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ABSTRACT

Seven problem areas where research is needed critically at the two-year institution level are identified: (1) establish reliability and stability of MIS/data base; (2) find reliable predictive instruments and/or formulae; (3) analyze support services and academic assistance objectives; (4) develop research methods to evaluate curricula; (5) investigate special problems of instructing adult populations; (6) develop concepts, tools and methods for tracking student progress through and beyond institutional programs; and (7) define, assess and use concepts and measurement of community needs for college educational services. Sub-categories of problems within each area are also articulated. (For related document, see JC 740 034.) (KM)

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INSTITUTIONAL RESEARCH NEEDS FOR
U.S. COMMUNITY COLLEGES

A report from the National Dissemination
Project for Post-Secondary Education

November, 1973

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INTRODUCTION

Educational research has long been the province of the major universities, and university-oriented research institutions. This tradition has had a significant bearing on the kinds of problems which have been investigated, and the ways in which research has been conducted. The problems have been those which appeal to university-oriented concerns, with a pronounced bias towards theoretical and esoteric questions; methods of research into education, too, have relied on analytical techniques, often more suited to the laboratory or the classroom.

The rise and rapid growth of the community college movement, however, has focussed attention on problems of a different kind, also requiring the attention of researchers and analysts. These are the problems that exist, not in the laboratory, but the real world; problems that have to be solved by institutions at the nexus of social transformation, in order to achieve their institutional goals.

A proper relationship between "basic" and "applied" research might be expected to address this concern. In practice, however, there does not seem to be enough "basic" research activity in those areas which are critical to community college needs; if there is, the information is not readily available to community college

researchers. This is not just a problem of dissemination; in many cases, the critical area of "developmental" research, as the necessary activity to transform "basic" findings into "applied" tools, has been under-financed and neglected.

To re-direct research activities along the lines necessary for community colleges requires leadership, imagination and courage at the Federal level. It is therefore incumbent on agencies such as NIE, HEW, the Office of Education, and others involved in educational research to examine the needs of community colleges, to see how long-range policies and guidelines can be best formulated.

The National Dissemination Project for Post-Secondary Education has been surveying U.S. community colleges since July, 1972 on the kinds of research assistance they need to fulfil their institutional missions. In this paper, we have attempted to identify those problems where research support is critically needed at the 2-year level, in the hope that this will help NIE and other Federal agencies in meeting these needs.

AN INSTITUTIONAL APPROACH

There is, of course, no such thing as a "typical" institution at the 2-year college level. Needs for information based on research vary greatly across the country, as another report by the National Dissemination Project shows*; even in the same region, institutional needs can vary according to location, size, mission, structure, and community characteristics.

Nevertheless, research needs for 2-year colleges do need to be examined from an "institutional" point of view. Our experience indicates that institutionalized research has the best potential for ultimate use in determining operational objectives; and, further, this kind of research is therefore most likely to be based on assessment of research needs. We do not wish to discount the value of research conducted under the auspices of individuals or autonomous divisions. However, without institutional sponsorship or commitment, results of such research are far less likely to be utilized in the contexts where they are obtained. Given the criterion of "utilization," this is a serious drawback.

What follows is a listing of typical research needs for a 2-year institution, as collated by researchers. The list claims to be "representative," in the sense that we believe they exist to different degrees in all or most 2-year colleges. Their priority order may vary enormously between institutions; in some cases, progress in some areas may be necessary for needs in other areas to be felt. However, from a national point of view, most major

areas where research is needed at the 2-year level are covered by the list.

THE MAJOR AREAS

The following major areas of needed research for 2-year colleges are expressed as problem statements, where results should help to define acceptable answers. Some special problems existing within each area are sub-categorized, as questions arising under major headings.

PROBLEM A--ESTABLISH RELIABILITY AND STABILITY OF MIS/DATA BASE.

- A.1 What are best ways to classify and define different kinds of "students"?
- A.2 What are best methods for operational (i.e. on-going) collection of data?
- A.3 What improvements can be made to process and store different kinds of "needed" data?
- A.4 What can be done with "unneeded" data? How can redundancies and irrelevancies be identified and eliminated?

PROBLEM B--FIND RELIABLE PREDICTIVE INSTRUMENTS AND/OR FORMULAE.

- B.1 What kind of regression or stochastic relationships will project "full-time equivalencies" from available data?
- B.2 What tools will reliably project student assessment in a manner that is consistent with career placement?
- B.3 How can we measure student success in job-placement terms?
- B.4 How can diagnostic instruments be used to assist student career (not vocational) choices?

PROBLEM C--ANALYZE SUPPORT SERVICES AND ACADEMIC ASSISTANCE OBJECTIVES.

- C.1 How can one (a) define, (b) measure, (c) evaluate the effects of guidance on student performance?
- C.2 Same as C.1, but related to academic tutoring.

PROBLEM D--DEVELOP RESEARCH METHODS TO EVALUATE CURRICULA.

- D.1 How can reliability indices be developed to match student learning to (a) textual "knowledge", (b) learning "objectives"?
- D.2 What methods can be used to verify "culture fairness" in curriculum materials?
- D.3 What research methods can be developed to plan, monitor and evaluate multi-media learning?
- D.4 What heuristic designs for strategies in instruction can be used with cognitive modes, and their mapping?

PROBLEM E--INVESTIGATE SPECIAL PROBLEMS OF INSTRUCTING ADULT* POPULATIONS.

- E.1 What are the effects of varying class size on teaching of adults (as opposed to non-adult students)?
- E.2 What are the effects of prior work or experience gained by adults, on their learning performance?
- E.3 What is the optimal mix of learning modes for adults? Does such an optimal mix reflect a greater "time-span of discretion" for adults as opposed to non-adults?

PROBLEM F--DEVELOP CONCEPTS, TOOLS AND METHODS FOR TRACKING STUDENT PROGRESS THROUGH AND BEYOND INSTITUTIONAL PROGRAMS.

- F.1 What is a "satisfactory rate of progress"? What are its parameters? How do they vary by (i) type of program (ii) type of student (iii) type of career goal?

* A similar set of research questions can be applied to other "special" students whose learning characteristics are assumed to be different from the norm.

- F.2 What instruments can be developed to measure student progress uniformly from point of institutional entry to program termination? What research will "validate" experimental instruments in this area?
- F.3 How can one define, isolate and measure "attrition," or drop-outs? How does the academic performance of the "temporary drop-out" (or "returning" student) compare with his peers who continued in school? What is the relationship between length of "interrupted" study and subsequent academic performance?
- F.4 What are best methods and instruments for "follow-up," i.e. identifying student progress beyond completion of institutional objectives?

PROBLEM G--DEFINE, ASSESS AND USE CONCEPTS AND MEASUREMENT OF
COMMUNITY NEEDS FOR COLLEGE EDUCATIONAL SERVICES.

- G.1 How can high school cohort analyses be conducted to predict future enrollment needs by program or institution?
- G.2 How can long-range forecasting of occupational training needs be conducted and used for planning institutional programs?
- G.3 How can student demand for educational services be (a) defined, (b) measured, (c) analysed at the programmatic level?
- G.4 What are ways of quantifying and assessing the "social utility function" of community college offerings?

UNIVERSITY OF CALIF.
LOS ANGELES

JAN 31 1974

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CONCLUDING REMARKS

Our listing of research needs for 2-year colleges has avoided analysis in terms of different program areas (e.g. bilingual programs, ethnic studies, etc.) except where this was unavoidable. It is in program areas that the greatest diversity exists between colleges, and general conclusions are difficult. This list is intended to describe the kinds of research activity which would best meet the needs of 2-year colleges; adaptation of these kinds of activity to meet the special needs of identified programs would be necessary when discussing specific institutions.

Our list also assumes the existence of operational programs for institutional development and renewal, so that the results of the research will be effectively utilized. This is clearly not the case in all 2-year institutions; in fact, many community colleges have to go through a "preparatory" period of re-organization to utilize the results of research. Our point is that community colleges are being increasingly faced with the choice of "change or perish"; those colleges which are incapable of responding to the changing world of higher education will find themselves headed, slowly but inexorably, towards extinction. The research that will provide the information crucial to their survival and fulfillment has to be developed today--and we can only hope that methods will then be found to help colleges to obtain research results, and put them to use.