasional interest to the field.

A free publications list is available from the Clearinghouse.

Hazel Horn, Editor

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TRENDS AND DEVELOPMENTS IN INSTITUTIONAL RESEARCH

The American Educational Research Association, at its national meeting in Chicago, April 3-7, 1972, will set a major milestone for community college institutional research. At this conference, the Special Interest Group for community college research will have four paper sessions, a business meeting, and an informal session sponsored by the ERIC Clearinghouse for Junior Colleges. The event will mark the culmination of the efforts of many who want to create a national platform for community college institutional research.

The meeting is significant, for it indicates several trends and developments in institutional research, some of which are examined in this special AERA issue of the *Junior College Research Review*. The developments are less a matter of research technique than of recognizing the need for research findings to aid in decision making.

Major Trends

Two major trends characterize institutional research in the community college today: one is communication of research results to practitioners and between those involved in the research; two is greater emphasis on what many call "applied" research, as opposed to "theoretical." The two trends are leading to the creation of *applicable* rather than *abstract* models.

Some feel a third and influential trend in institutional research may alter the image and functions of the institutional researcher in the community college. Several knowledgeable junior college administrators have spoken of creating an "Office of Information," directed by an "Information Dean," that would design a system for collecting institutional data to be used by college decision makers. It would establish a common data base for all and make the collection of data an ongoing process. It would be the job of the Information Dean to interpret, analyze, and report his findings regularly to the Board of Trustees, administration, faculty, and the institutional community at large.

The Clearinghouse purposes are quite in tune with the developments in institutional research. It varies its operations in keeping with the trends described in this report. Many readers may be familiar with the functions of the Clearinghouse, but to refresh their memories and inform new readers, some of its basic services are listed below.

1. Document searches on any topic dealing with community college development can be made on request. They cover all documents in the collection (approximately 2,000). Abstracts on the subject are pulled from the files and copies sent to the requester along with any other relevant references and data on the subject. There is no charge for the service or the materials.

2. Because the Clearinghouse publishes research on the community college, it has been its practice to issue publications jointly with other organizations. Thus, its publication activities are as varied as the organizations with whom it cooperates.

3. With over 100,000 community college practitioners in the country, it cannot possibly maintain a stable mailing list. It has been the policy, therefore, to disseminate published materials only through its selective mailing lists of organizations formed to contribute to community college development, including the AERA/SIG, Council of Community College Boards, Community College Social Science Association, and subscribers to the *Junior College Research Review*.

4. A major activity of the Clearinghouse is supporting institutional research in the community colleges, whose research efforts have long been subordinated to and remote from the promotional and developmental activities of the institution. Before the community college became the major enterprise it is today, decision makers seemed indifferent to how the institution used its relatively limited resources. Moreover, when the enrollment was relatively small and the curriculum stable, most problems could be solved by traditional procedures.

Requests and inquiries received at the Clearinghouse clearly show that decision making no longer relies entirely on personal judgment or past methods. Unfortunately, while institutional research in the college has increased measurably over the past few years, few administrators have given a firm commitment to using its findings in decision making. Nevertheless, research studies are increasing in number and improving in quality.

Improvements in Communication Among Researchers

People at all levels of education, interested in community college research, have felt the need to establish communication links among themselves. Members of AERA have formed a Special Interest Group (SIG) for community junior college research. Vernon Hendrix (University of Minnesota) is the current national chairman and the Clearinghouse for Junior Colleges is the national secretariat.

The AERA/SIG is divided into several regional sections, led by community college researchers and university-based associates, enabling those who cannot attend the national meeting of the AERA to readily exchange information. Regional chairmen who served this past year were Michael Schafer, Henry Moughamian, Paul Elsner, Young Park, Henry Reitan, Ernest Beals, and Frances Kelly.

An *AERA/SIG Newsletter* is published and distributed to the membership by the Clearinghouse. The November 1971 issue listed over forty-five research projects undertaken by AERA/SIG members in the fall of 1971. Each researcher received abstracts of ERIC documents in his particular area of interest. Further opportunities to exchange information are planned at the April AERA meeting through formal presentations of papers and informal meetings sponsored by the Clearinghouse.

Other groups interested in research exchange information and publications through the Clearinghouse, using it as a reference source. Notable examples of dissemination are *The Danforth Foundation Directory of Self-Instructional Materials*, four issues of the Topical Paper series devoted to reading programs in the Community College, and the *Community College Social Science Quarterly*.

New Organizational Emphasis

Several new groups have been organized in the past few years, pointing up the need for a base from which those interested in research may exchange information and develop themselves in the unique level of community college education. Examples of these newly emerging groups are:

1. *Council of Community College Boards.* This council is a subdivision of the National School Boards Association, one of the largest educational groups in the country. The CCCB is interested in community college research from a layman's point of view. Its members want more information both for decision making and for keeping abreast of recent developments in all phases of the community college.

The special research needs of this organization include fiscal accountability, federal legislation, master plans for new colleges, instructional evaluation, and innovations. The Clearinghouse is cooperating in several ways: assistance with publications that include a handbook for new trustees; establishment of a model information system to identify specific sources of information; and, of course, maintaining the user services of the Clearinghouse.

2. *Community College Social Science Association.* This group emphasizes subject matter, but the members are also concerned with community college organization, instruction, curriculum development, and innovation. It was notably successful in convening its first national conference in 1971 and in launching a major publication effort, the *Community College Social Science Quarterly*, this past year.

3. *California Educational Computing Consortium.* The expanding use of computers in all phases of education is demonstrated by the CECC. Based in California and only three years old, it has rapidly become the major source of information on computer science, for both the community college and higher education in general. Research and studies of interest to the CECC include computer-assisted instruction, administrative uses in registration and student records, curriculum development in computer sciences, and articulation with secondary and four-year institutions.

4. *Audio-Tutorial Congress.* Attendants at the Third Annual Audio-Tutorial Conference at Purdue University last November, of whom over half were community college instructors, formed this congress to promote audio-tutorial instruction in their colleges. Their special interests are instructional objectives for college courses, self-instructional material, audio-tutorial software and hardware, and the development of "learning mastery" in teaching.

5. *Mountain States Community College Consortium.* Seventeen community colleges in the Rocky Mountain area formed a cooperative union to upgrade their institutions last year. Special areas designated for further study include developmental (remedial) programs, identification and selection of methods for evaluating faculty and administrative work or output, and improved instructional methodology and effectiveness.

These are examples of how community colleges are organizing bases in every segment of their operation to exchange information and identify common problems for which research offers possible solutions. Junior college educators are no longer isolated from the mainstream of the research being conducted in other fields.

Changed Emphasis in Community College Research

Examining the list of projects under way (as reported by AERA/SIG members) shows that research is shifting to such topics as career education from those that merely tabulate student characteristics. A review of the reports in the ERIC collection from the summer of 1969 to the present reveals that about half the listings in *Research in Education* were descriptive studies of students, but only seven of the forty-five responses from AERA/SIG members named current studies of this nature.

Similarly, studies on curriculum development and instruction have been radically reduced. About 40 per cent of the studies from 1969 to the present were on some aspect of curriculum development, but the survey of current research projects revealed only four of them. Researchers are concentrating on specific areas of curriculum rather than on development in general in an attempt to create models that can be immediately replicated.

Practitioners throughout the country are now interested in career education programs, indicating how important they are to the U.S. Commissioner of Education. Twenty-five per cent of the proposed studies were on this subject, and reading projects and a number of other curriculum studies were indirectly related to it. Also related are the community surveys to determine the current educational needs of different parts of the community. Special solutions are sought for rural, urban, senior citizens', and women's needs.

Community surveys on accountability are also being conducted to determine the relative importance of the educational programs to the community and to the institution itself. Other studies projected for this year on teacher preparation and in-service training (five were reported) also take note of accountability. Several deal with the effectiveness of certain teaching methods, particularly the new teacher preparation programs with a greater emphasis on student learning than

on traditional teaching styles.

A surprising number of studies are being done on community college administration, e.g., accountability and alternative structures of organization. Among other notable projects now under way is a special one on "middle management" in the community college, the level that has been known traditionally as the "department" or "divisional" chairman. Four recent regional conferences on divisional chairmen led to a Clearinghouse study on middle management that examines alternate models of organization, teacher evaluation, compensation, and the development of a handbook for division chairmen.

While educators have always been interested in educational organization, it is a relatively new idea for community college educators to undertake an analysis of their institutional structure. Until six months ago, few such studies were conducted, but recently a number have been started. This may indicate that administrative organization has become a major interest of both faculty and administration, an interest given impetus perhaps by learning and fiscal accountability studies. Furthermore, national implementation of the Program Planning Budget System (PPBS) (the state of California has made it mandatory in public schools) has triggered a number of studies on its use in the community college. Attempting to measure learning and to relate its effectiveness to finances is extremely difficult, but it is one of the new information needs of the community college. The relationship is being studied by the League for Innovation in the Community College. Related studies include projects on cost analysis and behavior objectives, student-faculty ratios, and space use.

Another study that is under way, by John Lombardi of the Clearinghouse staff, is on the financial crisis in the community colleges. It deals primarily with alternate models of junior college financing. Several models are being examined and will be suggested as possible solutions to funding problems.

These are examples of the prime subjects of community college research today. The Clearinghouse is working closely with a number of organizations to determine their current research needs and to assist them in developing alternate models for immediate implementation. The Clearinghouse, for instance, is currently helping the Council of Community College Boards develop an information system tailored to its special needs. It will concentrate on key decision-making areas and will attempt to identify sources of information (called "meta-information").

Emerging Trends

Discernible trends in the development of institutional research may have far-reaching effects on research in the community college. First, the research has become more than a topic of study within the framework of higher education or education in general. Examples of its "academic acceptance" are the interest shown in the AERA and the establishment of a Special Interest Group in community college research. However, institutional research must still become an integral part of community college operations. Much can be done by interested people in the American Association of Junior Colleges, state and regional community college groups, and other organizations. More emphasis must be placed on the word "institutional" in institutional research; research should be *of* the community college rather than *about* it. Making institutional research truly institutional can be readily accomplished. Practitioners can redefine their purpose and functions so that the data collected in their institutions become the standard for all decision making — in contrast to data collected for a special project. Devising a system of data collection for all phases of the institutional operation would make the input both constant and uniform. This is similar to the suggestion for the creation of an information dean in place of the institutional researcher.

A second trend in institutional research is the emphasis on applied research. The increase in the number of research projects on real problems reported by AERA/SIG members (and the increased demands by practitioners for them) may presage a major change of goal for institutional research. It may well become "user-oriented" rather than "producer-oriented."

A third development in institutional research is the growing demand, expressed by both organizations and individual practitioners, for information rather than research studies *per se*, that is, information needed *in* the community college as contrasted to that *on* the community college. Both kinds of data may be used for decision making, but demand for the former has been increasing. Research that results in a usable model and research that analyzes existing procedures to make them more effective and efficient are sought today.

Finally, institutional research (and research in general) seems to have become more sensitive to the demands of the community and legislative agencies, as shown by the amount of research on career education and accountability. The interest in accountability may have positive effects on research, insofar as information on the institution is now a necessity, rather than a tired exercise. Consequently, the suggestion for an "Information Dean" is less far-fetched than it seems.

It is a welcome relief to see that institutional research is undergoing changes in approach, emphasis, and purpose. Fortunately, many doubtful practices have not yet become embedded in the operation of a community college, for, if this were the case, changes would be difficult or even impossible.

It was noted above that institutional research should be *of* the institution, rather than *about* it. Literature on this activity is generally only about the superficial occurrences in community colleges. As a departure from this cursory approach, the ERIC Clearinghouse has collected nine essays from practitioners who deal with the day-to-day problems of institutional research. Their insights into the operation of an office of institutional research have been published as Topical Paper No. 30, "The Practitioner Views Institutional Research." It will be released as a companion to this issue of the *Junior College Research Review*.

Being the first of its kind, this publication has considerable significance for community college research — it is written for practitioners by practitioners about their own work. Whatever might be said about how institutional research should be organized and operated, these papers tell how it is *actually* done amid all the restrictions and problems found in an institutional framework.

Areas in institutional research that require change need identification and critical examination. One may marvel, however, at the amount of work that is actually accomplished by the practitioners. The will and ability exist; the great lack is administrators with the foresight to use institutional research for their decision making.

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MORATORIUM ON NEW JUNIOR COLLEGES

Despite tremendous enrollment increases during the post-World War II period and despite the predictions of a continuing upward trend, a few educators have been brash enough to question the belief that enrollments will keep going up indefinitely. In 1969, when most educators were proclaiming the need for more community colleges, a little-noticed report, *We Believe*, issued by the Arizona State Board of Directors for Junior Colleges, advocated a moratorium. Based on its eight years' experience as a Board, on a special study of the status of community colleges by Marsden B. Stokes, Director of the Bureau of Educational Research and Services at the University of Arizona, and on a subsequent State Board Workshop in 1968, the Board announced that, since its "concern at this time is over-saturation rather than insufficient provisions" for the enrollments of the next decade, "we believe that a moratorium of not less than five years should transpire after 1969 before additional junior college districts are established." The report suggested that "it seems wise to allow time to observe the effects that the three new college districts will have on the educational needs in Arizona" (3:11-12).

This view had and still has few adherents among the community college educators, their professional state associations, the American Association of Junior Colleges, and particularly the Carnegie Commission on Higher Education and the federal government. Instead of a moratorium, they advocate creating more colleges, pointing to the constantly expanding enrollment statistics caused by population growth, a larger proportion of high school graduates going to college, and the diversion of freshmen from senior institutions because of cutbacks and closings. In its series of reports, the Carnegie Commission keeps stressing the need for more community colleges. In June 1970 it estimated that by 1980, 230 to 280 colleges should be established if the goal of a "community college within commuting distance of every potential student is to be achieved" (6:35). [In a later report, 1971, the range was 175 to 235 (15:70)]. The Commission did add: "Caution seems especially appropriate in view of the fact that entirely new types of educational experience beyond high school may develop in the future, attracting some of the students who might otherwise enroll in community colleges" (6:35), but this caution was ignored by the press as well as by the educators. The recommendations for expansion had a positiveness that few questioned. The Commission believes that other factors will counteract the effects of the demographic trends that point to a decrease in the 18-21-year age group by 1980.

In a 1968 Special Report stressing "budget-tightening measures reminiscent of those taken in days of the Great Depression," the editors, reflecting the views of 500 college and university presidents, wrote as if the enrollment trends of the fifties and early sixties would continue indefinitely. No caution or doubt appeared in any of the numerous quotations predicting that the colleges and universities would have to serve even more millions in the years ahead (10).

In the face of these pronouncements and predictions, a moratorium may seem unrealistic. For some states and for some communities, this may be true. They will have to open new colleges if open access to higher education is to become a reality, as the Carnegie Commission points out. However, while a moratorium may be unpopular in many states, it makes sense in light of population projections, the percentage of high school graduates entering college, and the declining rate of enrollment increase in the elementary and secondary schools. It is unlikely that these demographic effects on enrollment will be offset by enrollments of adults as suggested by the Carnegie Commission (6:35) and others.

Recently, Chancellor Allan Cartter of New York University called attention to population projections that support those favoring a moratorium on new colleges and new buildings on existing campuses. In his analysis of population trends, Cartter points out that the 18-21-year age group, after rising until 1975, will shrink by more than 2.75 million in 1988 and, by 1980, the percentage of high school graduates entering college will reach saturation (7:5). Thereafter, "there will be an absolute decline in the number of eligible students" (8:9).

Cartter also points out (as do some community college educators) that the rate of enrollment increase is slowing down. He notes that, as the percentage of high school graduates going to college approaches 80, the rate will reach its maximum — sometime in the early 1980s (8:9).

Community college educators across the country were shaken by the disappointing fall 1971 enrollments. The contrast between the headlines of 1970 and 1971 reflects the disappointment and surprise. The caption of a 1970 California Junior College Association *CJCA News* feature article, "J.C. Enrollment—It Just Keeps Climbing" (4a:1), was matched by *School and Society's* "Junior colleges steal the show in enrollments—increases up to 17 per cent" (21:125). The 1971 headlines: "Enrollment Stalls" (18c), "Enrollment Slowdown: Here's Why" (4c:1), "College Sign-Ups Sag" (4c:5)* reveal that an awakening to the demographic realities is taking place among community college educators, just as it had a year or so earlier among graduate school educators.

In California, Michigan, Illinois — three of the largest junior college states—the slowdown caused anxiety. A Michigan college president told his administrative council that the "projected FYES (fiscal year equated students) will be below our estimates and this will, of course, affect our state aid" (20). One month later he advised his cabinet that, in the light of

*Quoting a headline from the *Redwood City Tribune*

IMPORTANT NOTICE TO OUR READERS

Beginning in September, the JCRR will be incorporated into a new special junior college edition of *Change* magazine. Please turn to page 4 for details on the new subscription procedure.

the 1971 Student Enrollment Report, "enrollment projections for next year should be reduced." He added, "there are many variables to consider, but the days of annual student enrollment expansion seems to be a thing of the past" (19:4). A similar note was struck by a California writer of the lead article in *CJCA News*, who wrote, "whatever the reasons [for the enrollment sag] the phenomenon is here." In the same article a Skyline College administrator stated: "It's clear we're turning some kind of corner. It will be interesting to see what it is" (4c:8).

More than two-thirds of the 30 northern California presidents reported "either a decline in actual enrollment or falling short of estimates" (4c:3). Cited were the experiences of: Fresno City College, which projected an enrollment of 8,300 and registered 7,800; San Diego Mesa College, where students enrolled in 109,000 weekly student contact hours versus 115,000 in the fall 1970 semester; San Mateo Junior College District (3 colleges), which anticipated 13,900 but enrolled only 13,107; Los Rio Junior College District (3 colleges), which had a 5% increase instead of a predicted 10%. No less embarrassing than the experiences of California colleges are those of "The Iowa Lakes Community College, [which] underwent a severe crisis when it came up 200 students and $160,000 short of expectations," and of Worthington State Junior College in Minnesota, which also lost students (1:6).

The California experience was particularly embarrassing to the educators, since they had predicted that "an unprecedented rise in enrollment awaits the opening of the fall 1971 school year for California's vast junior college system." The 95 public and private colleges were expected to register close to 850,000 students — 232,000 full time and 510,000 part time. The *CJCA News* writer of the box item "Enrollment Swells" added the glowing observation: "The growth rate of the world's largest single collection of higher education institutions continues to exceed even the most expert of estimates" (4b:8).

Of the 46 Illinois colleges, 27 enrolled fewer full-time student equivalents than they had projected. For a few colleges the discrepancy approached 20 to 25%. For the state as a whole the actual FTE enrollment was down slightly more than 5% from the college projections. The headcount exceeded the projections 187,401 to 183,986, for a gain of just above 2%. The projections and actual enrollments of seven of these colleges are listed in Table A below. The last line is the total for the 46 colleges.

TABLE A

Name of College	College Projections FTE Student	Actual Enrollment FTE Student
Du Page	7,254	5,780
Triton	5,973	5,843
Illinois Central	4,874	4,641
Parkland	3,063	2,686
Illinois Valley	2,239	1,940
Highland	1,018	976
Shawnee	934	692
46 Colleges	111,972	106,280

The 1971 FTE enrollment is still 11,663 larger than the 1970 enrollment; but as can be seen from Table B, the rate of growth slipped from 19.6% in 1970 to 12.3% in 1971. The headcount rate of growth also declined from 14.8 to 10.4%.

TABLE B

	FTE Enrollment	% of growth over previous year	Headcount	% of growth over previous year
Fall 1969	79,676		147,882	
Fall 1970	94,617	19.6	169,691	14.8
Fall 1971	106,280	12.3	187,401	10.4
(13:1) (14:5)*				

*Sources for FTE data for 1969 and 1970.

As Cartter observed of graduate school educators, community college educators have also shown an "unwillingness to view objectively either the present or the future" (8:3), acting "like amateur forecasters" who believe "the best forecast for tomorrow" will be "an exact duplicate of today (8:4); thus, while college enrollments are rapidly expanding, [they] acted as though this rate of growth would continue unabated" (8:3-4). This explains why most community college educators do not analyze their own statistics, which show clearly that the rate of yearly increase, after rising to 25.1% in 1965, has since fluctuated between 18.5 and 13.3% (2:8). In 1971 public two-year college enrollment increased by 7.8% over 1970. Assuming that the 1971 figures are comparable to the AAJC tabulations (which may be a doubtful assumption), the declining rate of growth continues (9:1). A leveling of the rate of increase in student headcount enrollment was noted in Illinois in the fall of 1969 (12:2). Enrollments in the California elementary and secondary schools have shown either an absolute decline or a markedly reduced rate of increase. Including junior colleges, the rate of growth of average daily attendance fell from 6.54 in 1959-60 to 1.53 in 1968-69, dropping in seven of the ten years (5:74). The declining high school enrollments of the past two or three years should have been a warning to community college administrators, but most of them ignored these signs. It is not surprising that the failure to record spectacular increases in the fall of 1971 embarrassed many of them who had prepared budgets based on the predicted growth rate.

In their assessment of the downtrend in the rate of increase, educators cite many causes for the disappointing results of 1971. The most obvious and the best-documented cause is the decline in elementary and secondary school enrollments, the major source of their students. The huge Los Angeles Unified District experienced a drop of 13,000 instead of a projected increase of 18,000. In percentage, the decline was only 1.7, but it was the third consecutive year of decreases. For the state a similar trend had been observed, first in the elementary, and then in the secondary enrollment (18c). In the rural, farm, and many urban areas, population is declining, while in the newer suburban areas the rate of increase is slowing down (1:7).

The other causes are not as directly related as the first. Because of liberal deferment policies for students, college has been a haven for draftable young persons. With the change in the draft laws, draft deferment for attending college no longer seems assured. At the same time, with the withdrawal from Vietnam, the draft is not as serious a threat to students as formerly. The registrar of Skyline College (San Mateo District) believes "one of the big reasons [for the decline] seems to be that travel is becoming an alternative to going to college. There were five times as many students on the road this summer as compared to the past" (4c:3).

Still other causes are related to the rising costs of attending community colleges. Contrary to popular impression, most community colleges charge tuition and nearly all of them impose fees of various kinds. The rise in these costs has been gradual but steady. When jobs were readily available, students managed to pay or borrow the money to stay in college. Since the recession of 1969, jobs have become scarce, forcing some students to drop out of college for lack of money and causing others who have jobs to hold on to them, thereby delaying their entrance to college. Some areas were particularly hard hit by the recession when major industries closed plants (1:6-7).

Conclusion

Is today's decline a temporary phenomenon? Based on the latest studies on population, the answer "no" has a high probability of proving accurate. Two studies are particularly pertinent and confirm Cartter's analysis of population trends. In early September 1971, the Washington Center for Metropolitan Studies reported 15.5% fewer children under five years of age in 1970 than in 1960. More remarkable is that

the decrease occurred at the same time that the number of child-bearing couples in the 15-34-year age bracket increased by 29% and those in the 20-24-year age group went up by 52% (18a). A week later the Department of Health, Education, and Welfare reported (for the first six months of 1971) 17,000 fewer births than during the same period of 1970 (18b). Both these reports confirm Cartter's analysis of the population trends. In December 1970 he reported the under-five . . pulation was 13% below its 1965 level (8:9). Although Washington Center report cautions that "it is possible that generation just being born will decide to have babies at a considerably more rapid rate than today's young adults," it considers a zero population growth in this century a "distinct possibility" (18a).

Those educators who have had to make budgetary adjustments resulting from over-projections of enrollments will follow the cautiousnes of the president of Macomb County Community College and the Skyline College administrator quoted earlier. Those who did not suffer a decline may do well to study the population statistics and elementary and secondary school enrollments before making projections for the next five years. Most of the experts studying population and school attendance trends agree that they are national rather than regional or local phenomena. The complacency and comfort of the past 15 years will be replaced by concern and pain. If the concern and pain lead to the "reassessment of our educational goals," then a revitalization of community college education becomes a socially beneficial corrective (7:6).

A moratorium on new buildings is even more urgent than one on new colleges. The slowdown in enrollment, if sustained, will find many colleges with much more unused capacity than they now have. A common practice in many community colleges, as in most institutions of higher education, is to have high utilization in the morning hours and low in the afternoon. An example that can be multiplied throughout the country comes from a candid report of a Michigan president who pointed out to his faculty that classroom use at the college was 61% for the 8 to 12 o'clock hours and 28% from 1 to 4. Then he commented that the statistics "show dramatically to the layman that we have space to spare, and he'll never be convinced that, before we can fill it, we'll need 4,000 more students and 100 more faculty members" (11: App. 5). The layman may also wonder why the college planned for such a large enrollment. Mrs. Marian La Follette, president of the Board of Trustees, warned the administrators that taxpayers regard sparsely populated classrooms and unused facilities as major contributions to the financial crisis (17).

A moratorium will force educators to improve the use of classroom space. Improved planning of facilities will help in reducing the need for capital-outlay funds for new buildings and even new campuses. Also, fewer buildings ensure lower maintenance costs. Restricting the number of teaching stations will force administrators, faculty, and students to use the facilities at full capacity from morning until late afternoon. During the financial crisis, it is a luxury for classrooms to be idle during the afternoon hours, but as long as colleges are overbuilt, classes will be concentrated during the morning hours. As the practice continues, changing it will become increasingly difficult.

Effective use comes dramatically when enrollment increases beyond expectations. At Longview College in Kansas City (Missouri), where enrollment increased 47.2%, "the percentage of possible day-time use based on a forty-hour week for general classrooms increased from 53.1% in the first semester 1969-1970 to 79.1% during the first semester 1970-1971" (16:10).

To maintain this high degree of use will require considerable restraint on educational planning for the future. If Longview educators follow expansionist views, it will not be too difficult to predict that utilization of their new buildings will revert to the pre-1969 rate.

In the light of the September 1971 experiences of many colleges, the call for a moratorium by the Arizona State Board of Directors for Junior Colleges may prove to be one of the most prophetic statements made by a community college group. It must have taken a good deal of courage to make public such a pronouncement, when nearly every educator and educational group had been and is still predicting unlimited expansion.

Even if this 1971 enrollment experience should prove to be a temporary phenomenon, caution is still advisable. It is unlikely that the population trends will be reversed or that the great expansion of the sixties will be repeated (18d). Administrators will serve their communities and help resolve the financial crisis by restraint in constructing new colleges or adding new buildings to campuses.

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FROM HIGH SCHOOL TO COMMUNITY COLLEGE— A VITAL LINK IN THE ARTICULATION PROCESS

From a community college perspective, articulation is usually viewed only as an upward movement to senior college. The importance of communication with high schools is often slighted or completely overlooked. Partially because of student motivation to transfer to the next highest educational level, community colleges are prone to concentrate on the process of sending students to senior colleges and neglect their responsibilities as receiving institutions. As the intermediate unit in the transfer process, the community college must remain alert to the importance of maintaining close ties down the educational ladder as well as up it. The community college should expect no better treatment from universities than it is willing to extend to high schools.

Administrative reorganization of the two-year college is a complicating factor. Common administrative ties characteristic of the K-14 district, which in the past bound a high school and a junior college in a district, have now practically disappeared. Independent of the other, each is apt to pursue its own role. At the same time, however, high schools continue to exert great influence on development of the community college curriculum. Such influence is probably stronger than that of senior colleges and universities. For that reason alone, if not for the benefit of students, both secondary schools and two-year colleges share equally in the responsibility of building and maintaining a team relationship.

Difficulties of downward articulation are increased in states where two-year colleges have an open-door policy. Under this philosophy increasing numbers of high school dropouts and university drop-downs are allowed to seek second opportunities. Special programs for the disadvantaged and handicapped are further complicating factors, as these two groups of students are particularly vulnerable to breakdowns in articulation. The "open door" can become a "revolving door" for the disadvantaged.

Adult education presents additional communication difficulties. Programs for adults in many states may be maintained either by high school districts, by community college districts, or by both, thereby increasing competition and diminishing communication.

Communication between community colleges and high schools becomes especially critical in overlapping programs where high school enrollees are also part-time community college students. Passage of the Veysey Bill in California has enabled up to 15 per cent of the state's eleventh and twelfth grade students to attend community college classes. Success reported in these arrangements (2) has been largely due to cooperative efforts, particularly between high school and college counseling divisions.

Counseling is the heart of the process. Counseling offices are critically linked in a successful articulation relationship. Several techniques to coordinate counseling programs have recently been reported. High school counselors at Miami-Dade Junior College in Florida are hired part time by the college to identify high school students and adults who might benefit from work taken at the college. Certain high school counselors are given intensive in-service training and placed in a number of Dade County public high schools for evening and weekend service. Junior college students are trained as counseling aides and are employed to assist regular counselors at high schools from which they were graduated. The program continues to be most successful in student services and has provided a communication link between high school and junior college counseling staffs (5).

While only meagre information is available on programs and activities—both formal and informal—to improve articulation downward from the community college, scattered reports have been received from several states.

CALIFORNIA An important method of building downward articulation is practiced at Pasadena City College, where certified credentialed high school counselors are hired for evening employment at the college when registration activity is heaviest. They are highly motivated to become quickly familiar with college admissions and counseling policies and procedures so as to be an authoritative source of information at their local high schools (1).

A similar program is maintained at City College of San

NOTICE TO OUR READERS

This issue is the last to be published by the American Association of Junior Colleges. Beginning in September, the ERIC *Junior College Research Review* will be carried in *Change* magazine (please turn to page 4 for details).

We at the Clearinghouse appreciate AAJC's involvement with the *Review* over the past five years. And, although this joint publication arrangement is terminating, the Clearinghouse and the Association will continue working together in other ways to provide information to people interested in community and junior colleges.

Our thanks to Roger Yarrington and his staff for their cooperation during these years of the *Review*. It's been a pleasure!

Francisco. Operating under a specially funded summer project since 1967, high school students and teacher-counselors are brought to the college. Students are enrolled in regular college courses and helped to select realistic occupational objectives. Teacher-counselors participate in special workshops designed to improve techniques of vocational guidance and to orient them to city college semi-professional and trade programs (4).

Six other approaches to improving downward articulation at Pasadena City College are outlined by Lewis:

1. High School Concurrent Enrollments

Advanced academic or vocational students from the high schools, juniors and seniors, may enroll concurrently at the College for one or two classes. This has been an excellent means of articulation for course content and also for improving communication between the high schools and the College.

2. Newsletter

Four times a year a newsletter giving admissions and instruction information is circulated to all the district high schools. Some schools ask for sufficient copies to place one in each homeroom or guidance room. This has proved to be an excellent means of communication.

3. Subject Area Conferences

A productive articulation device for the junior high school, senior high school, and junior college is the Subject Area Conference. At Pasadena City College, departments have sponsored conferences in their subject areas, inviting teachers from neighboring junior and senior high schools to confer with the College faculty.

4. High School Advisory Committee

A high school advisory committee meets twice a year with the College Administrative Dean for Student Personnel Services. The Committee, consisting of the Assistant Principal for Guidance or the Guidance Coordinator from each of nine public and four private high schools in the Pasadena Area Junior College District, considers all matters related to improved admissions and counseling procedures.

5. Visits to High Schools

Each Pasadena City College counselor has specific high schools to which he is responsible for regular visits to improve the flow of information. All counselors go out on specified days or evenings at the invitation of the high schools. Upon invitation, counselors, plus a significant number of department chairmen and faculty, provide a total "PCC Night" at a high school with a presentation of the curriculum available at the College.

6. Area Superintendent Conference

The College president regularly schedules meetings of the six unified school district superintendents. Matters of common interest are discussed, including instructional programs, use of the planetarium or computer science facilities, the calendar, and related matters (1).

Specific opportunities for communication between high school and community college representatives are provided by the California Articulation Conference. This organization (described more fully in another section of the chapter) meets each May to review relationships among all segments of higher education and secondary schools. High school and community college delegates meet twice during the two-day conference to hear progress reports and to work out solutions to complaints. While most of the conference work is done by subject matter and service area liaison committees, communication at the intersegmental meetings is direct and pertinent.

COLORADO Articulation activity between community colleges and high schools is coordinaed by the Colorado Council on High School-College Relations. The Council is composed of members from secondary schools, community colleges, senior colleges, and universities. A counselor handbook is published annually by the Council.

FLORIDA Most community colleges work closely with the high schools in their own district. Seniors are encouraged to visit community college campuses; and arrangements are made in several community colleges for seniors to begin their college work while still in high school. Counselors are employed for summer work in the community colleges; and occupational information is made available to students in the middle schools and both junior high and senior high schools.*

NEW YORK Full Opportunity Programs operated by community colleges guarantee to every recent high school graduate and to every veteran released during the preceding year (who is a resident of the sponsorship area) admission to a full-time program geared to the individual's interest and achievement level. Part of the Full Opportunity Program requires that individual colleges submit plans that show articulation efforts with high schools. Some colleges have developed agreements with cooperating high schools allowing students to attend both college and high school and to receive college credit before completing high school.

Under a unique program of "urban centers and cooperative community college centers" developed in New York, students satisfactorily completing urban center-college adapter programs move directly into regular associate-degree programs at the supervising college.†

WASHINGTON In the state of Washington, community colleges submit reports at regular intervals to the State Board for Community Colleges on high school relations activities.

The reports describe a wide range of activities and programs designed to establish communication and improve relations with surrounding high schools. Several of the more innovative ideas reflect an apparent statewide recognition that a successful program of high school articulation is the life-blood of the community college:

1. Yakima Valley College has an agreement with some local schools for off-campus employment of college students.
2. Shoreline Community College conducts Oceanography and Marine Biology Institutes for elementary and junior high school teachers.
3. A team of Wenatchee Valley College representatives travels to high schools to meet with incoming students and their parents.
4. Bellevue Community College provides direct services to high school students with learning problems who would benefit from assistance from the college's Development Learning Center.
5. Spokane Community College's "three-six program" provides opportunities for students from four large high schools to take five occupational classes between 3:00 and 6:00 p.m. at the college.

Occupational education offers special opportunities for strengthening community college-high school relations. Career programs (the currently favored term) commonly offered by local schools and nearby community colleges alike can become natural communication links.

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* Correspondence with: James L. Wattenbarger, Director, Institute of Higher Education, University of Florida.

† Correspondence with: S. V. Martorana, Vice-Chancellor and Executive Dean of Two-Year Colleges, State University of New York.

An action program under way in the Los Angeles Community College District gives emphasis to improving articulation in career courses offered by the 73 high schools and the eight community colleges of the district. Development of a model system for articulating college, secondary, and community resources concerned with occupational education is the primary goal. As one of the major outcomes, the Area Articulation Committee hopes to provide students with opportunities to continue career programs on a sequential learning basis at the community colleges without time loss or course repetition. Success of the plan will depend largely on how well communication is established and maintained among the representatives of high schools, community and four-year colleges, government agencies, and community resource groups (3).

Universities maintaining offices of school services or school relations help in various ways to improve high school-community college articulation. The bulletins they issue serve as clearinghouses for high school-community college conferences, often sponsored and held on the university campus. These publications carry relevant articles on articulation. A few examples are:

California Notes, a monthly newsletter to Schools and Colleges from the Office of Relations with Schools, University of California.

Newsletter, published monthly by the Office of Community College Affairs, University of Iowa.

Letter to Schools, published bi-monthly by the University of Michigan Bureau of School Services.

Higher Education in North Carolina, a newsletter from the Board of Higher Education.

Hi U, a monthly newsletter for high school counselors, teachers, and administrators, published by the Offices of High School Relations, University of Wisconsin.

Responsibility for improving the articulation process also rests with the high school. Publication and distribution of a college handbook is a technique frequently used to encourage student planning. It is one of the best methods for maintaining communication with surrounding community colleges. "Thinking About College: Some Basic Considerations for Student and Parent" is a publication developed by the Mt. Diablo Unified School District, California. It includes an introduction to area community colleges and their offerings. Handbooks of this type are rich sources of current information for school counselors who play a key role in influencing student vocational choices.‡

Regional accrediting agencies, too, have a stake in community college articulation with high schools. In its "Self-Study Outline for Two-Year Institutions," the New England Association of Colleges and Secondary Schools, Inc. requires answers to the questions:

In what ways, if any, does your institution cooperate with other institutions or groups of institutions in educational offerings?

In other areas?

Are arrangements of this type contemplated in the future?

Both the Southern and Middle States Associations maintain standing committees on school/college relations.

Secondary school administrators are required by the Accrediting Commission for Secondary Schools of the Western Association to attach to accreditation applications descriptions of the provisions for continuity of student progress through articulation with feeder schools and with schools receiving their graduates. The Community College Commission expresses its concern with and bases questions on the following assumptions, which are called basic elements of community college-high school articulation:

1. High school students and even elementary pupils are familiar with the educational opportunities and community services of the community college.
2. The high school and community college faculties are in close communication, and are working together in curriculum and instruction to meet student needs.
3. The high school and community college student personnel staffs have a close working association to make the transfer of students "easy and comfortable."
4. The community college and the high schools work cooperatively to provide assistance for disadvantaged or minority race students and programs for educationally alienated people of all ages.
5. The community college has information about the economic, educational, and social characteristics of the area in order to understand the nature of the people it serves.

Accrediting agencies, in varying degrees, exert a powerful influence on improving articulation. Since recognition through full membership in a regional agency is invariably a cherished institutional goal, the agency holds the whip hand. The self-studies required periodically are strong incentives promoting comprehensive self-evaluations and total institutional involvement. Those institutions following to the letter the recommendations of their regional accrediting agency will ameliorate intra-institutional communication and advance the effectiveness of the articulation process.

Articulation in education is definitely a team process—a series of complex and interlocking formal relationships between schools. As described throughout this paper, articulation is also an attitude. Differences in institutional philosophy are not always identifiable, while individual prejudices are often hard to overcome and invariably indicate a lack of communication. Willingness to compromise extreme positions and to tolerate the views of others is essential if transfer relationships between high schools and community colleges are to succeed.

Frederick C. Kintzer
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‡ One of the most complete handbooks for students, parents, and counselors is issued by the Oregon-Washington Commission on *Mapping Your Education* through Abbott, Kerns and Bell Company of Portland.

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