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PERCEPTIONS OF BRAZILIAN EDUCATIONAL
PARTICIPANTS CONCERNING GOALS FOR
HIGHER EDUCATION

presented by

LUIZ R. LIMA

has been accepted towards fulfillment
of the requirements for

_____Ph.D_____ degree in _EDUCATION_

_____
Major professor

Date 7/26/85

PERCEPTIONS OF BRAZILIAN EDUCATIONAL PARTICIPANTS
CONCERNING GOALS FOR HIGHER EDUCATION

By

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A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Educational Administration

1985

ABSTRACT

PERCEPTIONS OF BRAZILIAN EDUCATIONAL PARTICIPANTS
CONCERNING GOALS FOR HIGHER EDUCATION

By

Luiz R. Lima

The purpose of the study was to analyze and describe per-
ceptions of educational participants concerning possible goals and
objectives for higher education. In addition, the larger concern
was to generate a framework for the research with regard to broader
issues of economics of education, sociology, organization, and
administration of higher education.

The investigator conducted an in-country survey at the
Federal University of Paraiba (Brazil), in December 1984. Some
N = 450 questionnaires were distributed to university students
(N = 150), faculty members (N = 150), and administrators (N = 150),
in order to assess their perceptions of what the educational system
actually "is" and their perceptions of what they think it ideally
"should be."

The instrument was based on the Institutional Goals Inven-
tory (IGI) (Peterson, 1970), and Gross and Grambsch (1968) pioneer
works on goals for higher education. The questionnaire contained
two parts. Part one dealt with demographic characteristics of the
respondents. Part two consisted of 36 possible goals for higher
education. For each one of the goal statements appearing in the

questionnaire, the respondents were asked to check the degree of importance for higher educational development on a five point Likert scale. Response choices were as follows: (1) Of no importance; (2) Of low importance; (3) Of medium importance; (4) Of high importance; (5) Of extremely high importance. Of the total questionnaires distributed, some N = 343 were returned (76.22 percent) containing information for analysis. Analysis of Variance (ANOVA) was used to test significant differences of perceptions for all goal statements within total group and subgroup tables. The statistical data obtained from the ANOVA was used to perform the Scheffée test, which is a post-hoc multiple-comparison of means.

In the analysis of actual goals of university education, there is congruence amongst total group as well as each individual group. Ideally more importance should be given to all goals. However, it was observed discrepancy in perceptions concerning priorities of goals by the individual groups. The respondents indicated desire of having the educational system changed to better qualify students with skills and know-how in demand locally. They long for a more participatory democracy. And they call for a reform of the educational system, in their overall perceptions.

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ACKNOWLEDGMENTS

No task of this magnitude could ever be completed independently. There are many people who have directly or indirectly helped in the achievement of this study. In a small way I wish to acknowledge some of those who have given me so much support.

I thank Dr. Ted Ward who served as my first Committee Chairman until prior to his leaving East Lansing. Dr. Ted Ward has provided valuable guidance and suggestions in the early stage of the doctoral program of studies.

I thank Dr. Eldon Nonnamaker for his willingness to serve as my Committee Chairman, for his guidance, and for his constant support.

I thank Dr. Ben Bohnhorst, my Dissertation Director, for his encouragement, patience and understanding, and for his expert advice and direction throughout my sojourn at Michigan State University. Dr. Bohnhorst is a diplomatic, courteous, and unassuming scholar who instills in his students the true desire for learning, research and exploring more.

I thank also the other committee members: Dr. Charles Blackman, Dr. James Buschman, and Dr. Louis Hekhuis, for their assistance.

There are two institutions in this country I owe so much to. The School for International Training and The Experiment in

International Living--the best kept secret in the United States. Indeed, the accomplishment of the doctoral program has its roots in the campus of these two institutions in Brattleboro, Vermont, where I first arrived in January 1968. From there I was introduced to Bates College (Maine) where I earned my Bachelor's degree. After which I returned to the School for International Training to work towards a Master's degree in education.

At these two institutions I wish to express my sincere gratitude to Dr. John Wallace. I am most grateful to his tremendous support and help, and for having paved the way for the attainment of this most important accomplishment.

Still at The Experiment in International Living I wish to acknowledge Tom and Ilene Todd, the Batchelder's, the Fantini's, Mike Jerald, Ray Clark, Pat Moran, Harry Starkey, Russ Ellis, Sam Achzinger, Ed Ellis, Mrs. Gregg, Ann Puyana, Shirley Capron, Julie Soquet, Bobby Williams, Mary Adams, the Burlingham's, Shaun Bennett, Mrs. Wallace, Sara Loessel, and Ed Cassidy, for their friendship.

In Brazil, I thank Professor Antonio Cavalcante Filho, my proxy and colleague for all the hard work performed on my behalf.

A special thanks goes to Darcy Chaves Araujo who kindly allowed me to use his car to travel throughout the State of Paraiba to collect the data.

I thank my sisters and brothers for their prayers and support. I am especially grateful to my sister Nancy Lima, who served as my proxy in the Rio de Janeiro area, being instrumental with financial matters.

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CHAPTER I

THE RESEARCH PROBLEM

Education everywhere is considered to be the vehicle through
which society transmits wisdom and accumulated knowledge from one
generation to another. Education empowers people for membership in
society, actively participating in the maintenance, progress, growth
and development of their countries. In fact, today it is common
practice to measure the worthiness of an individual in terms of his
or her academic achievements. In business, education is considered
to be an investment with consequences in the form of capital. The
rapport between education and productivity has captured the atten-
tion of educators and has become an integral part of economic and
social thought. Education everywhere is considered a form of
investment in human capital which yields economic benefits with
contribution to the future wealth of the nation by increasing the
productive capacity of its people.

In a developing country such as Brazil, education is viewed
not only as a cultural heritage, but also as an economic investment.
Education is utilized as a means of directing society toward desired
goals. Large sums of money and human resources are being invested
in education with the anticipation of better qualifying people to
help in the plight of the country to move from the stage of

underdeveloped society to that of a full-scale economy with high
employment, thus improving the standard of living of its citizens.
In fact, throughout Brazil there is a cry for skilled individuals
to work, operate, manage, and administer factories and those
corporations being installed in the country.

Universities must demonstrate their capacity to adapt to
the nation's research, scientific and professional needs. Although
higher education is being directly charged to train and qualify
individuals responsible for national development, there still per-
sists the old question about which concept is best suited in higher
education--literary or practical. Rather than straightforwardly
providing technical training for their students, universities in
Brazil seem to want to continue gearing curricula to the well-
roundedness of individuals, missing the opportunity to become more
effective institutions in tune with the aspirations of a fast-
developing society, one much in need of individuals with competence
in technical skills. Rapid and effective development of the system
is urgently needed, a market-oriented, more utilitarian system of
higher education which would qualify university students to fulfill
the demands of the high-technology era that has already arrived in
the country. Assessing the needs of higher education in Brazil,
McNeill (1970) states that "the traditional educational system
failed to meet the demands of this rapidly developing country."
Universities must exercise more accountability to the local com-
munity to promote change. As Roeber (1973, page x) asserted:

. . .organizations have been able to adapt themselves
to slow changes in their environments by making small
concessions to pressures, and through the import of
new personnel and the diffusion of new ideas. Through
these unstructured, untutored, and unconscious adap-
tive responses organizations have "tracked" changes
in their environment, much as the rear wheels of a
long trailer track the changes in direction at the
front. But such natural processes are no longer
appropriate when the environment changes rapidly.

Indeed, those in charge of higher education must introduce

processes for managing change that are capable of "defining missions,

setting objectives, allocating resources and coordinating efforts

for the institution" (Corson, 1975, page 18). As Gardner (1964)

suggested:

The true task is to design a society (and institutions)
capable of continuous change, renewal and responsiveness.
We can less and less afford to limit ourselves to
routine repair of breakdowns in our institutions.
Unless we are willing to see a final confrontation
between institutions that refuse to change and critics
bent on destruction, we had better get on with the
business of redesigning our society.

An institution of higher education must respond to the needs

and aspirations of the individual and of the community of which it

is a member. Learning is a hard task in itself, and learning for

the sake of learning is no easier. Carl Rogers (1961, page 292)

once said:

If we value independence, if we are disturbed by the
growing conformity of knowledge, of values, of attitudes
which our present system induces, then we may wish to
set up conditions of learning which make for uniqueness,
for self-direction, and for self-initiated learning.

In today's world, men and women need not only solid educa-

tional foundations, but also lifelong opportunities to adapt, to

renew themselves, and to acquire new knowledge, and, as Freire would say, "to master their own destiny." The development of human resources must not be overlooked by our institutions of higher education.

Statement of the Problem

In a developing country such as Brazil, the educational system has a great responsibility for helping to solve existing social problems, meeting the needs of its people, and assisting in the realization of the potentiality and aspirations of the nation. The university system should be called upon to better develop human resource programs, providing training to workers, and qualifying the labor force with skills necessary to the well functioning of enterprises locating throughout the various regions of the country. Thus, the main focus of the research was to interpret the lifelong educational needs that exist in Brazil, as perceived by university participants.

Purpose of the Research

The purpose of the research was to analyze and describe perceptions of participants in the Brazilian university system with respect to goals and objectives of higher education. The researcher conducted a survey with distribution of N = 450 questionnaires to three distinct groups of Brazilian university students (N = 150), faculty members (N = 150), and administrators (N = 150), in order to assess their perceptions of what the educational system actually "is" and their perceptions of what they think it ideally "should be."

The educational participants selected for responding the questionnaire were representative to some degree of educational outlooks in Brazil today. The degree to which the sample is representative was not tested, so no generalizations can be made with certainty. The researcher wanted to summarize these analysis in order to draw certain initial conclusions in the form of tentative principles, pointing to needed further research on the subject. But this research was intended only as an initial exploratory, descriptive investigation.

In addition to the main thrust of the research which dealt with perceptions about university goals and objectives, the larger concern was to generate a framework for the research with regard to broader issues of economics of education, sociology, organization, and administration of higher education.

Research Questions

The following research questions cover the major concerns of the study. They are based upon the needs assessment format, the result of which will serve as a basis for the final conclusions and recommendations of the research.

(1) How do all respondents (students, faculty members, and administrators), perceive and rank order the possible actual goals of university education?

(2) How do all respondents (students, faculty members, and administrators), perceive and rank order the possible ideal goals of university education?

(3) How do students perceive and rank order the possible actual goals of university education?

(4) How do students perceive and rank order the possible ideal goals of university education?

(5) How do faculty members perceive and rank order the possible actual goals of university education?

(6) How do faculty members perceive and rank order the possible ideal goals of university education?

(7) How do administrators perceive and rank order the possible actual goals of university education?

(8) How do administrators perceive and rank order the possible ideal goals of university education?

(9) What are the differences that exist in the perceptions of students, faculty members, and administrators, concerning the actual goals of unviersity education?

(10) What are the differences that exist in the perceptions of students, faculty members, and administrators, concerning the ideal goals of university education?

Statement of the Hypotheses

The conceptual framework of the research holds that the university and the community where it is located interact in such a way that they mutually benefit from their very existence in the environment. The framework holds also that university participants' perceptions of actual ("is") and ideal ("should be") objectives of higher education are consonant with the missions of the institutions. Based on these premises the null hypotheses to be tested were formulated as follows:

H_{0_1}: There are no significant differences in perceptions of students and faculty members, with regards to the actual possible goals of university education.

H_{0_2} : There are no significant differences in percep-
tions of students and faculty members, with
regards to the ideal possible goals of univer-
sity education.

H_{0_3} : There are no significant differences in percep-
tions of students and administrators, with
regards to the actual possible goals of univer-
sity education.

H_{0_4} : There are no significant differences in percep-
tions of students and administrators, with
regards to the ideal possible goals of univer-
sity education.

H_{0_5} : There are no significant differences in percep-
tions of faculty members and administrators,
with regards to the actual possible goals of
university education.

H_{0_6} : There are no significant differences in percep-
tions of faculty members and administrators,
with regards to the ideal possible goals of
university education.

Significance of the Study

The researcher's concern grew from a general interest in

university goals and objectives, sociology, organization, and

administration of higher education as means to efficiently provid-

ing students with high technology skills and training to fulfill

the needs and demands of a rapidly changing society. As a concep-

tual tool the notion of goals can be enormously useful in

deliberating, determining, and evaluating policy and practice in

educational organization.

Organization and administration are not ends in themselves.

They exist for the purpose of enabling institutions to carry out

their aims and policies. As Charles A. Beard (1937, page 3)

observed:

> There is no subject more important. . . than this
> subject of administration. The future of civilized
> government, and even, I think, of civilization itself,
> rests upon our ability to develop a science and
> philosophy and a practice of administration competent
> to discharge the public functions of civilized society.

Organization and administration have an important contribution to make to higher education, through both leadership and service, with respect to the individual institution and to the community of which it is an integral part and to which it is responsible. Thus, it is hoped that the research may be of value to those in charge of leadership in administration, planning and organization of higher education, as they may wish to learn the perceptions of educational participants which can aid in their true task of constantly trying to upgrade the goals and objectives of the university system, consonant to changes that occur in a modernizing society. After all, as John Caffrey (Gross and Grambsch, 1968, page vii) stated, "it is certainly one of the functions of leadership, be it administrators, faculty, trustee, or whomever, continually to clarify these goals and periodically to reexamine them in light of changing desirabilities and feasibilities".

Other factors equally important for this research are identified below:

(1) Despite Brazil's great natural resources and renewed governmental commitment to augmenting the skilled work force, educators must contend with certain historical liabilities as they try to improve the country and educate its people. Inequalities of wealth and income, widespread poverty, malnutrition, illiteracy,

high birth and mortality rates, and economic and political instability have long plagued the country. The primary challenge is to develop human resources as well as possible, given limited funds available for this purpose. Were courses of study briefer and more directed toward eventual local employment, the nation would be better served.

(2) The Constitution of Brazil establishes education as a right of all, stating that it is a duty of the State to provide education in the home and in school. The fundamental legislation which presently governs Brazilian educational system consists of the following:

(a) Law Number 4,024 of December 22, 1961, which defines the principles of national education and the general norms of organizations;

(b) Law Number 5,540 of November 28, 1968, which specifies the norms for the structure and function of postsecondary education;

(c) Decree-Law Number 464 of February 11, 1969, which complements Law Number 5,540; and

(d) Law Number 5,692 of August 11, 1971, which establishes the directives and bases of first-level and second-level education.

The university Reform Law (Number 5,540) clearly specifies and introduces innovations in the curriculum, switching to the credit system for evaluating students and appropriating sufficient public funds to support the expansion and improvements of physical and human resources in higher education (Haussman, 1978). The goals of universities in Brazil, according to the Reform Law (Number 5,540), are "research, the development of the sciences,

letters and arts, and professional education." Haussman further states that university extension activities in Brazil were developed to create a strong and visible link between higher education and national development. The goals of all extension programs have been fundamentally the same: (a) to provide students with a clearer understanding of regional and national problems and enable them to participate in the nation's development, (b) to encourage students both to apply classroom learning and to acquire skills essential to the country's needs, (c) to tap the university as a development-related resource, and (d) to bring technical assistance and training to Brazil's interior.

(3) A UNESCO study (1982) reveals that there are over one million students enrolled in higher education institutions in Brazil. It also shows that most institutions offer degree programs in four years of study, with little or no vocational/technical skills and training. Brazil is a developing country experiencing a tremendous economic and technological growth. The existing manpower supply lacks proper training and skills to fill existing job opportunities. The cost to industry and commerce to train prospective employees is high and time consuming.

(4) As the above points indicate explicit goals for Brazilian higher education currently are spelled out briefly or generally at best. The results of this study may help identify more well-developed higher education goal statements including goals which are considered more important by the respondents. Such

results may aid the university in the more adequate accomplishment of its mission and purpose.

The Setting for the Research

This section is divided into two parts. In part one it is discussed the Brazilian educational system. Part two is reserved for the presentation of a synopsis of the American higher education system.

Part One: The Brazilian Educational System

For centuries Brazil was dominated culturally by Europe. The Portuguese colonization was aimed at short term exploitation of the national resources rather than long term investment. Since the Brazilian society was predominantly agrarian, education was reserved for those members of the rural aristocracy. They were the educated elite who dominated and led the Church, the State, and the professions. To Haussman (1978) the education they received was, however, ornamental rather than functional--merely a social status symbol used to differentiate the upper class from the lower class. Education was classical in nature and elitist in orientation. There was little incentive for greater allocation of resources to education. In fact, investment in education was not considered economically attractive.

It was the Jesuits who introduced education in Brazil in 1549 when they arrived with the Portuguese colonizers. The cultural dominance was exercised until 1759 when the Jesuit influence was

virtually ended. The Portuguese Prime Minister Pombal expelled them in an effort to reform the administrative system of Portugal (Haussman, 1978, page 31). Cowen (1984) asserts that in the nineteenth century when Brazil sought a model for its cultural institution it was Europe, and particularly to France, that it looked. Thus the basic ingredient in Brazilian educational thought was the European tradition. It was essentially an elitist and humanistic tradition designed to cultivate the mind and provide an avenue to the "noble" professions: secondary and higher education in Brazil were above all the mark of a gentleman. It was anti-technical and concerned with theorizing rather than empirical investigation. It was reflected on concepts of "authority" as to the purity of the subject matter and as a result the system was rigidly centralized until 1961.

Haussman (1978) argues that although Jesuit colégios (actually, high schools) existed in sixteenth-century Brazil, higher education did not emerge until 1808 when the Portuguese court fled to Brazil in anticipation of Napoleon's invasion of Portugal. After 1808 and well into the middle of the nineteenth century, higher education remained exclusively professional in nature; offering study in such fields as medicine, surgery, economics, agriculture, chemistry, design, and mechanical drawing. The emphasis on professional studies represented a radical break with the scholasticism of the literary period (before the expulsion of the Jesuits) and strongly influenced the future development of higher education in Brazil.

The Ideal and Actual Values of Education

Secondary and higher education in Brazil, traditionally manifested itself in encyclopaedic curricula, and emphasis on standards and in examinations designed to sift out the intellectually unworthy. Primary schools (being concerned with the "instruction" and not the "education" of the lower classes) were not included in this rationale, but they too reflected its style and attitudes. Cowen (1984) states that in defining the objectives of education, governments expanded on this narrow educational view. Legislation variously defines them in terms of health, culture, nationalism, social integration and individual development--but in Latin fashion those were "ideal" values unrelated to what was actually happening in the schools.

The Development of the Country and the School System

The growth of Brazil since 1930 has been remarkable. During World War II, in particular, national industry was stimulated by great restrictions on international trade, which may have paved the way for the country to enter the "technological era." It is interesting and impressive the contrast of the present situation with the recent past. Oliveira Junior (1959) argues that during the first decades of this century agriculture was the main source of income; exports consisted of rubber, coffee, and other tropical products. Industry was primitive, and the country had to import almost entirely both raw materials and the machines to manufacture them. Gouveia (1957) asserts that in 1907 there were 3,250

industrial enterprises employing 150,841 workers. In 1963 more
than three million industrial workers in about one hundred thousand
enterprises were producing a large percentage of the country's
needs for heavy steel, oil products, automobiles, and household
appliances. McNeill (1970) states that at the beginning of the
century most Brazilians were peasants working on ranches and planta-
tions, totally dependent upon their landowners. Today, while this
situation still remains in most of the rural areas, an increasingly
large urban middle class is being formed, as the cities have
experienced extensive migration. According to a U.S. army area
handbook for Brazil (1964), in 1962 it was estimated that 200,000
inhabitants from the interior were moving to the cities each year
in search of work and better conditions. Together with industriali-
zation and population growth, the country's system of public ser-
vice is also developing at a rapid pace. How did the educational
system contribute to this development? Where did the country find
the workers to develop its steel and electric power, automobile
and aviation industries?

        According to McNeill (1970, page 9). the traditional educa-
tional system failed to meet the demands of this rapidly developing
country. It produced mainly lawyers, physicians, and engineers.
With the creation of faculties of philosophy in 1931, secondary
teachers, mathematicians, physicists, biologists, and chemists began
to receive specialized training. However, schools of commerce and
industry did not have many graduates to offer. Thus, the working

force was formed in part by on-the-job training, in part by immigrant skilled workers. According to Diegues Junior (1964) in 1951 alone, 8,606 skilled foreign workers were added to the labor force in São Paulo.

Nonformal Education: An Overview of Two Sound Technical Programs

A serious shortage of skilled industrial workers and of middle level business managers continues to exist. To meet these demands, Brazilian industry and business have supported and administered since 1942, two types of technical educational programs outside the regular system. By law, enterprises employing more than one hundred persons are required to provide schooling for their employees and their employee's children. Professional training, for youngsters and adults with or without proper schooling, is provided by Serviço Nacional de Aprendizagem Industrial-National Service of Industrial Apprenticeship (SENAI) and the Serviço Nacional de Aprendizagem Comercial-National Service of Commercial Apprenticeship (SENAC).

SENAI and SENAC are supported by a fund fed by the tax-paying enterprises and their employees, and are administered by the National Federation of Industry and the National Federation of Commerce, respectively. SENAI's chief activities today are: (1) the training of industrial manpower through its apprenticeship courses for youngsters between fourteen and eighteen; (2) intensive professional training for employed and unemployed adults; and (3) retraining and specialization courses for qualified workers

and supervisors. Haussman (1978, page 105) states that more than half of SENAI's courses are given at its own centers. The rest are given at factory sites.

SENAC was created in 1946, on the same principles as SENAI, to provide training for commercial and service occupations. SENAC offers courses for about 90 different occupations, and through on-the-job training courses in large commercial enterprises. For example, with Brazil's new efforts to attract tourists from abroad and offer them accommodations with internationally acceptable standards, the training of hotel and restaurant personnel has become a priority endeavor. Thus, SENAC operates its own restaurants to train cooks, waiters and barmen.

The Agricultural Crisis

Brazil also has a shortage of trained agriculatural workers, to which no solution has yet been found. In many areas production is small and expensive, and undernorishment is a permanent condition. Camargo (1960) points to an "agricultural crisis" in Brazil in terms of production and the number and quality of schools of agriculture. The author criticizes and suggests that agricultural education be expanded at the university level. According to a detailed survey of the Brazilian educational system (Anuário Brasileiro de Educação, 1966), in 1964 there were only 35 agricultural high schools (technical level) with an enrollment of less than 4,000. For McNeill (1970, page 10), graduates from these schools frequently lack practical farm experience, and many do not

become farmers; some become rural teachers, but do not seem to have a marked influence on the communities where they live. The shortage of skilled labor is also compounded by the fact that most students continue to prefer an academic education: it is far more prestigious.

Higher Education Administration

Higher education is a federal responsibility, though institutions are run by federal, state, municipal, religious and private entities. There are also large numbers of independent faculties. Education, research, and extension are the main functions of university education in Brazil. In 1980 there were 65 universities and 822 independent faculties enrolling a total of 1,311,799 students, 53% of whom were studying in private institutions. Brazilian higher education has been undergoing continuous reform since 1961 and was the subject of radical reforms in 1968. The intention of this reform was to improve the quality and efficiency of the first degree course, particularly by reducing the independence and powers of individual faculties.

The university organization Brazil inherited was patterned after European models which were limited to acquisition and transmission of current scientific knowledge or to applying and adapting such knowledge in order to meet pressing local needs. The University Reform Law of 1968 basically changed the structure of Brazilian universities. Fidelis (1982) asserts that the French model of the university, with its characteristic tendency toward

centralization, was replaced by a more flexible and decentralized system like the American model. New concepts in university administration emerged from the University Reform Law, such as the departmental structure, credits, basic and professional studies, student participation, and optional or elective courses. However, several areas of conflict are apparent, after the introduction of the University Reform Law. Fidelis (page 13) states that the newly designed structure of universities was intended to transform the older European-type professional school into an American-type system with a departmental structure, more interdisciplinary programs, and an emphasis on research and training in technological fields. Such changes were almost immediately implemented in all public universities in Brazil. However, the expansion and complexity of administrative matters in the new structure, if indeed envisioned, did not receive the necessary support.

The Development of Educational Research

Educational research pointing to specific problems and their solutions has not yet been extensively done in Brazil. Teixeira (1957) pointed to what he called the "backwardness" of educational research in Brazil; the fact that educational statistics were the major source of awareness about the nation's educational status.

Other critics (Abreu, 1968; Fernandes, 1960) have also pointed out that most of what has been called "educational research" is merely "identification, definition, assertion, and fact assembly,"

and that "a theoretical point of view to provide a rational criterion of assembling facts and methodological concerns are often absent." The lack of a "practical attitude" on the part of the researcher has also been criticized, for many studies have been useful neither for educational practice nor for planning future research (Abreu, pages 51-78). Fernandes (pages 31-59) believes that science and national development should be twin ideas. Brazilian scientists should: (1) try to create the conditions for pure and applied research in Brazil, (2) be concerned about the practical utilization of the results of their investigations, and (3) be aware of the social significance for Brazil of the "organized expansion of its science as well as of its scientifically based technology."

Development and Planning of the Education System

In a summary form, Cowen (1984, page 618) has presented the problems which Brazilians detect in their education system as follows:

Internal Efficiency

    (i)   a serious shortage and unequal distribution of facilities

    (ii) soaring demand outpacing supply

   (iii) high drop-out, repeater and failure rates

    (iv) lack of 'articulation' between levels of the system

    (v)   shortages of trained teachers at all levels; low salaries and part time working

    (vi) encyclopaedic curricula

(vii)   formalistic teaching methods

(viii) inappropriate educational aims and concepts.

External Relevance

(i)   academic curricula and non-practical orientation

(ii) humanistic bias at higher levels resulting in
      shortages of technicians, doctors, scientists,
      etc. and probable over-production of lawyers
      and philosophers.

Trends and Possibilities

(i)   the urban, progressive regions of Brazil with their
      European traditions and industrial bases have shown
      in recent years similar trends to those observable
      in Western Europe. The minimum length of schooling
      has become progressively longer. Curricula at the
      upper first cycle (primeiro grau) level have become
      more uniform and there is a trend toward postponing
      specialization until second cycle (segundo grau).
      At the upper levels there have also been clear
      signs of closer university involvement in develop-
      mental problems and a retreat from the "ivory
      tower" image. Pressures too from the National
      Council for Scientific and Technological Develop-
      ment (CNPq) and MEC's Coordination for the Improve-
      ment of Higher Education Personnel (CAPES) have
      also resulted in significant advances in the teach-
      ing of science and in the quantity and quality of
      advanced research. The foundation of the first
      faculties of education are also illustrative of
      a slight up-grading in the academic status of
      teacher training. At another level, a feature
      typical of the developing world can be detected--
      namely a phenomenal increase in demand and provi-
      sion, matched by a fall in quality.

(ii) these underlying educational trends combined with
      the response of the government's technocrats and
      planners to the quantitative and qualitative
      problems of the system produced in the late 1960s
      a sweeping program of reform. The extent and
      importance of these modifications can be appreciated
      by the following summary. Some may be criticized,
      and some omissions may be noted, but overall the

list presents an impressive catalogue of reform which in Brazilian conditions only a single minded and determined government could have achieved:

(a) "Operation School" launched in 1968 to master-mind the expansion of the primary system and the re-examination of curricula and criteria

(b) The Reform Law of 1971 (Law 5692) - restruc-turing the school system into two levels, the first offering "fundamental education" to all between the ages of 7 and 14; the second providing three or four years of secondary education of a type suitable for either university entrance or for the middle level manpower needs of the economy

(c) University Reform - following the lines of the recommendations of 1968, priority targets being:

- Operation Productivity, to improve adminis-trative efficiency

- the concentration of university departments and faculties on to the same campus

(d) Teachers. Accelerated training programs for unqualified teachers. The establishment of university faculties of education. The encouragement of full time work (especially at university level) with improved salaries

(e) Administration. The reform of both the struc-ture and the spirit of MEC. An expansion in educational expenditure and the creation of new sources of revenue. Expanded schemes for scholarships, etc.

(f) Research and Development. An expansion of official educational research and dissemina-tion facilities

(g) Use of the Media. The Brazilian authorities, concerned that conventional educational methods cannot solve the country's problems, is anxious to give high level technology a vital role in their strategy. A number of cities now have ETV networks and a scheme is at present in

operation in the north and northeast of the
country involving the use of an educational
satellite which receives signals from the São
Paulo area and transmits them to 200,000
schools distributed throughout the target area.
In 1975 plans were announced for extensive
reorganization and improvement of ER and ETV
systems, within the new national broadcasting
system (RADIOBRAS).

The following statistics in Table 1.1 present a clearer view
of the educational reality in Brazil. They appear in Cowen (1984,
page 624):

TABLE 1.1

STATISTICS OF THE BRAZILIAN EDUCATIONAL REALITY

SCHOOL ENROLLMENT: 1978 (in thousands)	
First level (Grades 1 to 8);	21,473
Second level (Grades 1 to 3):	2,519

HIGHER EDUCATION ENROLLMENTS: 1979	
Enrollments on all courses:	1,311,799
Enrollments in universities:	613,192
Enrollments in isolated colleges:	698,607

HIGHER EDUCATION STUDENTS: 1979 AREAS OF KNOWLEDGE	
Biological Sciences and Health Professions	153,255
Technological Sciences	326,825
Agrarian Sciences	29,086
Humanities	696,070
Literature/Linguistics	81,741
Arts	24,822
TOTAL	1,311,799

PERCENTAGE OF GNP ALLOCATED TO EDUCATION						
Year	1961	1963	1965	1967	1969	1971	1973
%	2.09	1.72	2.80	3.14	3.42	3.25	2.95

Figure 1.1 shows the total enrollment for all education in Brazil.

FIGURE 1.1

PYRAMID OF ENROLLMENTS

Third Level
1,311 (1979)

Second Level
2,519 (1978)

First Level
21,473 (1978)

Pre-Primary
944 (1979)
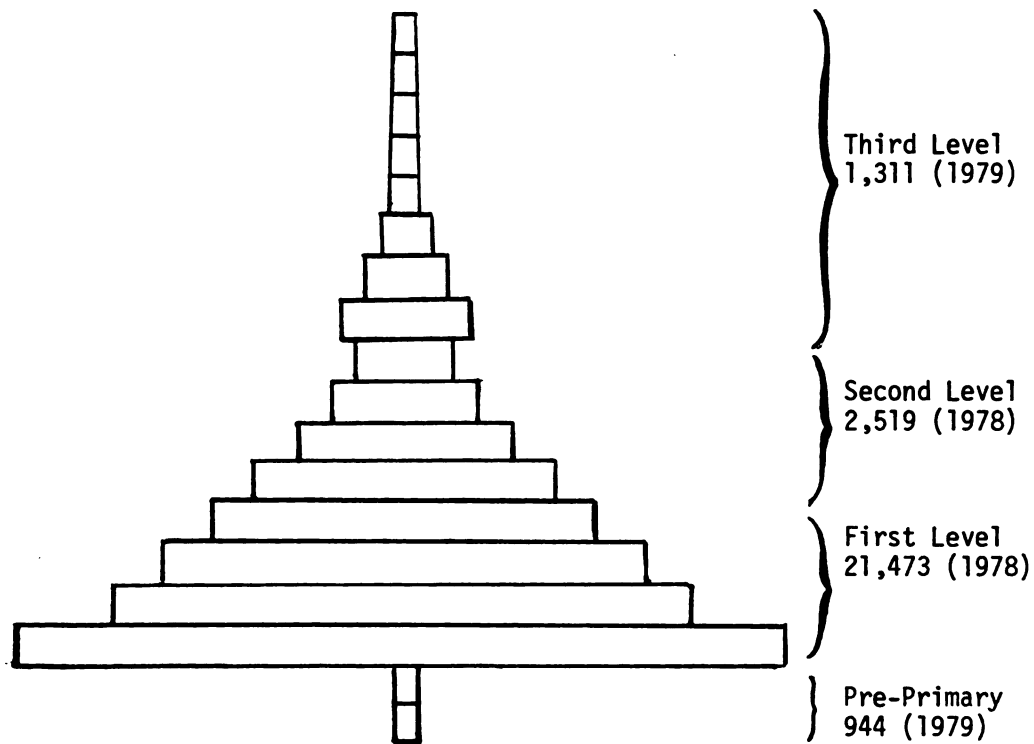
Source: Cowen, 1984, page 621.

Part Two: The American Higher Educational System

A critical analysis of the American higher educational sys-
tem is presented in this section. It will include the following
topics: efficiency and accountability in higher education; func-
tions of higher education; production in higher education; training
model in higher education; development of American higher education;
the American community college; concept and growth, the importance
of the institution, the community college in Michigan, and philo-
sophical assumptions.

Efficiency and Accountability in Higher Education

Education is a gigantic enterprise in the United States,
perhaps the largest one. In 1981, education was the primary acti-
vity of approximately 61.4 million Americans. Included in the total
were an estimated 57.8 million students enrolled at schools and
colleges, 3.3 million teachers, and about 300,000 superintendents,
principals, supervisors, and other instructional staff members.
This means that in a nation with approximately 230 million people,
more than one out of every four persons was directly involved in
the educational process. Data from a survey of enrollment in higher
education indicated that about 12,320,000 students were enrolled
in the 3,253 institutions of higher education. Of these, there
were five million students enrolled in the existing 1,274 community
and junior colleges open to the public in the United States.

The 1981 gross national product for the United States was
$2,827 billion. The total expenditure for higher education was

$73 billion. The total expenditure for all education was $199.8 billion (US Natl. Center for Education Statistics, 1982). This sum was second in size only to the national defense expenditure. Viewed from another context, the total expenditure for education in the United States is 6.8% of the gross national product (GNP). Figure 1.2 presents a clearer picture of estimated expenditures for educational purposes, including the percentage distribution by source of funds. These statistics provide a quantitative description of the current American educational scene. Clearly, the vast sums expended by educational institutions indicate that the American people have a high regard for learning, financially supporting their educational institutions.

A widely held assumption is that higher education at some unspecified time will involve every high school graduate (Hausman, 1972, page 1). If this were to happen the burden to state and federal governments would be great, due to the fact that the process of education involves large expenditures. On the other hand, total expenditures alone do not provide a good picture of the vast investments in education, nor does it tell about the quality of such education. One must also consider another important element in educational cost, the foregone income, that is, the total amount of money the student is not earning while attending college or university (Bowen and Servelle, 1972, pages 31-32; Carnegie Commission, 1973a, pages 49-53).

In the United States, the federal government has never been empowered to exercise direct administrative or legal control over

FIGURE 1.2

ESTIMATED EXPENDITURES OF EDUCATIONAL INSTITUTIONS,
BY SOURCE OF FUNDS: UNITED STATES: 1981-82

Local governments
25.4%

State governments
38.2%

All other sources
26.4%

Federal Government
10.0%
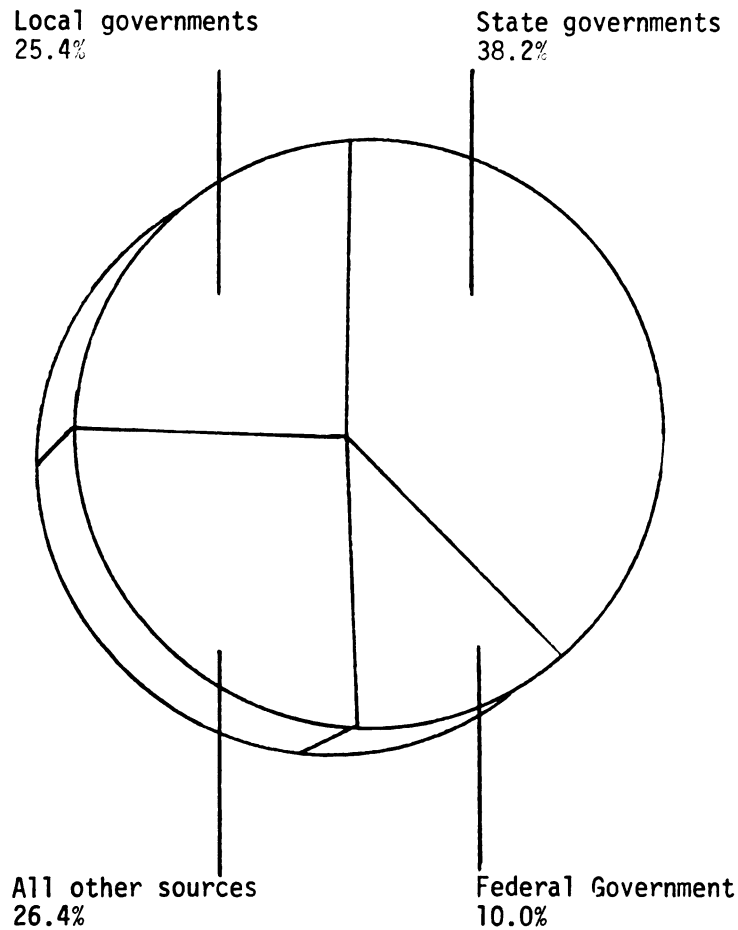
Total expenditures = $199.8 billion

NOTE: Includes expenditures of public and private institu-
        tions at all levels of education from preprimary
        through graduate school.

SOURCE: U.S. Department of Education, National Center for
         Education Statistics, estimates.

education in the states. It has been influential in education affairs, however; and in recent decades, it has had a marked effect on the development of both public and private education. When an industry reaches such financial magnitude, many people ask whether the outcomes are worth the cost. Criticism of higher education is that it is educating more people than the economy can absorb. Another is the inability of college graduates to get jobs, or the ill-preparation of graduates to the job market.

Many Americans perceive their system of higher education as efficient, great in quality and quantity, providing solid preparation of students. Many other Americans functioning as observers of their system wish to hold college and universities accountable, demanding that outcomes of higher education be identified, measured in dollars, and then compared with costs. See, for example, Goodman (1964); Berg (1970); Illich (1972); Thurow (1975); Freeman (1976). Yet, in their perceptions they fail to recognize that efficiency is a relationship between two variables, cost and outcome. Higher education is concerned with matters of intellect, personality, and value, not always quantifiable, to compute rates of return. In assessing the efficiency of higher education one must consider both cost and result. As Fritz Machlup has said (in Solmon and Taubman, 1973, page 361), "choices must be made among all sorts of alternatives, and the gratification of cultural desires--music and art, beauty and truth, peace and justice--is not outside economic considerations. We cannot measure such benefits, but we cannot help evaluating them as long as they do not fall like manna from heaven."

Functions of Higher Education

Education is the process of training and developing the knowledge, skills, mind, character, etc., especially for formal schooling. Education activities involve the production and distribution of knowledge which are undertaken in institutions of learning or elsewhere. The institutions where these activities take place are private and public elementary and secondary schools and private and public colleges and universities. Other institutions that carry out educational activities are the military, churches, business enterprises, civic clubs, etc. (Cohn, 1979, page 2). The education of the child is one of the basic duties of the state. It is not, however, the state's exclusive right. Independent associations of citizens and religious organizations share in the educational functions of the nation. The American higher educational system is a huge industry, with well-defined functions. Such an industry in performing its functions it engages in "production," using resources, which are transformed into end products called outcomes. Bowen (1977, page 7) maintains that the efficiency of the system is measured by comparing the outcomes with the resources employed. And accountability is achieved when the outcomes, as well as the resources used, are identified and measured.

Education, research, and public service are the three principal functions of American higher education. These functions are based in learning, which means knowing and interpreting the known (scholarship and criticism), discovering the new (research and related activities), and bringing about desired change in the

cognitive and affective traits and characteristics of human beings
(education). For Bowen (1977, page 8) education includes both
curricular and extracurricular influence on students. Its purpose
is to change students in both the cognitive and affective aspects
of their personalities and to prepare them for practical affairs.
Research, broadly defined, includes the scholarly, scientific,
philosophical, and critical activities of colleges and universities,
and their contribution to arts. The purpose of research is to
preserve, acquire, disseminate, interpret, and apply knowledge,
and to cultivate reactive frontiers in arts and sciences. The
public service activities include health care, consulting, off-
campus lectures and courses, work performance by interns, artistic
performances and exhibits, spectator sports, and so on.

Kaysen (1969, pages 5-8) cites the following functions of
higher education: (1) creation of new knowledge; (2) transmission
of knowledge to new generation; (3) application of knowledge to the
solution of practical problems in the wider society; and (4)
socialization of late adolescents and young adults. Ladd and
Lipset (1975, pages 10-11) suggest these functions: (1) socializa-
tion in the sense of the transmission of traditional values; (2)
innovation and scholarship; and (3) community service. Johnson
(Lumsden, 1974, pages 21-23) refers to: (1) a symbol and repository
of civilization; (2) a home for research; (3) a place of information
storage; and (4) a center for the teaching of young adults.

Production in Higher Education

Higher education produces only a small part of all human
learning (Machlup, 1962). Virtually all of the experiences in life
are learning experiences. Learning, the principal product of
higher education, consists primarily of changes in people, and
their behavior. Bowen (1977, page 12) states that another way to
approach the definition of outcomes is to assume that the institu-
tion should provide only adequate faculties, facilities, programs,
and services--a suitable environment--and students should use this
environment for the purpose of "getting an education". A college
or university achieves its production through creating an environ-
ment calculated to bring about desired change in people. To this
Bloom (1975, page 18) refers to as "growth-inducing climates."

Fägerlind (1975, pages 33-39) refers to the transformation
of early childhood resources into adult outcomes. Since students
come from different backgrounds, they bring to campus environment,
the author argues, a particular background of biological, psycho-
logical, and emotional traits and needs, and a special set of
experiences. Each student has a unique personality. Each student
may be affected by an institution differently. Each institution
is unique and has a unique environmental "press" that is "found
in the characteristic pressures, stress, and conformity-demanding
influences of the college culture" (Pace, 1957, page 4).

Learning in all its manifestations, has to do with changes in
people, in their knowledge, characteristics, behavior. As Bowen

(page 16) argues, these changes are generated in the first instance
by instruction, research, and public service. There are indeed
many "models" of production in higher education. Authors such as
Astin (in Bowen, 1974, pages 22-33; Clark and others, 1972, page
14; Micek and Wallhaus, 1973, pages 5-22; Walsh, 1973; Weisbrod,
1966, pages 5-21), have all delved into the arena of analysis and
production of "models" outcome in higher education. Table 1.2
presents a schematic outline tracing the productive process in
higher education from resources to environment to immediate outcomes
to future effects on society to further changes generated by these
future outcomes. It is presented as it appeared in Bowen (1977,
page 17).

Training Models in Higher Education

Educators, systems analysts, psychologists, and others have
developed a number of theoretical positions about learning and
teaching. The educational models developed are based on experi-
mental research, theories, and/or speculations about the meanings of
theories and research done by others. An example of such model
appears in Joyce and Weil (1980). These authors identified and
organized different models into four "families," such as: (a)
those oriented toward social relations and toward the relation
between man and his culture and which draw upon social sources;
(b) those which draw information processing systems and descriptions
of human capacity for processing information; (c) those which draw
on personality, development, the processes of personal construction

TABLE 1.2

SCHEMATIC DESCRIPTION OF THE PRODUCTIVE PROCESS
IN HIGHER EDUCATION

RESOURCES
(Labor, Land, Capital, Purchased Services, and Supplies)
↓

are transformed into
↓

ACADEMIC ENVIRONMENTS
(Physical, Human, Cultural)
↓

which produce
↓

(a)   IMMEDIATE AND INDUCED FUTURE CHANGES IN STUDENTS
(Cognitive Learning, Emotional and Moral Development, Practical
Competence)

(b)   BY-PRODUCTS FOR STUDENTS
(Career Placement, Direct Satisfactions, Lifetime Satisfactions)

(c)   SECONDARY BENEFITS AND SATISFACTIONS ACCRUING TO RELATIVES,
ASSOCIATES, AND OFFSPRING OF STUDENTS

(d)   IMMEDIATE AND INDUCED FUTURE CHANGES IN KNOWLEDGE AND THE
ARTS

(e)   DIRECT SERVICES TO THE PUBLIC
↓

which produce
↓

CHANGES IN SOCIETY
(Improved Performance of Government, the Economy, and other
Social Institutions, Human Equality and Freedom, Amelioration of
Social Problems, Improved General Quality of Life)
↓

which in turn give rise to
↓

FURTHER CHANGES IN INDIVIDUALS
(Including those of Future Generations)
AND SOCIETY

---

of reality, and the capacity to function as an integrated personality
as the major source; and (d) those developed from an analysis of the
processes by which human behavior is shaped and reinforced. Accord-
ing to the authors, these models can be used for making curriculum
planning, as guidelines for interactions between teachers and
learners, and as specifications for instructional materials (see
Appendix G for a list of models classified by "family" and goals).

Development of American Higher Education

Table 1.3 shows three historical periods in American higher
education with corresponding changes and development in the type of
college and in the curriculum and the related changes in philosophy.
Burnett (1977) states that all three periods were products of socio-
economic and political forces of those respective eras. The first
period (1636-1850), which was the era of colonial colleges and the
expansion of the liberal arts concept, was characterized by a
philosophy that was autocratic or elitist. Until near the end of
this era only young men, for the most part, were admitted to college.
Not always, but usually, because a college education was expensive,
the parents were upper-middle class or well-to-do people. The
second period (1850-1950) was dominated by the development of the
land-grant college and the expansion of the university. A merito-
cratic philosophy prevailed; namely, anyone who was motivated and
had the necessary academic credentials should be admitted to college.
The third period (1950-present) can be characterized by the amazing

growth and influence of the community college and the development
of the super star, the multiversity. The philosophy that has been
predominant so far in this period is egalitarianism; that is, anyone
has access to some sector of higher education who has a high school
diploma or is 18 years of age or older. American society has moved
from the concept of elitism to mass to universal higher education.

TABLE 1.3

HISTORICAL AND PHILOSOPHICAL DEVELOPMENT IN
AMERICAN HIGHER EDUCATION

TIME PERIOD	TYPE OF COLLEGE	PHILOSOPHY
1636-1850	Colonial Colleges and Expansion of Liberal Arts Colleges	Autocratic or Elitism
1850-1950	Land-grant Colleges and Expansion of the University	Meritocratic
1950-present	Community Colleges and Multiversities	Egalitarianism

The American Community College

        A critical analysis of current literature related to the
community college as an institution of higher education is presented
here. The literature reveals the effectiveness of the community
college in providing sound educational background skills, qualifying
students for employment by local businesses and industries. Perti-
nent literature related to functions, descriptive institutional

traits, and contributions of the community college is also considered. There is a vast amount of literature on relations between the community and the college as well as on the technique of effectiveness and better management of this segment of higher education, demonstrating the cost effectiveness of their operations. While there is a paucity of literature related to the effectiveness of higher education in general, there is abundant literature to determine what makes workers in the community college give their best in job-related situations. Many researchers conclude that the community college is different than the four-year institution, its people liking the differences and wanting them to continue.

The study of effectiveness in current literature is viewed as synonymous with internal organization, efficiency, and adequate internal processes and procedures (Argyris, 1962; Bennis, 1976; Likert, 1967). Writing on effectiveness of higher education institutions, Blau (1964) maintains that the basic responsibility of academic institutions are academic and scholarly research.

Concept and Growth

The community college is an important component of higher education in the United States. Its growth in the last two decades has been tremendous. There are over 1,250 two year colleges in this country with over 40% of the total college enrollment (Cross, 1982). American community colleges have met admirably the challenge of providing expanded access to postsecondary education (Luckenbill and McCabe, 1982). They have developed new opportunities for

individuals who had previously been excluded from receiving the training and education necessary to participate fully in the society.

There are many explanations for this phenomenal growth. Among them are the open door policy of the institutions, their mission, their geographic distribution, their low charges for tuition, their effectiveness in training students in short periods of time, and their appeal to students of all ages and commitments (Carnegie Commission on Higher Education, 1970).

There is reason to believe that the continuing growth of the community college and its appeal to people from all walks of life throughout the United States are primarily due to the value of the services that the community college renders to those individuals in need of training in a short period of time. More and more students believe that they can receive a sound educational training at a community college because it provides them the needed skills and technical experience necessary for job placement in a tight labor market. Thus, an interesting number of students seek training at a community college rather than at a university. Reportedly, such students demonstrate their satisfaction with the educational training they receive.

The community college means many different things to different people. It is a unique concept among institutions of higher education in the United States, and each one has its own peculiar characteristics. They differ in the composition of their student bodies, their physical facilities, their educational goals, and the communities they serve.

Literature concerning the community college in the United States is a rich one. Professional books, journals, periodicals, and newspapers in recent years have been publishing articles concerned not only with the community college concept, but also with the specific problems involved in establishing goals relevant to the population and community to be served, administrative procedures, integration of the institution into the community, and curriculum development.

The American Association of Community and Junior Colleges (AACJC) is the national organization that represents two-year colleges. The AACJC produces an authoritative professional bi-monthly magazine. In addition, AACJC publishes the annual Community, Technical, and Junior College Directory, which presents vital statistics about the two-year colleges. The mission of the AACJC is to exert leadership, act as advocate, and provide services in support of community, technical, and junior colleges, as these institutions deliver accessible educational opportunities designed to address the needs of the individuals, organizations, and communities forming their constituencies (AACJC, 1985).

American community colleges have met the needs of this nation. Evidence of this was demonstrated in the 1960s when enrollment more than doubled (Carnegie Commission on Higher Education, 1970). In 1960 there were 656 community colleges in the United States, by 1970 the total was 1,100, and in 1982 there were over 1,250 two-year colleges in the USA (Yarrington, 1981).

The community college holds that both the individual and his or her community are best served when the programs allow the student to integrate his or her own experiences. Generally, programs are designed to support and guide the student in his or her achievement of career, social, and personal identity through mastery of skills and search for meaning and belief. Warner (1982) states that the college is committed to purpose and process to a learning environment built on individualized instruction, student-oriented faculty, and flexible programs.

Institutions of higher education have not, as of yet, completely solved the problems of organization, administration, and philosophy which would allow the vocational/technical curriculum to exist. Redemsky (1972) asked the question, "If there is to be a vocational-technical education program, on what bases will it be justified, planned, and structured?"

> It seems that the junior colleges should (1) conduct more follow-up studies of their graduates in order to determine to what extent inclusion of vocational-technical courses in the curriculum is warranted; (2) survey the community to secure a perspective of the occupational pattern; (3) conduct a survey of high school seniors in order to determine if more seniors would attend the junior college if vocational-technical curricula were offered; (4) conduct a survey to determine what percent of the high school graduates remain in the community; (5) make an analysis of the type of occupations in which these high school graduates are engaged in order to determine if the junior college could offer curricula which would train them for these occupations; (6) discuss with employers the types of training junior colleges could offer to aid prospective employees; and (7) organize a citizen's committee to discuss and contemplate the expansion of the vocational-technical curricula in the junior college (page 224).

The Importance of the Institution

The American community college dates from the early years of the 20th century. The first public community college was established in Joliet, Illinois, in 1902. Several forces contributed to the rise in importance of this institution. The most prominent were the need for workers to operate the nation's expanding industries and the drive for social equality which was enhanced by opening more schools and encouraging everyone to attend (Cohen and Brawer, 1982). Enrollments increased from an estimated 100 students in 1902 to an estimated five million in 1981 (Open Doors, 1982).

The first colleges in this country were in small communities. Limited in curricula and serving a very small constituency, they served primarily people who came from what could be called "good families." By the mid-1800s, land grant institutions represented the educational frontier. With greatly expanded curricula and a mission to broaden a college education to serve the children of farmers and factory workers, the land grant institutions forged an entirely new culture, suited to life on the new frontier. Their educational pragmatism was very different from that of colleges of the past, and some people steeped in the traditions of the more aristocratic liberal arts colleges found the new frontier a bit crude. Almost a century later, community colleges came along, pushing with renewed vigor the egalitarian frontier of higher education. Unlike the aristocratic colleges of the 1800s which were

largely self selective or the land grant colleges which became institutionally selective, community colleges were not selective at all. They have opened a new frontier in higher education on many fronts, among which are open admissions, community involvement, comprehensive curricula, and teaching as a first priority over research (Cross, 1980).

Thornton (in Paradise and Long, 1981) delineates the basic philosophy that has led to the rapid growth and expansion of community colleges as arising from three main factors, which he identifies as the idea of widespread education for all people; the idea that increasing economic wealth will increase the taxation base of the governing jurisdictions--the long-prevailing view that education will provide social and economic opportunity; and the continuing realization of the "American dream" that education is a social and individual good that society is obliged to provide its people. The three humanitarian and economic factors, outlined by Thornton, continue to play a prominent role in furthering the development of community colleges. Implicitly, they also provide much of the argument for counseling as a major resource for the educational objectives of the community college student (pages 3-4).

Community College in Michigan

The first community college in Michigan was established in 1914 in Grand Rapids. Today, there are 29 such colleges in the state in 13 of the 14 state planning and development regions, and their districts include over 88% of the residents of the state,

approximately 95% of whom live within 40 miles of one of these "open admissions" institutions.

In the 1980-81 academic year, community colleges enrolled over 233,000 students in Michigan, representing over 40% of the students in Michigan institutions of higher education. Since persons enrolling in Michigan community colleges have varied educational goals and needs, the community colleges respond by offering programs and courses in occupational, general, continuing, and developmental education. The community colleges in Michigan hold a special place in the state educational system. Students are prepared with the job skills necessary for employment in local businesses and industries (Packwood, 1981). The institutions offer programming which specifically meets the needs of the businesses and industries in their areas. The goal of Michigan community colleges, typically, is to meet the needs of their immediate service areas and regions, rather than attempting to compete with institutions in other areas. There are several indices of how successful they have been at this:

    (1)   most students at community colleges are residents of their own community college districts and most of them commute to their colleges;

    (2)   community colleges have planned their programming around the needs of their local areas and residents; and

    (3)   community colleges work closely with their communities in developing new programs and courses. The community colleges work directly with representatives of businesses, industry, and the public sector in determining educational needs and in developing courses and programs designed to meet their specific needs.

The Michigan community college structure is unique with its potential for flexible responsiveness to its community constituents. Any time the community demonstrates a need for a new course or curriculum, the community college is likely to design and offer the course tailored specifically to meet that need. Such potential for flexibility in education is an important ingredient to meeting individual needs in an increasingly accelerating technological society (Toffler, 1971).

A few years ago a study was performed on the status of higher education in Michigan, part of which was completed by Martorana (1975) who was concerned with the goals and objectives of community colleges. The following are the objectives stated by that author:

(1) The Michigan community colleges on the whole accept and are making energetic efforts to accomplish the five functions usually associated to local, public, community, and junior colleges. The five purposes generally assigned to these institutions are (a) providing general education for all students; (b) offering transfer and college-parallel courses in pre-professional fields and in the arts and sciences; (c) providing organized occupational programs for students who will seek to enter employment immediately after leaving the local college; (d) offering adult and community-service programs of a wide variety; and (e) providing a full program of student personnel and counseling services for the students enrolled.

(2) Although they are doing significantly greater work than the private colleges or the state colleges in the provision of organized occupational programs, the Michigan community colleges are still placing major emphasis on offerings in pre-professional fields and in the lower division arts and science programs for transfer credit. Even so, the community colleges are the chief source of supply for technicians and semi-professional personnel in

Michigan, as shown by the fact that as a group they offer more organized occupational programs of less-than-bachelor's degree length than do either the state colleges and universities as a group or the private institutions as a group, more students are enrolled in these programs in the community colleges than in either of the other types of institutions of higher education. Community college acceptance of this important educational assignment in Michigan is evident, further, in that they have established more programs in recent years than the other two types of institutions have established (pages 3-4).

Martorana recommended that the community colleges within the state should continue efforts not only to maintain the supply of skilled personnel, but also to increase the number of technicians and semi-professional personnel for the economy of the state. Michigan's community colleges and local industry have worked cooperatively in providing facilities and support for education which will maintain a supply of technical and semi-professional personnel necessary for the state's economic needs.

Philosophical Assumptions

The purposes and philosophical assumptions underlying the programs of the community colleges throughout the United States have been defined by authors like Cross (1980; 1982), Martorana (1975), Gleazer (1980), and Bogue (1950) as well as institutions such as the American Association of Community and Junior Colleges (1983; 1984; 1985), the National Society for the Study of Education (1970; 1982), and many others. There is a general consensus among researchers today as to the objectives of the community college. Adaptability is one element in mission or process commonly agreed

upon. As an example, Gleazer maintains that there are different

values and different political realities. The institutions serve

unique communities and needs. Some observers say there are dangers

in attempting to be specific with regard to mission. Gleazer (1980)

asserts that:

> Any time we can describe the community college in defini-
> tive, specific terms, we will destory it. It has to
> change. It has to be different in different areas. You
> need to keep moving as a community college norm. We need
> to look at people, but we tend to look at the institution.
> We should not try to push the river in a different direc-
> tion (page 5).

Assumptions of the Study

The research was carried under the following assumptions:

(1) The research and its data gathering device were
understood by the respondents prior to their
completion of the survey.

(2) The respondents' answers to the questionnaire were
honest and accurate.

(3) The institution selected for this study shares as
a common mission and purpose the transmission and
education vis-à-vis the development and formation
of human resource potential in the environment.

(4) Survey research is an acceptable and adequate method
of gathering data for descriptive studies in the
social sciences and education.

Limitations

The research was conducted under the following limitations:

(1) It was limited to analyses and descriptions of percep-
tions and comments written in a questionnaire by the
respondents.

(2) The responses were written in Portuguese. A subse-
quent translation of the questionnaire to English was

a procedural step undertaken by the researcher.
Loss of meaning might have occurred in the process.

Definition of Terms

The following terms used in the research are defined as
follows:

Administration is an art. It was defined by Tead (1951,
page 3) as follows:

> . . . Administration (is) the necessary activities of
> those individuals (executives) in an organization who
> are charged with the ordering, forwarding and facili-
> tating of the associated efforts of a group of persons
> brought together to realize some defined purposes.

Community is a geographical metropolitan area served by
common institutions, providing medical care, local security needs,
and other social needs, and whose inhabitants interact more fre-
quently with each other than they do with persons outside of the
community.

Community College is an institution component of higher
education (Berdahl, 1971, pages 229-230). Such an institution is
characterized as follows:

> (1) provides instruction leading to the acquisition
> of technical skills needed within the community
> in which they are located;
>
> (2) offers courses requiring two to four years to
> complete;
>
> (3) courses are based on a combination of teacher-led
> instruction and hands-on experience in the practice
> of the skills learned both within the institution
> and within the local community;
>
> (4) primarily services the residents and business
> enterprises of a relatively restricted localized

area when compared to universities which may be per-
ceived to serve a generalized society, and

(5) institutions which interface with the more general
university system within the society in that comple-
tion of two-year course work within the community
college is directly transferable as credit toward
a university degree in the same field of study.

Goals will refer to the particular, possibly unique pattern
of specified ends, outputs, and priorities established for a single
college or university. Like system purposes, when new institutional
goals are set, it is generally through a political rather than a
more deliberate or rational process (Peterson, 1970).

Higher education is used as general term to include both
colleges and universities. It is also used in the sense of the
third and fourth level of the educational system, that which is
carried on in institutions of higher learning, and which lies
beyond the completion of the secondary school.

Higher education functions refer to activities of the
university or higher education system that are functionally related
to other social institutions. Such functions have evolved over
time generally without conscious intent. They are the variously
identified activities of higher education as one social institution
within a larger social system (Peterson, 1970).

Institutional goals inventory is an instrument to inter-
pret educational goals and identify priorities among those goals.
It is designed to elicit from individuals their opinions concerning
the desired goals of higher education. It is one component of the
total needs assessment process.

Needs assessment is the process of determining areas of deficiency of a given institution or educational system.

Objective is used in speaking about ends of various component units, programs, and services. Thus the academic planner (or program evaluator) might speak of "program objectives"; department chairman and professors, of "course objectives". In contrast to the other kinds of ends, determination of program objectives is primarily the task of the relevant academic professionals, with little "outside" influence. Program objectives, however, would be expected to be roughly consistent with institutional goals (Peterson, 1970).

Organization was defined by Dimock and Dimock (1953) as follows:

> Organization is the systematic bringing together of
> interdependent parts to form a unified whole through
> which authority, coordination, and control may be
> exercised to achieve a given purpose. Because the
> interdependent parts are made up of people who must
> be directed and motivated and whose work must be
> coordinated in order to achieve the objectives of
> the enterprise, organization is both structure and
> human relations.

Purposes in higher education refer to stated conceptions of the mission of systems, groups, or types of colleges. Purposes in the public higher education sector are usually politically determined (Peterson, 1970).

Technical skills are individual skills which allow persons to manipulate, maintain, or utilize materials or tools introduced into a local community from outside. As such technical skills

refer specifically to the learned interaction of persons with technology which is not indigenous and to skills for which there is no traditional source or means of instruction within the local community.

Organization of the Study

The study is organized and presented in the following way:

Chapter I deals with the focus of the research, the perceptions of educational participants concerning university goals and objectives. This chapter is organized with the inclusion of the following topics: the research problem, the statement of the problem, the purpose of the research, the research questions, the statement of the hypotheses, significance of the study, the setting for the research, part one: the Brazilian educational system, part two: the American higher educational system, assumptions of the study, limitations, definitions of terms, and the organization of the study.

Chapter II presents a conceptual framework and literature review. This chapter provides a review of relevant literature in the following topics: organizational goals and objectives, economics of education, sociology, organization, and administration of higher education. A summary ends the chapter.

Chapter III discusses extensively the research methodology and procedures, the research design, questions and hypotheses, population and sample, instrumentation, pretest, in-country data collection, reliability, validity, data analysis, and a summary.

Chapter IV deals with analysis of data and reports the research findings.

Chapter V is reserved for discussion of conclusions of the study and the recommendations based on the research findings.

CHAPTER II

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

This chapter clarifies the conceputal and empirical frame-
work of the research. A framework is an open case, or structure for
admitting, enclosing, or supporting things such as a window, a pic-
ture, or a library door. Intellectually, this means bringing to
light explanations or expositions and generalizations which are con-
sidered valuable as themes or organizing principles for grouping,
integrating, and explaining facts. Thus, the aim of this chapter is
to set the research in its proper perspective basing the theoretical
framework on a current literature review from which the conceptual
framework is drawn. The conceptual framework reflects intellectual
interest of the researcher, in areas of pursuit such as organiza-
tional goals and objectives, economics of education, sociology,
organization, and administration of higher education.

A fundamental assumption in the study is that higher educa-
tion is classified as an organizational system, serving educational
pruposes, reflecting values and aspirations of the community setting
where it is located. Penrose (1961) has identified three very
general characteristics in his writings about the nature of formal
organizations: purpose, program, and production. The purposes of
an organization are its goals and objectives. For some, professors

for instance, the purpose of higher education is to advance learning. For other, students, for example, judging them by their behavior, the primary purposes of institutions of higher education are to confer social prestige, enhance earning power, and palliate loneliness. Penrose asserts, nevertheless, that of all characteristics, purpose is the most important.

Higher education is an open organizational system very much in agreement with what Roeber (1973) postulates in his assertion of organization, when he suggested:

> Organizations are not closed systems, obedient to their own laws, but are open systems, sensitive and responsive to change in their environment. We call them systems because they have boundaries (although these are not easy to define) and the capacity for self-perpetuation and growth. They are "open" because they exist by interchange of matter, energy, and information with the environment and its transformation within the boundaries.

Rationale

The rationale for this chapter is based on a literature review, from which the conceptual approach for the research was set forth. The following procedural steps were observed for reviewing the literature:

(1) The Review of Educational Research was an important source, since it summarizes many researches conducted on a given topic, directing the researcher to relevant primary sources.

(2) The Education Index, which includes report of research, reviews of related research, and opinion articles, was also a very helpful source. It lists bibliographical information alphabetically, under subject, author, and title heading.

(3) A manual search of current literature through subject/author/title card catalogue.

(4) The interlibrary loan service was utilized with high degree of frequency when the researcher was in need of reference material unavailable at the Michigan State Library stacks.

(5) A computer search of Dissertation Abstracts International. The Dissertation Abstract International contains abstracts of doctoral dissertations. Abstracts are brief summaries of dissertation studies. The researcher was able to classify all references as relates to his problem of investigation. Dissertation Abstracts International classifies entry by subject, author, and institution. Copy of the complete dissertation, microfiche, or microfilm can be obtained from University Microfilms International, in Ann Arbor, which provides DATRIX, a computer retrieval service.

(6) A literature search through computer retrieval sources of Educational Resources Information Center (ERIC), including the ERIC microfiche system was undertaken. Educational Resources Information Center (ERIC) is a national information system supported and operated by the National Institute of Education (NIE). Its purpose is to collect and disseminate reports of current educational research, evaluation, and development activities.

ERIC publishes Resources in Education (RIE) and Current Index to Journals in Education (CIJE) (NIE. In Gay, 1981). The Thesaurus of ERIC Descriptors, is a compilation of the key words used in indexing ERIC documents (CCM Information. In Gay, 1981). The Thesaurus indicates the various terms under which a given topic is indexed. ERIC comprises a central office and a number of clearinghouses, each devoted to a different area. These clearinghouses collect, abstract, store, and disseminate documents, which include information analysis products (books, monographs, and other publications), fact sheets, computer search reprints, and information bulletins.

All ERIC documents are available in both hard copy and microfiche. Microfiche is considered less expensive. Michigan State University library maintains an updated microfiche collection service and advanced technological apparatus such as microfiche readers and microfiche duplicators. The researcher widely used the ERIC services in his quest of gathering information for the literature review.

Organizational Goals and Objectives

The main thrust of the research was to analyze and describe perceptions of the three groups of respondents, with regards to possible goals and objectives of higher education. A questionnaire was developed by the investigator. The instrument was modeled and patterned after the Institutional Goals Inventory (IGI) developed by Peterson and Uhl (1977). The questionnaire was also heavily influenced by the pioneering work of Gross and Grambsch (1968; 1974), which provide college and university administrators an easily accessible instrument and procedure for conducting self-evaluations of institutional goals.

The university is a large, complex organization, and usually it has a variety of goals. There are people who think of a goal in terms of output--teaching, research, or service to the community. One of the aims of the study was simply to focus attention on the analysis, and description of possible goals of university education. It was essential to contact the three groups participants in higher education, through the application of the questionnaire, in order to learn their perception about university goals both actual ("is") and preferred ("should be"). This need to understand organizational mission in order to integrate what are sometimes divergent activities has a basis in organizational theory. The assumption that an organization understands its mission is embedded in the management-by-objectives (MBO) and systems approaches to planning and management. For instance, Peter Drucker (1973) asserts:

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>Only a clear definition of the mission and purpose of
the business makes possible clear and realistic busi-
ness objectives. It is the foundation of priorities,
strategies, plans and work assignments. It is the
starting point for the design of managerial jobs and,
above all, for the design of managerial structures.
Structure follows strategy. Strategy determines what
the key activities are in a given business. And strategy
requires knowing "what our business is and what it should
be."

Another study found appropriate to mention in this review

was that done by King and Cleland (1978), who similarly stated:

>It is both meaningful and necessary for an organization
to consciously choose and continually review its mission
concept if it is to survive and prosper. This is as
true of government as of business, despite the much-
discussed perseverance of some bureaucracies past their
time of usefulness. This is so if only because a mission
statement serves as a guide for the multitude of under-
lying choices that must be made to guide the organiza-
tion into the future. However, it is also important in
serving to define the scope of acceptable choice, as a
symbol around which some organizational members can
gather, and as a statement from which nonagreeing
members can flee.

A Historic Overview of Higher Education Goals

The goals of higher education have been considered since
the time of Plato by philosophers, psychologists, sociologists,
literary figures, social critics, and educators. It is believed,
for example, that the great Roman philosopher Seneca, more than
1900 years ago, concluded:

>When a man does not know what harbor he is making for,
no wind is the right wind.

Plato (1974, page 130) quoted Socrates, "And we shall begin
by educating mind and character, shall we not?" Aristotle, however
(Ulich, 1968, page 65) was less positive on the matter when he

stated: "There are differences of opinion as to the proper tasks to be set; for all peoples do not agree as to the things that the young ought to learn, either with a view to virtue or with a view to the best life, nor is it clear whether their studies should be regulated more with regard to intellect or with regard to character . . . and it is not at all clear whether the pupils should practice pursuits that are practically useful, or morally edifying, or higher accomplishments." However, Aristotle went on to advocate attention to the intellect, the character, and practical competence.

Pre-twentieth century authors, Cardinal Newman (1960, page 76) for example, saw the purpose of the university as teaching and cultivating the mind. Cardinal Newman also saw the main purpose of a university in terms of how it treats students, in the following observation:

> An assemblage of learned men, zealous for their own sciences, and rivals of each other, are brought, by familiar intercourse and for the sake of intellectual peace, to adjust together the claims and relations of their respective subjects of investigation. They learn to respect, to consult, to aid each other.

In his essay "Literature and Science" (1927, page 62), Matthew Arnold observed that:

> When we set ourselves to enumerate the powers which go to the building up of human life, and say that they are the power of conduct, the power of intellect and knowledge, the power of beauty, and the power of social life and manner, (we) can hardly deny that this scheme, though drawn in rough and plain lines enough, and not pretending to scientific exactness, does yet give a fairly true representation of the matter. Human nature is built up by those powers; we have the need for them all. When we have rightly met and adjusted the claims of them all, we shall then be in a fair way for getting soberness and righteousness, with wisdom.

Nevitt Sanford (1969, page 76) offers a restatement of Arnold's theme: "our goal is to expand both the intellectual and the area of motive and feeling and to bring the two together in a larger whole."

Dewey's philosophy of education was essentially humanistic, with a concern for the needs and rights of the individual. For Dewey (1916), educational aims are not external, they are within people:

> An educational aim must be founded upon the intrinsic activities and needs (including original instincts and acquired habits) of the given individual to be educated.

The purpose of education, in Dewey's view, is to provide an appropriate learning environment in which each student can be helped to make sense of the world in his own way. Thus, students should be free to determine their curricular goals, rather than following a curriculum determined by the teacher. The student, rather than the teacher, is in control (Henderson and Nathenson, 1984, pages 52-53).

From colonial times through the early twentieth century, American colleges and universities faced a relatively stable environment (Caruthers and Lott, 1981, page 11). During the colonial era, the mission definition of the typical institution was easy to comprehend: to provide a liberal education to a rather select group of students and to offer training for entry into a few professions (Brubacher and Rudy, 1976, pages 3-11).

Higher education in North America began with the founding of Harvard in 1636. The college pattern was basically taken from

Stuart England with some Scottish influence (Carnegie Commission,

1973b, page 59). Historians of higher education identify three

historical periods and align their accounts accordingly (Brubacher

and Rudy, 1976; Rudolph, 1962; Schmidt, 1957). The first period

(from roughly 1636 to 1828) saw the transplantation of English and

Scottish universities with their classical curriculum packaged in a

theological framework. The original purpose of American higher

education was personal development through acculturation to the

classics and to moral principles (Handlin and Handlin, 1970). This

purpose of personal development has continued ever since in changing

forms. The second period (1828-1862) was characterized by the birth

of the modern university, and conflicts between sectarian and tradi-

tional liberal arts schools. The third period began with the

Morril Act of 1862. The Morril Act established state institutions

of higher education supported by endowments of land from the federal

government. It specified that agriculture and engineering and other

technical areas of study form the major part of the curriculum,

without excluding other scientific and classical studies. Conrad

(1978, page 50), maintains that "The most important single event in

the gradual unfolding of the curriculum from the general-liberal to

the utilitarian-vocational was the Morril Act (Land Grant Act) of

1862)." Conrad and Wyer (1980, page 9) identify this as a period

of transition, in their analysis of higher education, when they

stated:

> Our close historical proximity and contemporary confusion
> over the goals and mission of higher education have worked

to halt the definitive identification of a fourth period emerging in the late twentieth century.

Thus, Conrad and Wyer hold that liberal education flourished in the earlier periods but declined in significance and impact with the rising of the comprehensive university. Similarly, they state:

> Indeed, the failure of the liberal arts schools to adjust effectively to the changing pressures and needs of an expanding society is, at least in part, the explanation for their own decline and the immense success of more versatile and open forms of higher education. It is also one fundamental cause of our contemporary divisions between vocational and liberal arts colleges, and even between the sciences and the humanities. By the mid-twentieth century, the status quo lay firmly within the multi-purpose, multi-mission universities; and the majority of liberal arts colleges and university under-graduate offerings, if not their educational rhetoric, from the academic specialists, the professional schools, the immediate needs of society, or some combination of the three.

Throughout most of this century there have been attempts to revitalize liberal education and purposively illustrate its rela-tionship to society and to the other forms of higher education-professional, vocational, or disciplinary specialization.

After the World War II and the publication of Harvard's report, General Education in a Free Society (Harvard Committee, 1945), there appeared another surge of interest in liberal education. According to the Harvard report, "The task of modern democracy is to preserve the ancient ideal of liberal education and to extend it as far as possible to all the members of the community" (Harvard Committee, 1945, page 53). The report concludes that what is neces-sary is a "general education capable at once of taking on many

different forms and yet of representing in all its forms the common

knowledge and the common values on which a free society depends".

The dominant feature of our age has been unswerving faith

in a purely objective, inhumane form of reason, answered through the

beliefs and actions of withdrawals and irrationality: stoicism,

mysticism, existential despair. A new synthesis must lie in a model

of humane, practical reason. Conrad and Wyer (1980, page 58)

advocate that in more concrete terms, we need curricular models for

liberal education:

    (1)   avoid trivialization due the overemphasis of skills
         and behavioral outcomes;

    (2)   personalize education through broaching divisions
         between theory and practice, learner and teacher,
         and facts and values;

    (3)   integrate the vocational with liberal studies not
         through weakening the ideals of liberal education
         but strengthening our conception of vocation;

    (4)   allow more room for diversity in curricular practice
         and offerings through continuing focus on the unique
         traditions and mission of individual colleges;

    (5)   ensure that liberal education provides a forum where
         real-life issues and values are discussed freely
         and passionately. In short, creating an atmosphere
         where academic freedom can have real meaning; and

    (6)   shift the emphasis away from departmental and disci-
         plinary structures at the undergraduate level, with
         more weight given to those ideals and theories that
         link personal development with intellectual growth.

Liberal education is a dynamic tradition, capable of adapting

to changing times and conditions. Yet there is much in the history

of liberal education, particularly its Greek roots, that can illumi-

nate our current confusion. Rather than narrowly focus all our

attention on curricular trends and model, we must also confront the
underlying pragmatic cognitive reason and a dualistic view of
humanity and the universe--that shape our visions of liberal educa-
tion.

Accumulating Purposes

One purpose has been added to another--personal development,
economic growth, political health, service to society--and each pur-
pose has become more complex: thus the historical process of pro-
liferating purposes. Far from being in the periphery of life of the
middle classes, higher education in America is more at the center
of the entire society. The more that society needs new knowledge
and high skills, the more central it becomes. Purposes accumulate
as the trained becomes more essential to the effective conduct of
society. The Carnegie Commission (1973b) reports that the four
historical purposes may be partially translated into five current
and future purposes:

    (1)   Personal development can be translated into the
        education of the individual student and the pro-
        vision of an environment for developmental growth.

    (2)   Economic advancement, into aspects of advancing
        human capability in society at large.

    (3)   Political health, in part, into educational justice
        and into evaluation of society.

    (4)   Service to society, into aspects of advancing human
        capability.

    (5)   Pure scholarship has come along more as a companion
        of these four historical purposes than as a con-
        sciously chosen purpose by American society. It
        should be set forth formally now as a central purpose.

The Non-Functionality of Goals: A Viewpoint

Indeed, one would suppose that by now the question of educational goal would have been fairly well settled, and the problem to define goals would have found some useful answers. But the question is still very much open. The problem of goals is today, more than ever, a top priority, and largely unsolved problem. As King and others (1973, page 2) discussed, in spite of all hard thinking and earnest talk about educational goals and how to define them, the goals produced have been essentially non-functional. There are many reasons why they have been non-functional but among the most common are: (1) too much reliance on the magic words; (2) too little public participation in formulating goals; (3) too great a readiness to assume that goals are already given and require only to be achieved. Such weakness must be overcome if goals are to successfully serve their intended purpose.

Research on College and University Goals

Without a doubt the research undertaken in 1964 and published four years later, by Gross and Grambsch (1968) may be considered the most significant effort to analyze the nature and structure of university goals. These authors surveyed samples of faculty and administrators at 68 nondenominational Ph.D. granting universities, using an inventory consisting of 47 goal statements, of which 17 dealt with "output" goals (preparing students, doing research, providing public service) and the rest with "support" goals (holding staff, involving faculty in university governance). Respondents

rated the goals in two ways: (1) how important each goal "is" at the respondent's university, and (2) how important the goal "should be" at the university. Based on 51 and 40 percent return rates for faculty and administrators, the seven top ranked "Is" goals for the two groups combined were: (1) Protect the faculty's right to academic freedom. (2) Increase or maintain the prestige of the university. (3) Maintain top quality in those programs felt to be especially important. (4) Ensure the continued confidence and hence support of those who contribute substantially to the finances and other material resource needs of the university. (5) Keep up-to-date and responsive. (6) Train students in methods of scholarship, scientific research, and creative endeavor. (7) Carry on pure research.

Goals: The Intended Outcome of Higher Education

Researchers interested in purposes of higher education have noted the difficulties of translating goals into action. Stated goals may not reflect the reality of individual or organizational behavior. Argyris and Schön (1974) have identified the important distinction between individuals descriptions of their attitudes (their "espoused theories") and their actual behavior (their "theories in use"). Conrad (1974, page 512) has coined the term "operative goals" to avoid reifying organizational goals as synonymous with organizational behavior. Conrad maintains that most literature assures that goals explain organizational behavior. For him, "operative goals", by definition, avoids this crude determinism.

For Breuder and King (1976, pages 8-12) the identification of college goals and the achievement of consensus regarding goal priorities are only first steps. The next step is to translate institutional goals into explicit and measurable objectives, that are useful in guiding the allocation of resources. Doucette, Richardson Jr., and Fenske (1985) counterargument Breuder's and King's assertion, arguing that such assertion reflects the recent emphasis placed by major corporations and government agencies on management by objectives. They further argue that:

> Yet this argument assumes that goals and objectives are closely related constructs differing primarily in levels of generality. In fact, the translation of abstract goals into practical objectives has proven to be particularly elusive largely because goals and objectives are fundamentally different.

Similarly, an educational institution today which has not identified and set forth clear and explicit goals will be unable to provide the necessary focus and direction needed to achieve its prescribed mission. Peterson (1970, page 1) expresses the urgency of establishing goals when he says:

> It seems essential in these times that colleges articulate their goals: to give direction to present and future work; to provide an ideology that can nurture internal cooperation, communication, and trust; to enable appraisal of the institution as a means-end system; to afford a basis for public understanding and support. Indeed, the college without the inclination or will to define itself, to chart a course for itself, can look forward either to no future--to a kind of half-life of constantly responding to shifting pressures--or to a future laid down by some external authority.

The goals of which Peterson speaks are derived from the institution's mission statement--a statement of a single purpose which

is a hope for accomplishment. King, Marquess, and Breuder (1973)
state that:

> Goals are usually broad and may not be quantifiable.
> Once goals have been established measurable objectives
> can then be set and strategies for obtaining them
> devised. By evaluating each strategy in terms of
> resources needed and possible outcomes, a plan of
> action can be determined.

In general, there are two kinds of goals: outcome and sup-
port (process). For King and others outcome goals are ends the
college seeks to realize and are eventually translated into precise
measurable objectives. Goals of a supportive nature, when attained,
facilitate reaching the outcome goals. Essentially, they are
intended to optimize previously identified outcome goals.

Institutional goal determination has two end-products:
identification of goals and establishment of priorities among goals.
Still King and others maintain that:

> An institution's "goals structure"--it's rank ordering
> goals--can be said determined when some level of consen-
> sus has been reached through a process that is democratic
> and participatory. Goals must be developed which accommo-
> date the needs of diverse constituencies and respond to
> changing and conflicting societal demands. In order for
> an institution to identify goals considered important by
> the community it serves, it must identify a method for
> transforming expressed needs into meaningful goals.

On the subject of institutional goals assessment, the follow-
ing statement by Corson (1975) is clearly appropriate, especially
as it relates to colleges and universities:

> It is an axiom of management that to be effective, an
> organization must have clearly stated purposes and
> generally understood objectives that can be translated
> into more precise goals against which performance can
> be measured.

A study by Palola and Padgett (1971) arrived at the following conclusion:

> A recurring theme in the literature of goals in education is that too little attention is paid to defining the aims of the educational process beyond coining global abstraction... In the self-renewing institution, the plans allow flexibility while focusing on concrete goals; goals which represent achievable ideals rather than simply projections of the past on the one hand, or vague philosophical rhetoric on the other (pages 77-78).

In the final analysis, institutional well-being may depend on symmetry between intent and delivery. The latter depends upon demonstrated progress toward the achievement of goals and community expectations. Indeed, there is an urgency associated with the task of goal assessment, but care and planning are equivalent necessities.

Empirical Studies of Purposes and Goals in Higher Education

Social scientists have produced a substantive body of knowledge about different aspects of organizational behavior. Yet there are relatively few studies on goals in complex organizations. This paucity of research on goals is especially reflected in the study of complex universities; either the official statements of goals are taken at face value (Stroup, 1966) or the goals are taken for granted, in which case the most effective ordering of resources and personnel is seen as the only problematic issue.

There is, indeed, a voluminous literature about organizational goals, much of it the work of sociologists interested in organizational theory and behavior. A good review, in higher education context can be found in Palola, Lehamann, and Brischke (1970). Other

useful references are Drabek and Chapman (1973) and Georgiou (1973).
In their analysis of university goals Peterson and Uhl (1977) main-
tain that as intentions, goals exist only as statements that describe
the desired conditions. Such definitional language approximates
Kerr's (Carnegie Commission, 1973b), although Kerr uses the word
purpose rather than goal. Goals symbolize end conditions. They do
not describe what the institution does or how it functions to achieve
or maintain those ends. An institutional goal is an ideal condition
the campus can continuously seek to maximize or perfect; that is,
a goal can remain, even though according to some index, it has been
achieved. Thus, a goal may be thought of as a statement of continu-
ing intent.

Bowen (1977, page 32) similarly, takes the view that the
literature on goals of higher education is vast. In fact, in his
study, Bowen develops a systematic effort to identify widely accepted
goals of higher education. Like his, the researcher's objective was
to bring from the literature those goals which describe the final
outputs of higher education, not intermediary or enabling objectives.
For example, such objectives as increasing the financial support of
higher education, raising the faculty-student ratios, modernizing
buildings, and equipment, improving curricula--objectives that loom
large in the plans of educators--are regarded here not as final out-
puts, but as means (Gross and Grambsch, 1974, pages 43-74). The
goals are related to the three main functions of higher education:
education, research, and service.

Conrad (1974) elaborated the following main reasons for the advancing studies of goals, particularly university goals. For him, goals may serve a variety of purposes for the organization. They may (1) serve as standards by which to judge its success, (2) constitute a source of legitimacy, (3) define organizational needs and priorities, (4) define production units or "outputs" for the organization (5) define its clientele, or (6) define the nature of the relationship between the organization and society. Such enumeration of reasons seem to be strong enough. But if university goals are to serve the purposes listed above, they must be identified more precisely.

Clark Kerr (Peterson and Uhl, 1977) in his introduction of a major study of college and university goals observed rather emphatically:

> It is useful to us, therefore, to be reminded that goal setting is a complicated enterprise with serious consequences for an institution and the people who work and live within it. And it is also useful for us to understand that goals are not indelibly written; they change over time. Moreover, they are not always in the same rank of importance in relation to one another; some can be valid even if they have low priorities. Nor are they some kind of mysterious transcedent influence that controls and energizes a college or university; they are, instead, tools for directing, measuring, and evaluating the energies that are generated from within.

Although all major segments of the academic community are concerned with the goals and objectives of their own institutions, college and university presidents and their administrative staffs have a special responsibility, as a vital aspect of their leadership function, to develop, organize, and use the resources of the

institution to achieve its goals with maximum effectiveness. As

Caffrey (Gross and Grambsch, 1968, page v) asserts:

> An essential phase of this goal-oriented function is
> to clarify the institution's present goals, and
> especially to distinguish between the real and the
> supposed, in order to evaluate the effectiveness of
> progress toward these goals--and, equally important,
> continually to reevaluate the goals themselves. As
> needs and contexts change, so many goals.

The goals of higher education are concerned with the develop-

ment of the full potentialities of the human beings and of society,

since they correspond closely to the goals of human life. As

Alexander Heard (1973, page 16) remarked:

> Our largest common goal in higher education, indeed in
> all education, is to create and stimulate the kind of
> learning that breeds strength and humor and hope within
> a person, and that helps build a society outside him
> that stirs his pride and commands his affection.

Bowen (1977, pages 55-59) presents a rather long but very

useful taxonomy for the study of outcomes, which for him it is

indeed a catalogue of widely accepted goals. The catalogue of goals

for higher education, as it was presented by Bowen, is shown in

Table 2.1:

TABLE 2.1

TAXONOMY FOR THE STUDY OF OUTCOMES

I. Goals for Individual Students

A. Cognitive Learning

(1) Verbal skills. Ability to comprehend through reading and
listening. Ability to speak and write clearly, correctly,
and gracefully. Effectiveness in the organization and
presentation of ideas in writing and in discussion. Possi-
bly some acquaintance with a second language.

TABLE 2.1 (continued)

TAXONOMY FOR THE STUDY OF OUTCOMES

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(2) Quantitative skills. Ability to understand elementary
concepts of mathematics and to handle simple statistical
data and statistical reasoning. Possibly some understand-
ing of the rudiments of accounting and the uses of computers.

(3) Substantive knowledge. Acquaintance with the cultural
heritage of the West and some knowledge of other traditions.
Awareness of the contemporary world of philosophy, natural
science, art, literature, social change, and social issues.
Command of vocabulary, facts, and principles in one or more
selected fields of knowledge.

(4) Rationality. Ability and disposition to think logically
on the basis of useful assumptions. Capacity to see facts
and events objectively--distinguishing the normative,
ideological, and emotive from the positive and factual.
Disposition to weigh evidence, evaluate facts and ideas
critically, and to think independently. Ability to analyze
and synthesize.

(5) Intellectual tolerance. Freedom of mind. Openness to
new ideas. Willingness to question orthodoxy. Intellectual
curiosity. Ability to deal with complexity and ambiguity.
Appreciation of intellectual and cultural diversity. His-
torical perspective and cosmopolitan outlook.[1] Understand-
ing of the limitations of knowledge and thought.

(6) Esthetic sensibility.[2] Knowledge of, interest in, and
responsiveness to literature, the fine arts, and natural
beauty.

(7) Creativeness. Imagination and originality in formulating
new hypotheses and ideas and in producing new works of art.

---

[1]Appreciation of the local, provincial, and parochial is commend-
able. Values such as cosmopolitanism are not undesirable but perhaps
they are most valuable when they occur in tension with their opposites,
when the person achieves an appreciation of both the cosmopolitan and
the provincial and a critical capacity to stress the merits and
deficiencies ob both.

[2]Esthetic sensibility is often classified under affective develop-
ment rather than cognitive learning. It contains elements of both.

TABLE 2.1 (continued)

TAXONOMY FOR THE STUDY OF OUTCOMES

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(8) Intellectual integrity. Understanding of the idea of "truth" and of its contingent nature. Disposition to seek and speak the truth. Conscientiousness of inquiry and accuracy in reporting results.

(9) Wisdom. Balanced perspective, judgment, and prudence.

(10) Lifelong learning. Love of learning. Sustained intellectual interests. Learning how to learn.

B. Emotional and Moral Development

(1) Personal self-discovery. Knowledge of one's own talents, interests, values, aspirations, and weaknesses. Discovery of unique personal identity.

(2) Psychological well-being. Progress toward the ability to "understand and confront with integrity the nature of the human condition" (Perry, 1970, p. 201). Sensitivity to deeper feelings and emotions combined with emotional stability. Ability to express emotions constructively. Appropriate self-assertiveness, sense of security, self-confidence, self-reliance, decisiveness, spontaneity. Acceptance of self and others.

(3) Human understanding. Humane outlook. Capacity for empathy, thoughtfulness, compassion, respect, tolerance, and cooperation toward others, including persons of different backgrounds. Democratic and nonauthoritarian disposition. Skill in communication with others.

(4) Values and morals. A valid and internalized but not dogmatic set of values and moral principles. Moral sensitivity and courage. Sense of social consciousness and social responsibility.

(5) Religious interest. Serious and thoughtful exploration of purpose, value, and meaning.

(6) Refinement of taste, conduct, and manner.

TABLE 2.1 (continued)

TAXONOMY FOR THE STUDY OF OUTCOMES

C. Practical Competence

(1) Traits of value in practical affairs generally. Virtually all of the goals included under cognitive learning and emotional and moral development apply to practical affairs. In addition, the following traits, which are more specifically related to achievement in practical affairs, may be mentioned:

    (a) Need for achievement. Motivation toward accomplishment. Initiative, energy, drive, persistence, self-discipline.

    (b) Future orientation. Ability to plan ahead and to be prudent in risk-taking. A realistic outlook toward the future.

    (c) Adaptability. Tolerance of new ideas or practices. Willingness to accept change. Versatility and resourcefulness in coping with problems and crises. Capacity to learn from experience. Willingness to negotiate, compromise, and keep options open.

    (d) Leadership. Capacity to win the confidence of others, willingness to assume responsibility, organizational ability, decisiveness, disposition to take counsel.

(2) Citizenship. Understanding of a commitment to democracy. Knowledge of governmental institutions and procedures. Awareness of major social issues. Ability to evaluate propaganda and political argumentation. Disposition and ability to participate actively in civic, political, economic, professional, educational, and other voluntary organizations. Orientation toward international understanding and world community. Ability to deal with bureaucracies. Disposition toward law observance.

(3) Economic productivity. Knowledge and skills needed for first job and for growth in productivity through experience and on-the-job training. Adaptability and mobility. Sound career decisions. Capacity to bring humanistic values to the workplace and to derive meaning from work.

(4) Sound family life. Personal qualities making for stable families. Knowledge and skill relating to child development.

TABLE 2.1 (continued)

TAXONOMY FOR THE STUDY OF OUTCOMES

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(5) Consumer efficiency. Sound choice of values relating to style of life. Skill in stretching consumer dollars. Ability to cope with taxes, credit, insurance, investments, legal issues, and so on. Ability to recognize deceptive sales practices and to withstand high-pressure sales tactics.

(6) Fruitful leisure. Wisdom in allocation of time among work, leisure, and other pursuits. Development of tastes and skills in literature, the arts, nature, sports, hobbies, and community participation. Lifelong education, formal and informal, as a productive use of leisure. Resourcefulness in overcoming boredom, finding renewal, and discovering satisfying and rewarding uses of leisure time.

(7) Health. Understanding of the basic principles for cultivating physical and mental health. Knowledge of how and when to use the professional health care system.

D. Direct Satisfactions and Enjoyments from College Education

(1) During the college years.

(2) In later life.

E. Avoidance of negative outcomes for individual students.

II. Goals for Society

(Note: These goals may be achieved through education, through research and related activities, or through public services.)

A. Advancement of knowledge

(1) Preservation and dissemination of the cultural heritage.

(2) Discovery and dissemination of new knowledge and advancement of philosophical and religious thought, literature, and the fine arts--all regarded as valuable in their own right without reference to ulterior ends.

TABLE 2.1 (continued)

TAXONOMY FOR THE STUDY OF OUTCOMES

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(3) Direct satisfactions and enjoyments received by the population from living in a world of advancing knowledge, technology, ideas, and arts.

B. Discovery and Encouragement of Talent.

C. Advancement of Social Welfare.

(1) Economic efficiency and growth.

(2) Enhancement of national prestige and power.

(3) Progress toward the identification and solution of social problems.

(4) "Improvement" in the motives, values, aspirations, attitudes, and behavior of members of the general population.

(5) Over long periods of time, exerting a significant and favorable influence on the course of history as reflected in the evolution of the basic culture and of the fundamental social institutions. Progress in human equality, freedom, justice, security, order, religion, health, and so on.

D. Avoidance of Negative Outcomes for Society.

Conceptual Distinctions

The literature review contains interesting conceptual distinctions drawn mainly by sociologists interested in organizational theory. The distinction between output and support goals (Gross and Grambsch, 1968) is between those "which are manifested in a product of some kind (output goals). . . and those which are the

ends of persons responsible for the maintenance activities. . . of

the organization" (support goals). In the university, the former:

> involve the usual goals of teaching, research and
> community service. . . the latter involve a variety
> of activities designed to help the organization sur-
> vive in its environment, those that ensure that the
> university is run in desired ways, those designed to
> ensure motivated participation, and those designed
> to ensure the university's position in the population
> of universities (Gross, 1968).

Official goals have been contrasted with operative goals by

Charles Perrow (1961). For him, official goals:

> are the general purposes. . . as put forth in the
> charter, annual reports, public statements by key
> executives, and other authoritative pronouncements
> such as the college catalogue, while operative goals
> designate the ends sought through the actual operat-
> ing policies of the organization; they tell us what
> the organization actually is trying to do, regardless
> of what the official goals say are the aims.

Amitai Etzioni (1964) makes approximately the same distinc-

tion, using the words stated and real goals. Operative goals bear

no necessary relation to official goals; the former, says Perrow,

"may support, be irrelevant to, or subvert official goals." Various

researchers (Perrow, 1961; Etzioni, 1964; Price, 1968; Churchman,

1968) have pointed out the relative difficulty of identifying the

operative or real goals of an organization.

In organizations the problem of goals and goal attainment

has priority over all other problems (Parsons, 1961, pages 38-41).

The existence of the organization is justified primarily by its

orientation to a set of goals, and it is continually judged by how

successfully it attains those goals. Simon (1964) comments that in

spite of the very great amount of research and theoretical atten-
tion which has been given to formal organizations, little attention
has been paid to developing a clear definition of what is meant by
a goal in the first place. The concept seems to be taken for
granted in most studies, yet the specific goal of a particular
organization is an empirical matter which can be ascertained.

Etzioni (1964, page 6) defines an organizational goal as
"a desired state of affairs which the organization attempts to
realize." It is essential, a priori, to distinguish private from
organizational goals. For Gross and Grambsch (1974, page 9) a
private goal consists of a future state that the individual desires
for himself. Such a notion comes close to the psychologist's
conception of a motive. This meaning may be distinguished from
what a particular person desires for the organization as a whole
(Cartwright and Zander, 1953, pages 308-311). The latter comes
closer to the notion of an organizational goal, although it still
consists of something that the particular person wishes and may not
at all correspond to the organization's goals.

Thompson and McEwen (1958) and Parsons (1961) have attempted
to define goals in terms of systems linkages. Both have seen a goal
as involving some type of output to a larger society. Amitai
Etzioni (1964, pages 16-19) has criticized the goal approach to the
study of organizations as being too limited. To define an organiza-
tion solely in terms of its degree of success in obtaining that
goal is to doom the investigator to disappointment.

An institution's mission, goals, and objectives are all involved in assessing institutional goals. Pratt and Reichard (1983, page 53) offer the following definition for these terms: The mission is a statement of educational philosophy, which may include a description of special populations to be served. It changes infrequently and provides a long-term sense of identity to an institution. Goals, in contrast, provide a sense of direction for the shorter term. Objectives are much more specific statements, which describe activities and related outcomes for short periods of time.

Fenske (1980) presents a definition of goals that reflect the broad consensus of other authors. He defines goals as statements of university purpose that fall between extremely broad statements, such as those contained in the institutional mission, and specific descriptions of various operations within a university. Obviously, a broad mission statement can generate several goals, and each goal, in turn, can create many objectives. Goals imply a desired outcome. As Pratt and Reichard (1983, page 54) remind us, a key element is the translation of broad goals, which may prove difficult to measure, into more specific and measurable objectives. Obviously, goals are the cornerstone of effective planning, and yet there are those who question the need for goals. As Fenske (1980, page 178) indicates: "The question 'Why study goals?' is somewhat annoying to most planners and researchers, in that the answer seems so obvious, even axiomatic. One of the few things organizational theorists agree on is the necessity of defining and studying goals".

The debate over the utility of mission statements is obscured by the absence of widely accepted definitions to distinguish among a number of interrelated terms. Caruthers and Lott (1981, page 26) state that mission, role, scope, goal, and objective are used almost interchangeably by authors in the field. In general, mission, roles and scope describe the philosophy, clientele, and dimension--the identity of a college. The goals and objectives dimension relates more to actions--that is, the steps an institution plan to take in order to achieve certain outcomes that will help it fulfill its desired mission. The former dimension usually focuses on what the institution is and hopes to be, the latter on the means to reach that end. Mission and scope and objectives imply the more specific parts of any overall statement. Thus for the most part, the mission of an institution is relatively unchanging, while the scope and particularly the objectives, are subject to regular revision.

Romney and Bogen (1978) have defined goal as a set of circumstances sought in pursuit of the mission. Goals are usually stated in broad qualitative terms and serve as guides for institutional development in a particular frame of time. Objectives are specific ends to be achieved with regard to a particular goal. An objective is often stated in more quantitative, outcomes-oriented terms. A frequent purpose of formulating a set of goals and objectives is to enable an institution to change its role and scope.

Techniques for Identification of Goals

Many questions can be asked by those responsible for planning and development of goals and objectives, when an institution reaches the conclusion that some formal process must be to identify goals. Should the planners use a collection of goal statements developed elsewhere, or should they develop a list of goals expressly for their institution? Who will be the constituent groups involved in the process? How many persons from each group will be part integrant in the process, as respondents? What will the process to select a defined set of goals? Who will be responsible for coordinating such endeavor? How long will such planning group work together? Such planning and work in goals development require considerable amount of time and resources. However, standardized instruments, sampling techniques, and even some standardized analyses of data are available and can reduce the institutional effort. One such instrument will be now discussed.

Institutional Goals Inventory (IGI)

The Institutional Goals Inventory (IGI) was developed by Peterson and Uhl at the Educational Testing Service (ETS). It is considered to be one of the most extensive and the best known compilations of goal statements (Pratt and Reichard, 1983). The IGI was developed as a tool that colleges and universities may use in the process of identifying basic campus goals and in determining priorities among them. For Peterson and Uhl (1977) the IGI can indicate the degree of consensus among people at the college regarding the

importance of each goal. King and others (1973) in their analysis
on the subject, concluded that the IGI was judged to be superior
(in terms of goals statement coverage, flexibility, and ease of
administration) to the only other known published goals inventory,
produced by the National Lab for Higher Education in Durham, North
Carolina. The instrument does not tell colleges and universities
what to do in order to reach goals. Instead, it provides a means by
which many individuals and constituent groups can contribute their
thinking about desired institutional goals.

The inventory is comprised of ninety goal statements which
attempt to conceptualize in a meaningful way the spectrum of goals
of American colleges and universities. It is divided into twenty
goal areas. There are four goal statements per goal area with ten
goal statements categorized under the rubric "miscellaneous". The
twenty goal statements are divided into thirteen outcome goals and
seven process goals. They are listed below in Table 2.2 as shown
by Peterson and Uhl (1977).

Descriptions of Goal Statements of the IGI

Peterson and Uhl (1977) have described the twenty goal areas
shown in Table 2.2 as follows:

Outcome Goals

Academic Development has to do with acquisition of general
and specialized knowledge, preparation of students for advanced
scholarly study, and maintenance of high intellectual standards on
campus.

TABLE 2.2

OUTCOME AND PROCESS GOALS

OUTCOME GOALS (Goals the college or university seek to realize)	PROCESS GOALS (Goals of a supportive nature--when attained, they facilitate reaching the outcome goals)
Academic Development	Freedom
Intellectual Orientation	Democratic Governance
Individual Personal Development	Community
Humanism/Altruism	Intellectual/Aesthetic Environment
Cultural/Aesthetic Awareness	Innovation
Traditional Religiousness	Off-Campus Learning
Vocational Preparation	Accountability/Efficiency
Advanced Training	
Research	
Meeting Local Needs	
Public Service	
Social Egalitarianism	
Social Criticism/Activism	

Intellectual Orientation relates to an attitude about learning and intellectual work. It means familiarity with research and problem solving methods, the ability to synthesize knowledge from many sources, the capacity for self-directed learning, and a commitment to lifelong learning.

Individual Personal Development means identification by students of personal goals and development of means for achieving them, enhancement of sense of self-worth and self-confidence.

Humanism/Altruism reflects a respect for diverse cultures, commitment to working for world peace, consciousness of the important moral issues of the time, and concern about the welfare of man generally.

Cultural/Aesthetic Awareness entails a heightened appreciation of a variety of art forms, required study in the humanities or arts, exposure to forms of non-Western art, and encouragement of active student participation in artistic activities.

Traditional Religiousness is intended to mean a religiousness that is orthodox, doctrinal, usually sectarian, and often fundamental--in short, traditional rather than secular or modern.

Vocational Preparation means offering specific occupational curriculums (as in accounting or nursing), programs geared to emerging career fields, opportunities for retraining or upgrading skills, and assistance to students in career planning.

Advanced Training can be most readily understood simply as the availability of postgraduate education. It means developing

and maintaining a strong and comprehensive graduate school, providing programs in the professions, and conducting advanced study in specialized problem areas.

Research involves doing contract studies for external agencies, conducting basic research in the natural and social sciences, and seeking generally to extend the frontiers of knowledge through scientific research.

Meeting Local Needs is defined as providing for continuing education for adults, serving as a cultural center for the community, providing trained manpower for local employers, and facilitating student involvement in community-service activities.

Public Service means working with governmental agencies in social and environmental policy formation, committing institutional resources to the solution of major social and environmental problems, training people from disadvantaged communities, and generally being responsible to regional and national priorities in planning educational programs.

Social Egalitarianism has to do with open admissions and suitable education for all admitted, providing educational experiences relevant to the evolving interests of minority groups and women, and offering remedial work in basic skills.

Social Criticism/Activism means providing criticisms of prevailing American values, offering ideas for changing social institutions judged to be defective, helping students learn how to bring about change in American society, and being engaged, as an institution, in working for basic changes in American society.

Process Goals

Freedom is defined as protecting the right of faculty to
present controversial ideas in the classroom, not preventing stu-
dents from hearing controversial points of view, placing no restric-
tions on off-campus political activities by faculty or students, and
ensuring faculty and students the freedom to choose their own life-
styles.

Democratic Governance means decentralized decision-making
arrangements by which students, faculty, administrators, governing
board members can all be significantly involved in campus governance;
opportunity for individuals to participate in all decisions affect-
ing them; and governance that is genuinely responsive to the concerns
of everyone at the institution.

Community is defined as maintaining a climate in which there
is faculty commitment to the general welfare of the institution,
open and candid communication, open and amicable airing of differ-
ences, and mutual trust and respect among students, faculty, and
administrators.

Intellectual/Aesthetic Environment means a rich program of
cultural events, a campus climate that facilitates student free-time
involvement in intellectual and cultural activities, an environment
in which students and faculty can easily interact informally, and
a reputation as an intellectually exciting campus.

Innovation is defined as a climate in which continuous innova-
tion is an accepted way of life; it means established procedures for

readily initiating curricular or instructional innovations; and, more specifically, it means experimentation with new approaches to individualized instruction and to evaluating and grading student performance.

Off-Campus Learning includes time away from the campus in travel, work-study, VISTA work, etc., study on several campuses during undergraduate programs; awarding degrees for supervised study off the campus; awarding degrees entirely on the basis of performance on an examination.

Accountability/Efficiency is defined to include use of cost criteria in deciding among program alternatives, concern for program efficiency, accountability to funding sources for program effectiveness, and regular submission of evidence that the institution is achieving stated goals.

The Educational Testing Service (ETS) has published guides for use of the Institutional Goals Inventory (IGI), which describe the instrument, suggest appropriate methods for conducting a goals study (Peterson and Uhl, 1975) and provide comparative data (Peterson and Uhl, 1977). The IGI measures respondents' perceptions of the extent to which each goal statement describes the current orientation of the institution and also the extent to which each goal should be emphasized. The discrepancy between what should be (desired goals) and what is (perception of current reality) provides insights into value orientation of various constituencies. There are several methods for selecting high-priority goals. One of the

simplest, from an administrative point of view, is the survey.
Adopting this approach for data collection, a large set of goal
statements is sent to prospective respondents chosen from each
institutional constituent group. The results of the survey are
compiled, and the highest-ranked (or highest-rated) goals become
the current goals of the institution (Pratt and Reichard, 1983).
The survey approach has the advantage of being relatively inexpen-
sive, requiring a minimum of each participant's time and allowing
inclusion of a greater number of participants.

For each goal statement appearing in the inventory, the
respondent is asked to check the degree of importance for the insti-
tution on a five point Likert scale. Response choices are: "of
extremely high importance", "of high importance", "of medium impor-
tance", "of low importance", and "of no importance". The IGI asks
participants to rate goals in two ways. First, the participant is
asked to rate the goal as to its current importance, the Is
response; and, second, the participant rates the goal as to the
importance it should have in the future, the Should Be response.
In selecting goals for attention, it is especially important to
consider the goals that have the highest Should Be ratings, accom-
panied by a large discrepancy between Is and Should Be ratings.
Thus, the IGI is a tool used to measure perceptions of members of
various constituent groups. If longitudinal data are not available,
discrepancy analyses incorporating a series of actual (Is) versus
ideal (Should Be) comparisons also may be helpful in assessing

differences between expectations and outcomes. In this regard, differences between the ideal and the actual attainment of specific goals may be evaluated (Pratt and Reichard).

Use of the Institutional Goals Inventory (IGI) is appropriately only one element in a larger goal-setting process that would involve information and ideas from many sources together with all manner of deliberation (Peterson and Uhl, 1977). The assessment of goals is a complex process. Specifying the relationship between a goal and a set of outcomes by formulating clear objectives is the key to the process. The essential significance of the resulting goals conception is that it sets forth basic institutional policy, which then has the potential of serving as a unifying ideology throughout the campus (Peterson and Uhl, 1977).

Conceptual Framework

The general strategy followed by Peterson and Uhl (1977) in constructing the IGI was first to develop a theoretical framework-- a conceptualization of higher education goals--and then to write goal statements that seemed to reflect each of the goals, or goal areas, conceived.

Two general considerations guided their conceptual efforts. First, they established a structure that was comprehensive, embracing the major goals of all kinds of higher education institutions. The development and publication of the IGI, has a major advantage of a single standard instrument in that it enables and encourages comparative multicampus studies that can be especially illuminating to

participating colleges. Second, the conceptual framework needed to be specific enough for the resulting instrument to yield information for some suitable number of goals. Peterson and Uhl (1977) assert that the initial conceptualization for the instrument grew out of extensive deliberations within a task group at the Educational Testing Service (ETS), in New Jersey. The preliminary Institutional Goals Inventory, which was based on the Gross and Grambsch (1968) response format, was developed specifically for a study carried out during 1970 under Uhl's direction. One purpose of the project was to define the goal structures of five colleges that were working with the Lab in developing its Administrative Organizations System (AOS) model. Peterson and Uhl assert that the final turn in the conceptual evolution of the IGI was to abandon the words output and support in favor of outcome and process. Output implies production of a perhaps standard product, as on an assembly line; outcome is more suggestive of ends and purposes, perhaps in variable combination. Support, means maintenance and survival; by process, the authors wish to refer to the characteristic model and styles that define the process by which the work of the college is carried forth.

Economics of Education

From the outset an operational definition of economics, education, and economics of education, is deemed necessary. Economics defined: Samuelson (1961) acknowledges that there is no single definition of economics, but he develops "an informative introductory description" in the following ways: "Economics is the study of how

men and society choose, with or without the use of money, to employ
scarce productive resources to produce various commodities over
time and distribute them for consumption, now and in the future,
among various people and groups in society" (page 6). Education
defined: According to Webster's New World Dictionary (1962),
education is "the process of training and developing knowledge, skill,
mind, character, etc., especially by formal schooling" (page 461).
The Economics of Education defined: Based upon the definitions of
economics and education, a definition of the economics of education
emerges: The economics of education is the study of how men and
society choose, with or without the use of money, to employ develop-
ment of knowledge, skill, mind, character, and so forth--especially
by formal schooling--over time and to distribute them, now and in
the future, among various people and groups in society. As Cohn
(1979, page 2) pointed out, the economics of education is concerned
with (1) the process by which education is produced; (2) the dis-
tribution of education among competing groups and individuals; and
(3) questions regarding how much should be spent by society (or any
of its component individuals) on educational activities, and what
types of educational activities should be selected.

Psacharopoulos has written, that ideas are that, tradition-
ally, the factors influencing education in the community have been
examined from the sociodemographic point of view. It has been
established for example, that education promotes social goals as
the creation of better citizens and the possibility of social

mobility by facilitating occupation change (in Knowles, 1977,

page 1344). In the past three decades, education has been increas-

ingly looked on from an economic viewpoint, that is, the economic

impact on the individual, his community, and his society as a whole.

Historical Perspective of Economics of Education

The purpose here is not to state of develop new ideas, nor

to establish a framework. Rather, the purpose here is to present

an intellectual introduction on historical perspective of economics

of education, which is but one intellectual and estimulating area

of interest held by the researcher.

Human capital is an old concept but a relatively new research

area in economics. The central ideal is that human capacities are

in large part acquired or developed through informal and formal

education at home and at school, and through training experience,

and mobility in the labor market (Mincer, 1979, page 1).

Interest of economists in the effects of higher education

can be traced historically at least to the writings of Adam Smith,

who commented in some detail on the social and economic benefit of

education. Adam Smith in 1776 considered the skills of labor to be

the predominant force for economic progress and part of his defini-

tion of capital. In 1890, Alfred Marshall argued that schooling

may be regarded as a national investment. He also suggested that

the profit motive operates in personal investment in the same manner

as it operates in other capital investment decisions (1961, Ninth

edition). The tradition of economic reasoning was maintained by the

other great economists. Ricardo was concerned to show that increase in economic well-being of the masses could arrive from a diminution of the population or augmentation of capital. He and Malthus favored education as means of inculcating habits which would lead to family limitation (Vaizey, 1962, page 19).

Alfred Marshall (Sixth edition, 1910, page 217), refers to "education as national investment" and writes "There are few practical problems in which the economist has a more direct interest than those relating to the principles on which the expense of the education of children should be divided between the state and the parents". He adopted the prevailing psychology, which was based very much on "learning by doing" and so supported practical forms of education, linked to industry (Vaizey, 1962, page 21).

As observed, from the earliest days, the great classical economists such as Adam Smith, Ricardo and Marshall, brought to bear upon education a searching and measuring approach concerned with its contribution to wealth creation and the "orderly habits of people" (Lyons, 1979, page 416). Marx shared in this tradition, and developed, too, Adam Smith's plea for education as a counterbalance to the inhuman results of the division of labor. For him, the function of education in a socialist society will be to overcome the alienation of the worker from the means of production, while developing his technical skills; it will be to restore him as a man as well as keeping him as a producer (Vaizey, 1962, page 24). Marx was wrong in believing that general education cannot evolve in a

capitalist society. Professor Johnson (1960, page 563) observes: "Application of Marx's general analytical method to the system of corporate industrial production suggests, not the polarization and eventual breakdown of capitalist society that he predicted, but the consolidation of a highly differentiated hierarchical society in which status is determined ultimately by educational attainment".

As economic growth was resumed in 1940 shortages of skilled talent became evident; and with growing interest in the measurement of economic magnitudes work has become focused on the problem of evaluating "human capital." As Johnson (page 562) observes, this development has affected economic thought about the worker and his wages. "His knowledge and skill in turn are the product of a capital investment in his education in the general capacities of communication and calculation required for participation in the production process, and the specific capacities required for the individual job, a capital investment which is variously financed by the state, the worker himself and the employer. Thus the laborer is himself a produced means of production, an item of capital equipment."

Empirical analysis of the economic value of investments in schooling have been undertaken since the first decade of this century (Ellis, 1917; Walsh, 1935). But intense professional interest in economics of education did not truly begin until about 1960, when empirical investigations of the American economy confirmed that the output of goods and services had been growing much more rapidly than the quantity of labor, capital, and materials used to produce

it (Douglass, 1977, page 360). Nonetheless, Machlup (1976, page 10)
has warned us that nothing in modern economics is more speculative
than quantitative empirical research.

An interesting point of debate in the discussion of the growth
of higher education concerns the role played by early work of Schultz
(1960), Denison (1962), and Harbison and Myers (1964) which attempted
to show a causal link between educational expansion and economic
growth. It took longer before the states' management of the educa-
tional systems became affected by the intention of stimulated or
sustained economic growth. The idea that formal education is an
investment has been enthusiastically received in both the developed
and the developing world.

Manpower Needs and Expenditure on Education

Education has become a major source of skills and trained
talent. Indeed, from one point of view, this is education's critical
economic role. Some economists agree that expenditure and effort by
national education authorities should be directed towards the fore-
casting of needs for scientific and technical education. Since there
is always scarcity of resources to finance education, it is diffi-
cult to decide how wisely to distribute available money between
levels and types of education. Developing nations are particularly
pressed to meet the urgent needs for scientists, technologists and
technicians, reforming the overly humanistic curricula and programs,
and turn to the systematic education and training of the needed
personnel by spending greater sums on such scientific and technical

education. Manpower needs can also be met by developing non-formal education through the efforts of business firms, but this involves many social and organizational problems (Lyons, 1979, page 427).

There is also the role of money in encouraging recruitment to teaching and to jobs which are of prior importance for economic development. Dudley Seers and Richard Jolly in a series of studies (Jolly, 1969), have examined the difficulties of providing education in countries where the salaries for teachers and of educated people were high, relative to those of less educated or uneducated people, and where with limited budget resources education could not be developed in order to meet estimated needs. Being education an investment of human capital, it naturally follows that the accumulation of this human capital should be a factor in economic growth. Vaizey identifies three initial roles for education. One is to supply skilled manpower and technicians without whom physical capital would be wasted. The second is to generate "a climate for growth", by giving the masses a capacity for thinking beyond their immediate needs and troubles. The third is to teach the cultivators simple and elementary rural skills which will yield a small surplus over subsistence consumption and which can be the basis for physical accumulation.

Human Capital: A Conceptual Framework

The human capital hypothesis is an approach which relates levels of schooling to demands in the market place for skilled labor. Basically, the hypothesis is that a growing demand for skills

increases the individual's monetary returns to investment in schooling-
to investment in his or her human capital-and, hence, that unless the
real and opportunity costs of formal education or the demand for
unskilled labor increase proportionately, levels of schooling will
rise (Becker, 1964; Mincer, 1958; T. W. Schultz, 1961). Education
for Craig (1981, page 159) can result in higher earnings, in social
control, in national integration, and so on. From an economic point
of view education may be regarded both as consumption and as invest-
ment. Education can lead not only to higher wages in the labor mar-
ket but also to better working conditions and fringe benefits (Duncan,
1976; Freeman, 1978; Lucas, 1977). Schooling can make individuals
more proficient learners and increase their propensity to seek new
knowledge (Goody, 1977; Heckman, 1976; Hyman, Wright, and Reed, 1975).
It also can make them more efficient consumers, thus raising their
real income (Michael, 1973). It can contribute to better health and
greater life expectancy (Grossman, 1975). It can result in a better
allocation of men and women in the marriage market and hence in more
suitable and rewarding marriages (Becker, Landes and Michael, 1977).

Human capital as most economists define it, consists of the
acquired energy, motivations, skills, and knowledge possessed by
human beings, which can be harnessed over a period of time to the
task of producing goods and services (Douglass, 1977, page 362).

A Brief Overview

Economics of education is a field of study gaining increasing
interest by educators. This area called for an extensive review of

the literature to trace some historical aspects related to what economists have said about economics of education with regards to social and economic benefits of education. Based on the review of the literature it can be concluded that (1) during the past thirty years or so economists have made a substantial contribution to thinking about problems of resource allocation to education and of returns to education; (2) the study of costs and expenditures on education has advanced considerably; (3) the relationship of expenditure on education to economic growth, individual and social returns to education, and the role of education in meeting economic needs, similarly, gained attention of analysts of economics of education.

The issue of the role of the state in determining the balance between social expenditures and other expenditures in national economic and social development remains central to "economics of education". Economists still have an important contribution to make to the development of cost and finance analysis and to studies of the efficiency of resource allocation to education in order to avoid waste (Lyons, 1979).

Sociology of Education

Max Weber was the first sociologist to apply sociology to the field of higher education (Shils, 1974). Max Weber (1946, page 426), has classified educational system into three major types as follows:

(1) The attempt to call forth and to test allegedly inherent traits to the individual, to allow them to unfold, to be realized. This is generally characteristic of charismatically sanctioned institutions and status groups.

(2) By rote learning and moral exhortion, by drill and imposed habituation, the attempt to stereotype the individual into line with the traditional routines, which is generally characteristic of traditionalist societies.

(3) The attempt rationally to transmit to the individual certain traits, to train him for specific skills by challenging him to think and act independently-- which is generally characteristic of educational spheres of rational bureaucratic organizations.

Weber's third category classification is the prevalent type of educational system. In modern education the principal aim is to develop rational faculties of human beings so that they can have independent thinking and their actions are not governed by any stereotype norms or principles. This type of training helps the individual to challenge the dogmatic beliefs and to inculcate rational thinking. The encouragement of rational and independent thinking, consequently, affects the behavior of the individuals, as thought and behavior are closely interrelated. Education can be regarded as influencing both the thought and behavior-patterns of the individuals and when there are changes in the behavior-patterns of individual members of various social groups, the social structural elements of a community are bound to have a significant impact (Bhatnagar, 1972, page 4). The term sociology was coined by Comte in the first half of the nineteenth century. Comte divided the new subject in two parts: social dynamics (to study the progress of society), and social statics (to study the order of society). Education was clearly related to social progress, its social function was given considerable attention by early socio- logists such as Comte, Spencer, Durkheim and Ward. Durkheim, above

all, defined clearly the scientific nature of sociology of education and education as "methodical socialization of the younger generation" (Durkheim, 1956, pages 49, 119). He analyzed the history of French educational thought in terms of a relationship between social development and educational institutions, and explained the function of the school in training youth in civil morality (Shimbori, 1979, page 396).

While these sociologists were interested mainly in the relationship of education to social progress, early American sociologists developed sociology not from purely academic motives but in response to practical needs, as means of resolving social problems such as crime, divorce, unemployment, poverty, delinquency, prostitution and racism. With the dramatic expansion of educational institutions in early part of this century, and particularly after the Second World War, education was recognized as means of economic recovery, necessary for development and for national cohesion. As a strong educational movement, there was the Parallel Community School Movement which tried to combine progressivism and essentialism and to use education as a means of community development. After the war, ducational sociology became an established sub-discipline of sociology of education, with three approaches as follows:

(1) cultural anthropology

(2) social psychology

(3) historical-institutional.

The cultural-anthropological approach focused attention on social class and education, via problems like educational opportunity,

social mobility, child-rearing and "culture and personality" (Bogdan and Biklen, 1982, pages 11-26).

The social psychological approach had the tendency to analyze the school class and school as social systems, examining the structures of human relations, role systems, school cultures, group norms and communication processes, using techniques such as experiments, controlled observation, micro-sociological analysis and statistical questionnaires.

The historical-institutional approach was mainly interested in the social functions of education.

Shimbory (1979, page 400) argues that the scientific level of a discipline depends to a great extent upon the development of cognate disciplines, and as they grow in quality, educational sociology necessarily is improved. So, as theories and findings in the fields of sociology, social psychology, cultural anthropology, research methods in statistics and social surveys have been remarkably improved, education as a social phenomenon has been explored in more sophisticated ways. The "new" sociology of education appeared in the 70's. Although in the crisis of education in the 60's the benefits of widespread schooling were seriously doubted, sociologists of education still believed in their competence in helping to solve the crisis. The "new" sociology appeared with a pessimistic view of the ability of the "old" sociology of education to analyze and rescue contemporary education. This "new" sociology, both at the theoretical and the methodological level seeks to re-examine fundamentally

the social function of sociology and the social role of sociologists. The Frankfurt School, covering a vast range of scholars such as Horkheimer, Adorno, Marcuse, Fromm, Habermas and Schmidt were the radical sociologists critical of both functionalism and of Marxism. The "old" school was seen as a failure in dealing adequately with conflict and change, and thus accused of maintaining the status quo of society. Through functionalism, education could not promote social change or innovation.

Social Goals of Higher Education

Educationists have observed and studied the relationship of education and society since Plato, who is considered to be the father of the philosophy of education, and who was the initiator of the social function of education. Since last century, the educational theory has been characterized as more individualistic, with the full development of the individual as the center, the aim of education. Michiya Shimbori (1979, page 394) in reviewing the historical trend of educational theory, asserts however that since Herbart established pedagogy as a systematic theory, the main trend of educational theory for a long time has been individualistic, in that it took the completion of an individual being as the aim of education, with teaching seen as a deliberate and planned process of formal instruction. Historically, there has always existed two broad views of education. One which emphasizes individual development, views expressions of rationalists, existentialists, and transcendentalists, and the other, which views expressions of pragmatism, utilitarianism, and social

reconstruction. These opposing extremes are known as individualism and collectivism. The individualistic, emphasizes the development of persons as the final end, and the collectivistic, emphasizes the advancement of society as the final end (Emmerij, 1974, pages 147-151, 170-171, 191-200).

Individualism versus Collectivism

The following are the assumptions underlying the extreme individualistic and collectivistic points of view. They were discussed in Bowen (1977, page 46). Individualistic assumptions are (1) that education should be designed to produce autonomous individuals who are civilized and effective in practical affairs; (2) that a society of such individuals will spontaneously work out a desirable social destiny through the democratic process as a result of their separate and collective decisions and actions; (3) that research and related intellectual and artistic activities of the academic community should be designed to foster learning for its own sake; and (4) that such learning will spontaneously turn out to be useful for both cultural development and practical affairs.

The assumptions underlying the extreme collectivistic point of view are (1) that "society" has goals that may be distinguishable from the interactive summation of individual goals; (2) that education should be designed to shape individuals to serve the purposes of the nation--usually set forth by the government or by a party leadership; and (3) that research and related intellectual and artistic activities should be directed toward the achievement of

national goals, including the solution of social problems. This

point of view was recently described by Jan Szczepanski (1974, page

7) as: ". . . a process of intentional formation of the personality

according to an established personality idea. . . " He then outlined

the goals of higher education as follows:

> First is the education of the desired personality type
> required by the relations of production--to use the
> Marxian terminology--or, in other words, the type of
> personality required by the structure of the economy
> and this type of socialized society.
>
> Next, the most important goal is the vocational and
> professional education of graduates required by the
> present state for the expected future development of
> the economy. . . The third goal is preparation for
> participation in social and cultural identity of the
> nation. . .
>
> The final goal is to assure the optimal development of
> human individuality, to provide the individual with the
> chance for self-orientation and self-education. This
> goal is to prepare him fully to function in all con-
> texts of social life, not only in the economic sphere.
> This is, I might say, an echo of the Humboldtian idea
> of the fully developed creative personality (1974,
> pages 10-11).
>
> Sociologist and educator Szczepanski added:
>
> Within every institution of higher education the party
> organization has to watch that the political line is
> being respected. . . One of the most important problems
> is the harmonization of the state and government goals
> and societal goals with the personal goals of the fami-
> lies who send their children to an institution of higher
> education, and students who want to achieve personal
> life goals. The traditional images of the role and
> function of higher education still influence the expec-
> tations of students and their families. But the tradi-
> tional images are irrelevant to contemporary reality
> (pages 18-19).

While it is true that a nation must find its place on the

continuum between individualistic and collectivistic educational

approaches, the researcher believes that the individualistic view is the one held in the American educational system. Thomas Jefferson, Horace Mann, and John Dewey are examples of educationists whose concepts of education and democracy are well known world over. Education has been regarded as a means of preparing individuals capable of choosing sound goals for society and effective in achieving these goals through the democratic process.

Social Change versus Stability

Is education an agent of social change or an agent of social stability? Or both? Some observers hold on to the theory that higher education should equip students to understand and appreciate the cultural heritage, to value social continuity, to discover what is right in society as well as what is wrong, to distinguish between what is possible and impossible in social reform, and to work toward the preservation of that which is worth preserving (Bowen, 1977, page 49). Other observers maintain that the college or university should serve society in the capacity of social critic--as a center from which ideas basic to social change would emerge. The dual roles of higher education may not be in conflict. The true goal may be men and women with free minds who can form balanced judgments about change and stability and who can work toward orderly and progressive social development, drawing on both old and new (see Ottoway, 1962; Clark and others, 1972; Ladd and Lipset, 1975).

Organization and Administration of Higher Education

General administration of colleges and universities consists essentially of the overall direction and management. Organization patterns range from simple structures for smaller, two- and four-year colleges to very complex structures of administration for very large universities with traditional undergraduate and graduate programs and many special missions (Rodgers, 1977). College and university administration has, as its goal, the achievement of effective participation in the affairs of institutions by various constituencies of such institutions--faculty and staff, students, and members of the governing boards.

Organizational Theory

The basic organizational structure of a college or university is determined by its missions and charter, its size and scope of services, its complexity, and its philosophy of education. The primary missions of educational institutions are teaching, research, and public service. The degree to which any institution undertakes these three missions and the breadth of its offerings and activities in one or any combination of them determine its organizational structure and administrative pattern.

Research on the organization of Western colleges and universities has been emerging as a serious area of inquiry since the 1960s (Peterson, 1974a). No consensus exists as to the most appropriate model for the administrative organization of colleges and universities. As Corwin (1974) suggests, researchers are beginning

to determine that different models may be applicable under different conditions. Two major types of current research is detected: descriptive studies, based on empirical evidence; and research and normative studies, based on decision theory and management science methods relating to efficient and effective organization.

Descriptive Studies

Baldridge (1971a; 1971b) conducted an intensive, two-year empirical study of a "political process" model of institutional decision making in an American university. In. this study he concentrated on the major policy issues affecting New York university in the late 1960s. The simple political model consists of five components: (1) the social context factors, (2) interest articulation, (3) legislative transformation, (4) policy consensus, and (5) execution of policy. Baldridge believes that the effective formulation of policy, through his suggested political process, is more important to the effectiveness of colleges and universities than the concentration on effective utilization of resources because the latter assumes that policies have been effectively formulated.

Parsons and Platt (1973), conducted a study of American research-oriented universities. Parsons and Platt view the American university as essentially a stratified collegial institution. The university's primary societal function is that of guardian of cognitive culture and the interests that support such culture. The graduate faculties and research centers are the core of the universities.

The primary function of the graduate faculty is to maintain standards of cognitive rationalities; additional functions are related to undergraduate socialization; training in the professions; and the education of social critics. This theory of university organization ascribes a detached societal role for universities in which their primary concerns are the advancement of knowledge and the development of cognitively significant competencies. Van den Berghe (1973), on the other hand, considers the relationship of the university to society as most important. He conducted an intensive sociological case study as a "minimally participant observer" of a major African university. In this study, Van den Berghe focused on the political structure of the university and its relationship to society, social stratification and mobility, and the problems of ethnicity in the emergence of an African nation.

Van den Berghe found that the political structures of the university was closely related to the social, economic and political structures of the local, regional, national, and even international tie was attributed to the necessity of hiring faculty who had been educated abroad. The university was closely associated with the national government because of its dependence on the government's financial support, advice and consultation to federal agencies, and its primary role in training the elite for the national bureaucracy. In terms of social stratification and mobility, the members of the university community were identified as members of three estates; (1) senior staff, including senior administrators and faculty;

(2) students; and (3) the intermediate and support staff. Although

three estates were not considered strict definitions assignable at

birth, Van den Berghe found that members of these three groups

tended to act in a homogeneous manner, exhibiting a hierarchy of

prestige and power within the groups, and also that significant gaps

in income occurred among the three groups.

Normative Studies

The Ford Foundation supported a five-year program in univer-

sity admiministration, directed by Balderston (1974), at the Univer-

sity of California, Berkeley, to determine what changes in management

practices were required in response to the growing complexity of

colleges and universities. Balderston believes that new management

approaches are very much needed but that these new management prac-

tices could facilitate control of the university by its enemies, or

evoke the imagination, the stamina, and free commitment essential

to academia. Balderston believes the obligation "is to create, pre-

sent, and use approaches to management in universities that will

enhance their ability and effectiveness and will serve sensitively

and not impair the work of the scholar and student (1974, page viii).

The project sought to test in empirical applications, new techniques

to investigate and analyze university management problems and new

models of educational resources allocation. The study developed

models for enrollment projections, faculty staffing analyses, library

utilization, manpower projections, capital analyses, resource plan-

ning, cost analysis, admissions planning, and facility planning.

These and other analytical efforts were aimed at assisting university decision makers and others concerned with university management to understand better the complexity of university systems and to utilize effectively the tools of modern management.

Fieden and Lockwood (1973) examined existing planning management, and budgeting systems and practices in a selected sample of British universities, reviewed other management techniques and innovations that have proved useful through experience elsewhere, and produced their recommendations in a handbook on planning and management in universities. Both the descriptive and normative approaches to understanding and improving the decision-making processes of college and university general administration are helpful. The distinction between the approaches is becoming more vague; in fact, the approaches appear to be converging. Practitioners of general administration have to be familiar with both traditions and eclectically adept at modifying components of each approach that appear to be most useful for their particular situation and circumstances.

Governance and Control

Theories in educational administration must be seen in the context of the social sciences and science itself, with all the limitations inherent in such disciplines (Willower, 1980, page 2). Some of the more recent ideas being advanced in the social sciences, organization theory and educational administration reject traditional theory development and, to some extent, scientific method itself.

The governance and control of higher education covers four main areas: (1) academic decision making, (2) charters and statutes, (3) governance and administration, and (4) university legislation. Traditionally, universities have seen themselves as largely autonomous institutions; yet with the rise of industrialism and the new demands of a post-industrial society, "the great historic universities must now depend financially primarily on the more lucrative but once wholly secondary functions of professional training and government-contract work" (Martin, 1977. Quoted in Carr, 1984). As a result modern institutions of higher education are increasingly being influenced at the policy making and curricular planning levels by the demands of the wider community. The issue of the role of the state in determining the balance between social expenditures and other expenditures in national, economic and social developments remains central to the economics of education (Lyons, 1979, page 415).

The increasing dominant view of the social function of the university today is expressed by Bledstein (1976, page 289):

> The American university has served as a primary service organization, a professional service institution which has made possible the functions of many derivative institutions serving the middle class. The university has exerted a formative influence upon society as the matrix within which the culture of professionalism matured; as the center to which practitioners trace the theoretical basis of knowledge upon which they establish authority.

The Role of Paradigms in Science

For Baldridge (1971b) governance is the process by which the university's destiny is shaped; it is the complex of structures and

processes that determines the critical decisions and sets the long-range policies. Baldridge further asserts that one of the most urgent needs is a theoretical framework that can unify isolated ideas and findings about academic governance. Without a unifying model facts about the university are fragmented and contribute little to an overall understanding. Copernicus (Kuhn, 1957), once commented that astronomy was in a similar condition under the old Ptolemaic theory of the solar system:

> . . . it is as though an artist were to gather the hands, feet, head, and other members for his images from diverse models, each part excellently drawn, but not related to a single body, and since they in no way match each other, the result would be a monster rather than a man (page 138).

It is still Baldridge (1971b, page 8) who asserts that although the idea of scientific models, or paradigms, is certainly not new, Thomas Kuhn's book entitled The Structure of Scientific Revolution has been a benchmark in the thinking of historians of science as they approach the problems of scientific advancement. Kuhn suggests that scientific enterprises occur within the bounds of certain conceptual frameworks, which he calls "paradigms." According to Kuhn's argument, science does not advance by piecemeal accumulation of facts, but instead major advances are related to conceptual revolutions, to critical shifts in intellectual frameworks, and to changes in the scientific paradigms. The scientific paradigm governs the thinking of a particular segment of the scientific community and serves as a conceptual framework within which the group's investigations occur. The paradigm becomes the governing

framework that defines and legitimizes the efforts of scientists working within this area.

Organizational Paradigms Applied to the University

The literature regarding organization and administration of higher education usually falls into three models: bureaucratic, collegial, and political. The bureaucratic model derived from the work of Max Weber. Baldridge (1971b, page 9) states that although well suited to the analysis of business and governmental organizations, Weber's paradigm does not adequately account for what observers believe to be the unique nature of universities as organizations. Some of these observers turn therefore to the so-called collegial paradigm as a theoretical foundation for examining the universities. It was Baldridge (1971b) who developed a new interpretation of university governance, with his political model. Table 2.3 presents these three models.

Planning

For Peterson and Uhl (1977), the diverse activities and decisions that go under the name of planning are critical to an institution's future. Virtually all those who write on the subject regard institutional goals as a first step in the planning process. For example, Cammack (1971, pages 259-62) asserts that:

> the first step of a planning effort requires that a statement of assumptions about the future be developed (and that) the process of developing assumptions and specific goals related to these may be one of the more difficult points upon which to obtain accord.

TABLE 2.3
COMPARISON OF THREE MODELS OF UNIVERSITY GOVERNANCE

	BUREAUCRATIC	POLITICAL	COLLEGIAL
BASIC IMAGE:	Hierarchical bureaucracy; bureaucracy	Political system; fragmented, complex professional federation	Professional community; community of peers
CHANGE PROCESSES:	Minor concern; change results from structure	Primary concern; change results from influence	Minor concern; change results from staffing/staff development
CONFLICT:	Viewed as abnormal; to be controlled by bureaucratic sanctions	Viewed as normal; key to analysis of policy influence	Viewed as abnormal; eliminated in a "true community of scholars"
VIEW OF SOCIAL STRUCTURE:	Unitary; integrated by the formal system	Pluralistic; encompasses subcultures and divergent interest groups and values	Unitary; united by the community of scholars; integrated by peer consensus
BASIC THEORETICAL FOUNDATIONS:	Weberian bureaucratic model; classical formal systems model	Conflict theory; interest group theory; open systems theory; community power theory	Human relations approach to organizations; literature on professionalism
DECISION-MAKING:	Rational decision-making; formal bureaucratic procedures; standard operation procedures	Negotiation, bargaining, and political influence processes	Shared, collegial decisions; consensus; community participation
GOAL-SETTING AND POLICY:	Emphasis on execution	Emphasis on formulation	Unclear; probably more emphasis on formulation
LEADERSHIP AND SKILLS:	Authoritarian hero; technical problem-solving skills; administrator as manager	Negotiator; mediator; statesman; political strategy; interpersonal dynamics; coalition management; administrator as politician	"First among equals", interpersonal dynamics; administrator as educational leader
ROOTS:	Rational-based (logic)	Reality-based (pragmatic)	Goal/ideal based (philosophical)
DECISION-PROCESS:	Problem definition; search for alternatives; evaluation of alternatives; calculus; choice; implementation	Emergence of issue out of social context; interest articulation; conflict; legislative process; implementation of policy; feedback	As in bureaucratic model, but in addition stresses the involvement of professional peers in the process
MANAGEMENT EXPECTATION:	"Scientific management"; very high-people believe the hero-leader can solve problems and he tries to play the role	Strategic decision making; modest-leader marshals political action but is constrained by the counter efforts of other groups	Management by consensus; modest-leader is developer of consensus among professionals
BASIC CHARACTERISTICS:	Complex organization; formal hierarchy, channels of communication, authority relations, policies and rules; authoritative decision-making	Inactivity prevails; fluid participation; fragmented interest groups; conflict is natural; political pressure limits formal authority	Decision by consensus; professional authority of faculty; call for utopian humane education
WEAKNESSES:	Ignores informal power influence; ignores processes; fails to explain changes in structure; fails to explain how policies are initiated; ignores political issues	Overstresses conflict; underestimates impact of routine bureaucratic processes; ignores long-term decision-making patterns; fails to consider the way structure shapes and channels political efforts	Descriptive and normative visions are confused; fails to deal with conflicts
MAJOR PROPONENT:	H. Stroup; M. Weber	V. Baldridge	P. Goodman; J. Millett; E. Trueblood; P. Selznick

Source: Adapted from Baldridge (1971b, pp. 1-19) and Riley and Baldridge (1977, pp. 2-25).

The second step is to review past operations.

> The third step. . . is the clarification of goals,
> (which is) more than a matter of reading a statement
> of goals or purposes in the catalog. We are talking
> about broad institutional purposes which are opera-
> tionally evident in the functions of instruction,
> research, and public service. . . We are talking about
> fairly specific definitions of the types of character-
> istics or competencies that students are expected to
> acquire. . . We are talking about ends viewed for
> graduate or professional programs, for commitment
> to the liberal arts, for innovation. . .

The subject of goals and planning, it can be assumed, is

interconnected. The connection between such concepts becomes

explicit in Micek and Arney's (1973) conception of "outcome-oriented

planning." These authors suggest that "planning in higher educa-

tion. . . can be improved by taking an "outcome-oriented (as opposed

to a means-oriented) approach. . ." which involves the following

three steps (page 5):

> (1) the goal setting step emphasizes the translation
>   of and program goals, which often are broad and
>   philosophical, into desired measurable outcomes
>   terms.
>
> (2) The program selection step emphasizes an understand-
>   ing of the expected outcomes of each alternative
>   program being considered. . . The program. . . that
>   most closely meets the desired outcomes can be
>   identified (selected).
>
> (3) Program evaluation (the final step) stresses. . .
>   measurement of the actual outcomes that result
>   from implementing programs. Did the program meet
>   the established goals?

With regards to goal setting and planning it is still authors

Peterson and Uhl (1977) who assert that goal setting and planning

are best regarded as separate processes. Goal setting is more

political while planning is more technical.

Accountability

Mortimer (1972) notes that the term accountability does not appear in the Education Index until June 1970. Peterson and Uhl (1977) note that evaluation as a measurement of goal-relevant performance, chiefly for the purpose of program improvement, began to permeate higher education in the late 1960s, often along with the notions of planning, innovation, flexibility, and other elements of John Gardner's (1964) idea of institutional self-renewal.

As a management control device, accountability seems to be widely used. As confidence in higher education is restored this term seems to be giving way to responsibility. Edward Suchman (1967), in an early and general treatise on evaluation practice, puts "identification of goals to be evaluated" first in a list of steps "essential for evaluation". A blue-ribbon task force on evaluation (Task Force IV, 1971) began its recommendation to the Connecticut Commission for Higher Education as follows:

> Recommendation 1. Each institution within the state system of higher education should define its goals and functions in such terms as to make it possible to check whether the goals are being achieved, should reconsider its goals and functions periodically, and should change them as appropriate. . .

> Recommendation 2. Each institutional unit. . . should periodically evaluate, in the light of the goals and functions mentioned in Recommendation 1, its inputs, its processes, and its performance, with evaluation of performance being of highest importance (pages 1-2).

> and further:

> Recommendation 10. In justifying budget requests made to the state legislature, the Commission for Higher Education should coordinate efforts of the separate

institutions to develop, agree upon, and report realistic indices of value produced, including those which measure "value added," to the population being served (page 5).

The Carnegie Commission (1973c) endorsed the notion of assessment of value added, as follows: "The quality of an institution should be determined by what it does for the students it enrolls, not by the characteristics of its entering students. . ." (page 39). Peterson and Vale (1973) have outlined several strategies for assessing value added (institutional effectiveness) in multicampus systems, and Palola and Lehman (1976) have recently set forth a provocative framework for assessing program effectiveness and the attendant costs.

The concept accountability for Mortimer (1972) indicates that:

Determining goals and objectives is one of the primary requisites for establishing internal accountability (page 30).

For Henry (1972):

Accountability as a concept rests upon measurement of performance. To measure performance, one must begin with purposes. Purposes and objectives constitute the standard to which evaluation is calibrated. Without a clearcut and specific statement of purpose, measurement is meaningless. . . Without maximum institutional research capability, efforts to improve accountability will be seriously handicapped (page 289).

Bowen (1974) asserts that:

The six steps of a system of accountability are quite simple and straightforward. They are: to define, clarify, and order priorities among the objectives to allocate resources to methods of "production" that promise maximum returns in relation to these objectives; to measure the costs of these activities or programs; to evaluate their outcomes or products or results; to

relate costs and outcomes; and to report the results in
appropriate form to governing boards, outside sources of
financial support, faculty and administrative staff,
and the general public (page 121).

Each step in this process involves extraordinary feats
of identification, measurement, and judgment . . . The
process is bound to be difficult, expensive, and in the
end subjective and judgmental. However, judgments can be
informed and made more credible by systematic fact
gathering and analysis. There is no valid reason why
institutions should not clarify goals, gather evidence
about costs and outcomes, and report the results of
institutional evaluations to funding agencies and to
the public. If institutions do not do these things,
others will (page 2).

Recent Development

Edgar Faure et al (1972) says that "the physical, intellec-

tual, emotional and ethical integration of the individual into a

complete person is a broad definition of the fundamental aim of

education". This essentially means a closer interaction between

the affective components of a human being and academic learning.

Recent development in society led planners and administra-

tors to bring the curriculum towards vocational preparation and away

from the humanities (Swartz, 1977). After considering the objectives

of higher education and its role in the socio-economic development,

Sanyal (1982; Silberman, 1978) analyses the relationship between

higher education and the world of work, and makes various assertions.

Work and education are connected. Higher education will have to

find ways to train young people to meet the existing needs of the

community, taking into account the objective need for skills, values,

and ethics as well as manpower forecasts. Planning for higher

education should integrate informal and nonformal with formal pro-
grams. The objective of higher education should include means of
making persons educable rather than educated. Experience from indus-
try should be taken into account, with the final objective of
integrating institutions of education and institutions of employment.
Until society is ready to recognize as "employment" any useful social
role, higher education planning should emphasize aspects of graduate
employability.

Another interesting field of study has been in relation to
women's role in higher education. Martin (1982) asserts that women
have been traditionally under represented in the scholarship of the
academic disciplines. The author examines the exclusion of women
from philosophy of education both as subject who have written about
education and as object of educational study and thought.

Randour, et al (1982) present a recent, extensive review of
the literature on women in higher education. The authors concluded
that insofar enrollment is concerned from 1968 to 1978 the percent-
age of women aged 16 or older enrolled in school increased for every
age group. Grant and Eiden (1980) assert that by contrast the
percentage of 18- to 24-year-old men in the population enrolled in
school declined dramatically--from 60.4 to 47.8 while the percentage
of men in the school population aged 25 and over remained stable or
increased only very slightly.

Despite the increase in enrollment of women vis-à-vis men,
entry into medical and legal fields of study and the unprecedented

numbers earning doctorates, "most women still earn their degrees in lower-paying, lower-status, female-intensive fields" (Randour, 1982). Nonetheless, there is an inverse relationship between the level of degree and the percentage of women earning degrees in that field. At higher-degree levels, fewer women are earning degrees. The most sizable gains, made by women are in the community college realm. As Randour (1982) stated:

> There are more women in two year colleges, more women in less well-funded public institutions, more women enrolled part-time, and more women achieving lower degree levels. We conclude that some women in higher education have achieved parity with men, but caution that most have not.

The University as Center and Periphery

Carnoy (1967) argues that although recent research in human resources has generated universal interest in education as a tool of economic development, empirical results of such research have, in fact, been almost entirely restricted to highly developed economies. Carnoy further asserts that, rather than putting investment in education within the context of allocating scarce resources optimally, developing countries have tended to superimpose educational investment decisions somewhat haphazardly on general development goals (pages 359-374).

Analyzing the complexities and dilemmas of higher education, Altbach (1981) developed an empirical study concerning the relationship between universities in the industrialized world and in the Third World. The author argues within a dependency theory framework,

suggesting that universities in the Third World find themselves at
a disadvantage in the international knowledge network while at the
same time playing a key role in their own societies (page 601).
Altbach draws the distinction between the center-periphery concept,
between educational institutions at the intellectual centers, that
give directions, provide model, produce research for the entire
academic system, and between universities at the periphery which
tend merely to "copy developments from abroad, produce little that
is original, and are generally not at the frontiers of knowledge"
(page 602).

Central institutions tend to be research-oriented, prestigious
and part of the international knowledge system (large libraries, well-
equipped laboratories, plentiful resources for research and graduate
study) (page 602). Peripheral universities, on the other hand, act
as "distributors of knowledge" with a large concentration on teach-
ing as opposed to research. They tend to be dependent for innovation
and direction, on the center universities. Their facilities are
less adequate, their academics less well qualified and less well
paid.

Altbach further asserts that centers and peripheries exist
not only among nations but within national university systems,
whereby a handful of universities set the academic tone for the rest.
Speaking about the American system of higher education, Altbach
maintains that:

> A small number of recognized central universities in
> the United States dominate the large majority of

universities. Relatively few institutions present alternative models or go in radically different directions. The current debate concerning the under-graduate curriculum is, not surprisingly, led by Harvard University. When Harvard gives its approval to a new trend, as it has done in the past with regard to legal and business education, other institutions generally follows. Further, the central universities receive an overwhelming proportion of research funds, have research-oriented faculty, and the like. The peripheral institutions not only follow, but they seldom blaze new trails in education even in the United States, where fiscal and other constraints are not so serious as in most Third World countries (page 603).

In concluding his study, Altbach calls for a clear and realistic appraisal of the position of a national academic system in its international and regional context. He further points out that some universities can realistically try to build up excellence in some areas, while others may be best suited for knowledge trans-mission (page 617). Educational planners, at both the government and the academic levels, should also have a consciousness of the nature of the dependency relationship and decide whether to develop new and more independent models. Altbach further asserts that:

The research function of universities is very important. Even if it is possible to sponsor research in only a few areas, perhaps related to local economic or agricultural conditions and in fields that will foster a national culture, such developments will be useful (page 618).

Linkages Between the University and the Community

Several institutions have been established in the United States, whose purpose and mission feature a philosophical and programmatic objective of service to the community and fostering international understanding through education of students. One of

them is the Experiment in International Living, a pioneer institu-
tion in international youth exchange programs, founded in 1932.
Through its programs the Experiment encourages and educates people
to be culturally sensitive and to act responsibly in the world com-
munity by addressing basic human needs through a process of learn-
ing that involves the whole person.

The academic arm of the Experiment in International Living
is the School for International Training which was founded in 1964,
to prepare needed professionals for international careers.

The School for International Training is a senior college
and graduate school, offering upper level university education
resulting in a bachelor's degree in international studies, master's
degree in international management, and a master of arts degree in
teaching. In all its programs, the School for International Training
heavily emphasizes current world issues and cross-cultural orienta-
tion, fostering awareness and understanding amongst people from dif-
ferent cultures, educating and promoting commitment in one's com-
munity, society, and the world. The educational philosophy and
approach of the School for International Training are based on the
concept that effective action requires conceptual knowledge, practi-
cal skills, and an ability to apply these in intercultural and
international settings.

Another institution, Florida International University, accord-
ing to Pagano (1977) explored the linkages between a community of
learners with a community of scholars. The university's primary

clientele is composed of adult graduates of community colleges and older continuing education adults who are self-supporting. The average age of the general student population is 28 years, the majority of students work full-time or part-time, are married or have substantial family responsibilities, and 60 percent attend classes after 5:00 p.m. (page 207). The university developed a learning environment as a response to the characteristics of the learning community. Florida International University offers full range of degree programs to students in the junior and senior years of undergraduate programs, as well as master's degree programs in a range of fields having in common the development of experts in academic and professional domains bearing directly on the needs of the larger community. Pagano asserts:

> As the newest university in the state system, it has
> two philosophical and programmatic objectives which
> rank equally with the education of students: Service
> to the community, and fostering greater understanding,
> learning and technical expertise in the international
> arena comprised by the Caribbean Islands and Latin
> America countries (page 206).

The university's planners acknowledged and developed an early respect for the multiplicity of roles played by its potential student population. Such roles include: wage earner, spouse, parent, consumer, voter, community leader and taxpayer. Rather than expecting students to abdicate non-student roles, the university sought to make its 'traditional' courses accessible through new methods of delivery. Pagano further states:

> Such a highly individualized system has created radical
> changes in the roles of students, faculty members,

administrators, Deans, Chairpersons of academic units.
The critical processes in which all are involved are
the assessment of prior learning and the development
of an educational contract (page 212).

The student for example, becomes "active initiator of educa-

tional experiences, rather than passive recipient. The primary role

of the faculty adviser is to assist and support the student in

utilizing his or her own resources as well as those of the university

in attaining specific learning objectives. While the student bears

primary responsibility for identifying his own learning needs and

the means by which he hopes to attain them, the faculty adviser is

charged with keeping the academic process. As Pagano further asserts:

> While the student is responsible for knowing how and
> what he prefers to learn, the faculty adviser is
> responsible for making sure the learning contract
> reflects appropriate learning modes to match specific
> content areas, that the size and scope of independent
> study projects is appropriate to the number of credits
> to be awarded, that the level of learning reflected in
> independent study projects will be consistent with the
> junior and senior years of college level work, and
> that the plan for learning is one that will yield
> assessable products on which to base the faculty
> adviser's recommendation, upon completion, that the
> student be certified for graduation (page 214).

Summary

This chapter presented the conceptual and empirical ground-

ing of the research. The literature was reviewed in areas such as

university goals and objectives, economics of education, sociology,

organization, and administration of higher education. Such areas

have, indeed, a bearing on the overall purpose of the study. The

conceptual framework was drawn from the comprehensive review of the

literature, and it shed light to relevant theories for the analyses and description of data gathered from participants in university system, and their perception of goals of higher education.

CHAPTER III

RESEARCH METHODOLOGY AND PROCEDURES

In order to analyze and describe perceptions of educational participants concerning university goals and objectives, the research utilized the distribution of questionnaire as the primary source for collecting data. This chapter describes the research design, questions and hypotheses; it also describes the population and sample, the instrumentation, pretest, in-country data collection, reliability, validity, and data analysis. A brief summary completes the chapter.

Research Design

The mode of the study was essentially descriptive. Sax (1968) maintains that descriptive research involves the collection of data for the purpose of describing conditions as they exist. Armore (1966) asserts that descriptive statistics provide methods to organize, summarize, and describe sets of data which represent the population. Descriptive analysis was used for that part of the research which could not be analyzed statistically. The open-ended portion of the questionnaire where the respondents commented about their perceptions of university education both actual ("is") and ideal ("should be"), was subjected to descriptive analysis, in order

to find out whether there was evidence of recurring statements in the data.

Ary et al (1972), provide the base for descriptive studies when they assert that descriptive research studies are designed to obtain information concerning the current status of phenomena. For Van Dalen and Meyer (1962), one of the objectives of descriptive study is to determine the nature of prevailing conditions, practices and attitudes--seeking accurate descriptions of activities, objects, processes and persons. For Isaac and Michael (1971), descriptive studies can make contribution to the advancement of knowledge. They assert that the purpose of survey studies are as follows:

(a) to collect detailed factual information that describes existing phenomena.

(b) to identify problems or justify current conditions and practices.

(c) to make comparisons and evaluations.

(d) to determine what others are doing with similar problems or situations and benefit from their experience in making future plans and decisions.

Questions and Hypotheses

The following research questions were investigated by the researcher:

(1) How do all respondents (students, faculty members, and administrators), perceive and rank order the possible actual goals of university education?

(2) How do all respondents (students, faculty members, and administrators), perceive and rank order the possible ideal goals of university education?

(3) How do students perceive and rank order the
possible actual goals of university education?

(4) How do students perceive and rank order the
possible ideal goals of university education?

(5) How do faculty members perceive and rank order
the possible actual goals of university education?

(6) How do faculty members perceive and rank order
the possible ideal goals of university education?

(7) How do administrators perceive and rank order
the possible actual goals of university education?

(8) How do administrators perceive and rank order
the possible ideal goals of university education?

(9) What are the differences that exist in the percep-
tions of students, faculty members, and adminis-
trators, concerning the actual goals of university
education?

(10) What are the differences that exist in the percep-
tions of students, faculty members, and adminis-
trators, concerning the ideal goals of university
education?

The following null hypotheses were developed, specifically

for use in this study:

H_{O_1} : There are no significant differences in perceptions
of students and faculty members, with regards to the
actual possible goals of university education.

H_{O_2} : There are no significant differences in perceptions
of students and faculty members, with regards to the
ideal possible goals of university education.

H_{O_3} : There are no significant differences in perceptions
of students and administrators, with regards to the
actual possible goals of university education.

H_{O_4} : There are no significant differences in perceptions
of students and administrators, with regards to the
ideal possible goals of university education.

H_{O_5} : There are no significant differences in perceptions
of faculty members and administrators, with regards
to the actual possible goals of university education.

H_{0_6} : There are no significant differences in perceptions of faculty members and administrators, with regards to the ideal possible goals of university education.

Population and Sample

The population of the research was composed of students, faculty members, and administrators of the Federal University of Paraiba, throughout its seven campuses. The State of Paraiba is located in the northeast part of Brazil. Appendix A shows the map of Brazil, with contours of her various states. The state of Paraiba is shaded in the map for rapid identification. Appendix B presents the map of the State of Paraiba, highlighting locations of the seven campuses of the Federal University, setting of the research.

The sample consisted of N = 450 members of the three distinct groups selected to participate in the research. The survey questionnaires were distributed to university students (N = 150), faculty members (N = 150), and administrators (N = 150). The returned questionnaires represented 76.22% of the total distributed or 343 useful survey questionnaires, comprised the operational population of the research.

Instrumentation

A survey questionnaire inspired and patterned after the Institutional Goals Inventory (IGI) (Peterson, 1970, 1973a, 1973b, 1973c, 1974b), was developed as a tool for data gathering. The survey's design was also based on a format which was developed by Gross and Grambsch (1968) and used extensively by the Educational Testing

Service (ETS). The questionnaires were distributed personally in face-to-face situation to the three groups, students, faculty members, and administrators, of the Federal University of Paraiba, in order to assess their perception of current needs of higher education.

The questionnaire was divided in two parts. Part one dealt with demographic questions related to the characteristics of participants in the research. Part two consisted of 36 possible goals for higher education. The questionnaire was printed out professionally and contained 8 pages (Appendix E). The front page of the questionnaire was a letter signed by the researcher, addressed to the respondents, providing the objective of the instrument, and asking the respondents participation. The respondents were here informed of the strict confidentiality of which the data gathered would incur. A letter in English, signed by the researcher's academic committee chairman, was inserted in the bottom of the page. This letter was also addressed to the respondents, requesting their time to respond the questionnaire. The front page of the survey used a Michigan State University letterhead, where it appears also College of Education, Department of Educational Administration, which contributed considerably to make the final printed version of the survey questionnaire very clear, with a professional look, and very impressive.

Page 2 contained instructions on how to fill out the questionnaire in both parts. The 36 possible goals for higher education

were to be answered in two ways. One representing the respondent's perception about what the current educational system "is", and, then, what it "should be". An example was provided as follows:

1. ACTUAL: How important is the goal of university education at the present time?

2. IDEAL: How important should the goal of university education be?

For each of the goal statements appearing in the questionnaire, the respondents were asked to check the degree of importance for higher educational development on a five point Likert scale. Response choices were as follows: (1) Of no importance; (2) Of low importance; (3) Of medium importance; (4) Of high importance; (5) Of extremely high importance. Respondents were asked to answer the goal statements both in terms of perceived existing goals and goal preferences ("is" and "should be").

Page 3 contained the demographic information on the respondents, such as sex, age, academic position, etc. Respondents were asked to circle a number which would correspond to their category. Pages 4, 5, 6, and 7 contained the 36 possible goals of higher education. A space on page 7, was provided for possible objectives numbers 37, 38, 39, and 40. The respondents were asked to write here their own objectives for higher education, different of the ones presented by the researcher.

Page 8 asked the respondents to critically react to the objectivity and clarity of the survey questionnaire. Also, the respondents were asked to comment and present suggestions about the

study, and their feelings about university education as they perceive it in their own reality. The open-ended portion of the questionnaire allowed the respondents to answer freely and fully in their own words and their own frame of reference, presenting their perceptions about goals of university education.

Pretest

The questionnaire was developed specifically for the study. It was submitted to the researcher's Academic Committee for appreciation and suggestions for upgrading and improvement. After incorporating the suggestions, the questionnaire was translated into Portuguese language and was pretested in October 1984, with a group of Brazilian graduate students at Michigan State University. A total of N = 27 survey questionnaires were pretested. A letter explaining the purpose of the pretest study was mailed, asking the selected participants to complete the questionnaire, and their written comment on any item, including clarity of the Portuguese language (Appendix C). Another letter signed by one member of the researcher's academic committee was also sent along, reiterating the objective of the pretest and eliciting cooperation (Appendix D). A stamped, addressed envelope was provided for the respondents to return the questionnaire to the researcher on, or before October 10, 1984.

A high response rate, over 80%, was obtained, since N = 24 respondents returned the questionnaire with comments and suggestions. Based on the suggestions received the questionnaire was reworked and again submitted to the Guidance Committee members for approval,

prior to being sent to be professionally printed as a final version. At this time, the final pretested Portuguese version of the survey was translated into English to be part integrant of the research (Appendix E).

The high response rate brought a wealth of data which needed to be organized, analyzed, and reported in a systematic manner. The pretest study in its entirety proved to be a valid and reliable exercise, concurring with Babbie's (1973) assertion that pretest refers to initial testing of one or more aspects of the study design. It was very contributive to the overall organization of the study. It also enhanced the researcher's experience and led him to anticipate and budget for possible future drawbacks.

In-Country Data Collection

The data for the research were collected in Brazil, at the Federal University of Paraiba. The questionnaires were administered in face-to-face contact situations with students, faculty members, and administrators, throughout the seven campuses of the institution. In this direct contact the investigator was able to personally present the questionnaire to the respondents, explaining the purpose and significance of the study, clarifying points, answering questions the participants asked, and talking about the confidentiality the answers would be treated.

In the in-country data collection, the researcher was immersed in the task of extended observations with the purpose of collecting valid and reliable information. He was in a vantage

position in the setting, interacting with university participants,
learning their aspirations and perceptions, which would not surface
had the study relied solely on mailing questionnaires. The existing
socio-economic inequalities emerged and were observed. Malinowski
(1922) argues that ethnography depends on real scientific aims, on
living right among natives, and on using a variety of special methods
of collecting, manipulating, and fixing evidence. Purely descrip-
tive studies deal with characteristics, usages, social and political
conditions of peoples irrespective of their possible relations or
affinities. The French writer M.de Rosny (Keane, 1896) gives an
unlimited scope to ethnography, declaring that it results from "la
synthèse de toutes les sciences qui ont pour but de rechercher la
mission de l'homme et ses destinées."

The Rector of the Federal University of Paraiba was contacted
with regard to the research activity, which took place in December,
1984. The Rector provided a letter to the researcher, introducing
him to the groups (Appendix F), and authorizing him to carry on his
duties in the university setting. The operational population of the
research consisted of N = 343 responses brought back to the United
States with the researcher, for computer analysis of data at the
Computer Center of Michigan State University. According to Babbie
(1973, page 165):

> . . . a response rate of at least 50 percent is adequate
> for analysis and reporting. A response rate of at least
> 60 percent is good. And a response rate of 70 percent or
> more is very good. The reader should bear in mind, how-
> ever, that these are only rough guides, they have no

statistical basis, and a demonstrated lack of response
bias is far more important than a high response rate.

Reliability

The American Psychological Association (1974) has defined
reliability as "the degree to which the results of measurement are
attributable to systematic sources of variance (true variance)".
The sources of variance, which are classified as systematic and
random, are determined by one's conception of reliability and will
determine the operational definition of reliability for a specific
study. Peterson and Uhl (1977) state that different definitions of
reliability lead to different procedures for measuring reliability,
which may provide quite different estimates. For example, an instru-
ment may possess high test-retest reliability (stability) and may
have rather low internal consistency (homogeneity in item content),
even though both are measures of reliability. The difference is
that, in a test-retest situation, the consistency of the total score
over time is measured, while, for internal consistency, the consis-
tency of responses to individual items is measured.

Validity

The validity of an instrument indicates whether it measures
what it purports to measure. Although there are numerous procedures
for assessing validity, they are frequently classified into the
general areas of content, criterion-related, and construct validity.
The three have been described by the American Psychological Associa-
tion (1966, pages 12-13; 1974, pages 25-31), as follows:

Content validity is demonstrated by showing how well the
content of the test samples the class of situations or subject matter
about which conclusions are to be drawn . . .

Criterion-related validity is demonstrated by comparing the
test scores with one or more external variables considered to pro-
vide a direct measure of the characteristic or behavior in question
. . .

Construct validity is evaluated by investigating what quali-
ties a test measures, that is, by determining the degree to which
certain explanatory concepts or constructs account for performance
on the test.

Data Analysis

Statistical and descriptive data were collected. Both of
them were used for the analysis and explanation of the findings.
A high return rate of the survey questionnaires, as seen in Table 4.1,
prompted the researcher to utilize a large mainframe computer
(Cyber 170/750) for data analysis. To quantify the data, each
response category on the rating scale was assigned an arbitrary
value. The response "of no importance" was assigned a value of 1;
the response "of low importance" a value of 2; "of medium importance"
a value of 3; "of high importance" a value of 4; "of extremely high
importance" a value of 5. To proceed with computation of mean scores
each goal classification, for each individual, was derived by summing
the item scores for each individual and dividing by the number of
items answered. All responses were coded for key punch (IBM cards),

use and analysis. Statistical techniques were used to analyze the survey data, within groups and across groups consideration of goal rankings, and measure of congruence across and within groups. The survey data were analyzed in order to compare the ranking of items of students, faculty members, and administrators, to observe the significant differences, if there were any, in their perceptions of what education "is" and "should be". The open-ended questionnaire presented a set of comments by the three group members. The descriptive comments gathered from the survey questionnaires were analyzed with the objective of identification of common, or recurring responses. This procedure was done in a systematic manner and it was used as supplementary data in the analysis and explanation of the statistical data. The <u>Statistical Package for Social Sciences</u> <u>(SPSS)</u> (Nie, et al, 1975) computer program was utilized to analyze the data. Analysis of Variance (ANOVA) was used to test significant differences for all 36 goal statements within the total group and subgroup tables. The level of significance for the rejection of the null hypotheses was set at the .05 alpha level. The .05 level of significance is a commonly accepted one, according to Borg (1979, pages 424-425). According to Walpole (1974) the ANOVA is a method of splitting the variance into more meaningful components that measure different sources of variation. This test was selected because most of the commonly used statistical tests assume variance to be roughly equal and because the researcher's hypotheses concerns the variability of samples means.

The statistical data from the ANOVA was used to perform the Scheffée test, which is a post-hoc multiple-comparison of means. The objective for performing the Scheffée test was to examine which pairs of comparisons were significantly different.

Summary

The primary purpose of the research was to analyze and describe perceptions of Brazilian educational participants concerning university goals. Thus far, the chapters have presented procedural steps conceputalized and undertaken in conducting the research. The principal procedures adopted dealt with qualitative and quantitative research. The next chapter will present the data analysis and the findings of the study.

CHAPTER IV

ANALYSIS OF DATA

This chapter contains a detailed analysis of data, and it is organized and presented through the display of tables. This presentation is comprised of four general areas as follows:

(1) demographic information

(2) perceptions of the respondents concerning goals and objectives

(3) goals written by the respondents

(4) comments written by the respondents

Demographic Information

The population of the research consisted of students, faculty members, and administrators of the Federal University of Paraiba, in its seven campuses. The sample consisted of N = 450 members of the three distinct groups selected to participate in the study. The returned response was N = 343, or 76.22 percent. The distribution is presented in the following Tables 4.1 and 4.2:

Table 4.2 presents totals of the questionnaires returns, by campus and by groups:

Tables 4.3, 4.4 and 4.5 list for the respondents their years in the categories of students, faculty members, and administrators. They are presented as follows.

TABLE 4.1

DISTRIBUTION OF RESPONSES BY GROUP

GROUP	N	PERCENT
Students	147	42.9
Faculty members .	106	30.9
Administrators	90	26.2
TOTALS	343	100.0

TABLE 4.2

REPORT OF RETURNS ON EACH CAMPUS

CAMPUS	LOCATION	STUDENTS	FACULTY	ADMINISTRATORS	TOTAL
I	João Pessoa	57	44	41	142
II	Campina Grande	14	25	34	73
III	Areia	2	3	4	9
IV	Bananeiras	9	4	3	16
V	Cajazeiras	35	13	4	52
VI	Sousa	27	5	1	33
VII	Patos	3	12	3	18
TOTALS		N = 147	N = 106	N = 90	N = 343

TABLE 4.3

YEARS IN THE CATEGORY AS STUDENTS

YEARS	NUMBER OF RESPONDENTS	PERCENT OF GROUP
Up to 1	16	10.9
1 to 2	24	16.3
2 to 3	17	11.6
3 to 4	33	22.4
4 to 5	14	9.6
6 to 10	9	6.1
11 to 20	24	16.3
Above 21	4	2.7
Missing	6	4.1
TOTALS	147	100.0

TABLE 4.4

YEARS IN THE CATEGORY AS FACULTY MEMBERS

YEARS	NUMBER OF RESPONDENTS	PERCENT OF GROUP
Up to 1	7	6.6
1 to 2	7	6.6
2 to 3	5	4.7
3 to 4	4	3.8
4 to 5	17	16.0
6 to 10	35	33.0
11 to 20	22	20.8
Above 21	7	6.6
Missing	2	1.9
TOTALS	106	100.0

TABLE 4.5

YEARS IN THE CATEGORY AS ADMINISTRATORS

YEARS	NUMBER OF RESPONDENTS	PERCENT OF GROUP
Up to 1	11	12.2
1 to 2	14	15.6
2 to 3	10	11.1
3 to 4	11	12.2
4 to 5	9	10.0
6 to 10	18	20.0
11 to 20	11	12.2
Above 21	5	5.6
Missing	1	1.1
TOTALS	90	100.0

Of the respondents, 51.9 percent were male, and 47.2 percent female. Table 4.6 shows the overall distribution of respondents in terms of sex, by groups.

TABLE 4.6

SEX OF THE RESPONDENTS, BY GROUP,
WITH THE PERCENTAGE AND TOTAL

SEX	STUDENT	FACULTY	ADMINISTRATOR	TOTAL	PERCENTAGE
Male	57	62	59	178	51.9
Female	89	44	29	162	47.2
Missing	1	-	2	3	.9
TOTALS	147	106	90	343	100.0

As for age, 82.8 percent of the respondents were below 44 years old, and 15.5 percent were above. Table 4.7 displays the distribution by groups.

TABLE 4.7

AGE OF THE RESPONDENTS, BY GROUP,
WITH PERCENTAGE AND TOTAL

AGE	STUDENT	FACULTY	ADMINISTRATOR	TOTAL	PERCENTAGE
17-24	87	3	-	90	26.2
25-44	53	84	57	194	56.6
45-64	6	18	27	51	14.9
Above 65	-	1	1	2	.6
Missing	1	-	5	6	1.7
TOTALS	147	106	90	343	100.0

Of the respondents there were 49.0 percent single and 48.1 percent married. Table 4.8 presents the marital status by group.

TABLE 4.8

MARITAL STATUS OF THE RESPONDENTS, BY GROUP,
WITH PERCENTAGE AND TOTAL

MARITAL STATUS	STUDENT	FACULTY	ADMINISTRATOR	TOTAL	PERCENTAGE
Married	33	61	71	165	48.1
Single	110	42	16	168	49.0
Other	3	3	3	9	2.6
Missing	1	-	-	1	.3
TOTALS	147	106	90	343	100.0

Of the faculty members and administrators respondents, 13.8 percent hold full professorship position, 21.4 percent are listed as adjunct professor, 50.0 percent are employed as assistant professor, and 11.2 percent work as auxiliary professor. A total of 3.6 percent listed other position category, when responding to this item. Table 4.9 presents the distribution of the overall academic positions held by the respondents.

TABLE 4.9

ACADEMIC POSITION OF FACULTY MEMBERS AND
ADMINISTRATORS, WITH TOTAL AND PERCENTAGE

POSITION	FACULTY	ADMINISTRATOR	TOTAL	PERCENTAGE
Full Professor	10	17	27	13.8
Adjunct Professor	16	26	42	21.4
Assistant Professor	58	40	98	50.0
Auxiliar Professor	19	3	22	11.2
Other	3	4	7	3.6
TOTALS	106	90	196	100.0

The academic discipline of interest of the respondents is shown in Table 4.10.

TABLE 4.10

ACADEMIC DISCIPLINE OF INTEREST OF RESPONDENTS,
BY GROUP, WITH TOTALS AND PERCENTAGE

DISCIPLINE	STUDENT	FACULTY	ADMINISTRATOR	TOTAL	PERCENTAGE
Economics	7	8	6	21	6.1
Administration	13	13	9	35	10.2
Education	21	10	8	39	11.4
Engineering	15	4	9	28	8.2
Mathematics	2	6	6	14	4.1
Physics	1	9	6	16	4.7
Chemistry	3	1	5	9	2.6
Technology	5	7	7	19	5.5
Art/Humanity	11	10	5	26	7.6
Social Sciences	24	16	15	55	16.0
Biology	40	15	9	64	18.6
Other	3	7	5	15	4.4
Missing	2	-	-	2	.6
TOTALS	147	106	90	343	100.0

In terms of work condition, 87.7 percent of the respondents are full time employees. It should be noted that those hired as full time may not, legally, accept job employment in another enterprise while affiliated with the university. Of the respondents 8.2 percent are employed under 40 hours work condition, and 4.1 hold 20 hours work commitment.

Table 4.11 depicts this distribution by group.

TABLE 4.11

WORK CONDITION OF FACULTY MEMBERS AND
ADMINISTRATORS, WITH TOTALS AND PERCENTAGE

CONDITION OF WORK	FACULTY	ADMINISTRATOR	TOTAL	PERCENTAGE
Full time*	87	85	172	87.7
40 HOURS	11	5	16	8.2
20 hours	8	-	8	4.1
TOTALS	106	90	196	100.0

*Full time employees may not, legally, accept job employment in another enterprise.

Of the administrators respondents, 46.7 percent hold department chairmanship position, 23.3 percent occupy themselves in the Master Degree programs, and 16.7 percent are directors. Table 4.12 shows the characteristics of their occupations in more detail.

TABLE 4.12

OCCUPATION OF ADMINISTRATORS AND PERCENTAGE

JOB OCCUPATION	ADMINISTRATOR	PERCENTAGE
Department Chairman	42	46.7
Master Degree Coordinator	21	23.3
Director	15	16.7
Pro-Rector	6	6.7
Vice-Rector	1	1.1
Rector	1	1.1
Other	4	4.4
TOTALS	90	100.0

Perceptions of the Respondents Concerning
Goals and Objectives

This section portrays various tables concerning perceptions
of the respondents with regards to the 36 possible university goals
in the questionnaire. The tables will display both the perceived
and the preferred goals. Tables will be shown for the three groups
combined as well as the individual groups.

The means and standard deviations for each goal statement
are presented in summarizing form. Means and standard deviations
are calculated directly from the Likert scale, the five point response
distributions, excluding missing data, or omits. The closer the
goal statement mean is to 5.0, the greater the importance attached
to the goal by the group in question. Likewise, the higher the
standard deviation the greater the disparities of disagreement within
the group regarding the importance of the goal statement in question.

Following this rationale, it is significant to note that
the relatively low standard deviation scores of the preferred
("should be") responses indicate greater group consensus regarding
the importance of the individual goal statement.

Perceptions of the Three Groups Concerning Actual Goals

Research question number one asked:

How do all respondents (students, faculty members,
and administrators), perceive and rank order the
possible actual goals of university education?

Table 4.13 shows the perceptions of all respondents concern-
ing actual goal statements in rank order, means, and standard
deviation.

TABLE 4.13

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	1	2.342	1.077
7	To provide vocational and academic counseling to the students.	2	2.339	1.197
3	To provide training opportunities and skilled manpower for local area busi- ness, industry and government.	3	2.300	1.157
35	To develop a university system whose academic credits can be transferred to other universities.	4	2.296	1.109
1	To provide opportunities for adult education in the local area.	5	2.279	1.072
5	To facilitate involvement of faculty members in neighborhood and community service activity.	6	2.251	1.073
4	To facilitate involvement of students in neighborhood and community service activity.	7	2.220	1.132
2	To provide retraining opportunities for professionals whose job skills have become out of date.	8	2.203	1.094
19	To provide training which prepares students to function effectively as members of the community.	9	2.169	1.102

TABLE 4.13 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
33	To emphasize lifelong education as priority for future professional success of the students.	10	2.169	1.176
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	11	2.138	1.058
34	To attend to the education needs of the community where the university is located.	12	2.137	1.026
14	To provide students with various avenues to reach success in their professional careers.	13	2.134	1.199
26	To realistically prepare students for the job market.	14	2.116	1.081
32	To remove economic barriers to university education.	15	2.116	1.193
36	To develop a policy of admissions of students that are prepared for university work.	16	2.115	1.140
12	To confer equal prestige to academic as well as professional programs.	17	2.096	1.023
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	18	2.089	1.075
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	19	2.088	1.164
28	To use the university as the educational and socio-cultural center of the community.	20	2.087	1.048

TABLE 4.13 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
31	To remove geographical barriers to university education.	21	2.079	1.095
22	To provide educational programs relevant to the evolving interest of the community.	22	2.078	1.023
21	Implement and better the university-business sector with regard to future employment to graduating students.	23	2.062	1.128
8	To help students identify their own personal goals.	24	2.061	1.165
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	25	2.058	1.166
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	26	2.055	1.161
23	To utilize the university for the study of community problems.	27	2.050	1.077
18	To provide a flexible curriculum that responds to the changing needs of society.	28	2.049	1.081
15	To emphasize lifelong education.	29	2.024	1.088
17	To provide relevant learning experience that reflects the needs of the individual.	30	2.022	1.029
27	To use local resources to solve local problems.	31	2.019	1.032

TABLE 4.13 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
25	To constantly promote educational innovation to attend the needs of society.	32	2.015	1.092
29	To provide learning activities for students of varied abilities and ambitions.	33	1.984	1.028
9	To assist students in exploring various alternative careers.	34	1.939	1.139
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	35	1.922	1.054
6	To include local leaders in the planning of university education programs that will affect the local community.	36	1.886	1.058

Clearly, the respondents perceive the actual goals as having low priority. The average mean ratings range from ($\bar{x}$ = 1.886) to ($\bar{x}$ = 2.342).

Perceptions of the Three Groups Concerning Ideal Goals

Research question number two asked:

How do all respondents (students, faculty members, and administrators), perceive and rank order the possible ideal goals of university education?

Table 4.14 shows the perceptions of all respondents concerning ideal goal statements in rank order, means, and standard deviation.

TABLE 4.14

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
36	To develop a policy of admissions of students that are prepared for university work.	1	4.439	.808
33	To emphasize lifelong education as priority for future professional success of the students.	2	4.379	.789
14	To provide students with various avenues to reach success in their professional careers.	3	4.364	.784
7	To provide vocational and academic counseling to the students.	4	4.353	.749
26	To realistically prepare students for the job market.	5	4.339	.790
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	6	4.328	.748
32	To remove economic barriers to university education.	7	4.328	.807
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	8	4.310	.774
4	To facilitate involvement of students in neighborhood and community service activity.	9	4.298	.702
15	To emphasize lifelong education.	10	4.289	.876

TABLE 4.14 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
25	To constantly promote educational innovation to attend the needs of society.	11	4.265	.760
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	12	4.264	.886
28	To use the university as the educational and socio-cultural center of the community.	13	4.262	.784
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	14	4.260	.789
34	To attend to the educational needs of the community where the university is located.	15	4.256	.810
18	To provide a flexible curriculum that responds to the changing needs of society.	16	4.255	.801
5	To facilitate involvement of faculty members in neighborhood and community service activity.	17	4.245	.846
21	Implement and better the university-business sector with regard to future employment to graduating students.	18	4.238	.870
8	To help students identify their own personal goals.	19	4.225	.876
23	To utilize the university for the study of community problems.	20	4.223	.858
19	To provide training which prepares students to function effectively as members of the community.	21	4.221	.830

TABLE 4.14 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	22	4.207	.819
22	To provide educational programs relevant to the evolving interest of the community.	23	4.188	.793
9	To assist students in exploring various alternative careers.	24	4.174	.886
35	To develop a university system whose academic credits can be transferred to other universities.	25	4.171	.889
3	To provide training opportunities and skilled manpower for local area business, industry and government.	26	4.167	.841
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	27	4.148	.827
1	To provide opportunities for adult education in the local area.	28	4.123	.807
27	To use local resources to solve local problems.	29	4.099	.843
31	To remove geographical barriers to university education.	30	4.093	.835
2	To provide retraining opportunities for professionals whose job skills have become out of date.	31	4.047	.922
12	To confer equal prestige to academic as well as professional programs.	32	4.037	.788

TABLE 4.14 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ALL RESPONDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
17	To provide relevant learning experience that reflects the needs of the individual.	33	4.037	.813
29	To provide learning activities for students of varied abilities and ambitions.	34	3.965	.914
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	35	3.935	1.038
6	To include local leaders in the planning of university education programs that will affect the local community.	36	3.829	1.045

As can be seen in Table 4.14 the respondents perceive the ideal goals as having top priority. All goals are ranked above "Of medium importance". The average mean ratings range from ($\bar{x}$ = 3.829) to ($\bar{x}$ = 4.439).

Perceptions of Students Concerning Actual Goals

Research question number three asked:

How do students perceive and rank order the possible actual goals of university education?

Table 4.15 shows the perceptions of students concerning actual goal statements in rank order, means, and standard deviation.

TABLE 4.15

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY STUDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
7	To provide vocational and academic counseling to the students.	1	2.584	1.375
1	To provide opportunities for adult education in the local area.	2	2.571	1.206
3	To provide training opportunities and skilled manpower for local area business, industry and government.	3	2.504	1.357
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	4	2.459	1.303
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	5	2.451	1.252
19	To provide training which prepares students to function effectively as members of the community.	6	2.439	1.234
5	To facilitate involvement of faculty members in neighborhood and community service activity.	7	2.422	1.231
4	To facilitate involvement of students in neighborhood and community service activity.	8	2.410	1.356
2	To provide retraining opportunities for professionals whose job skills have become out of date.	9	2.400	1.198
35	To develop a university system whose academic credits can be transferred to other universities.	10	2.390	1.312
33	To emphasize lifelong education as priority for future professional success of the students.	11	2.382	1.372

TABLE 4.15 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY STUDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	12	2.379	1.349
14	To provide students with various avenues to reach success in their professional careers.	13	2.343	1.431
36	To develop a policy of admissions of students that are prepared for university work.	14	2.343	1.297
12	To confer equal prestige to academic as well as professional programs.	15	2.307	1.216
15	To emphasize lifelong education.	16	2.301	1.243
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	17	2.287	1.333
22	To provide educational programs relevant to the evolving interest of the community.	18	2.276	1.210
34	To attend to the educational needs of the community where the university is located.	19	2.269	1.209
32	To remove economic barriers to university education.	20	2.268	1.380
8	To help students identify their own personal goals.	21	2.267	1.311
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	22	2.256	1.210
26	To realistically prepare students for the job market.	23	2.248	1.253

TABLE 4.15 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY STUDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	24	2.241	1.281
9	To assist students in exploring various alternative careers.	25	2.219	1.321
18	To provide a flexible curriculum that responds to the changing needs of society.	26	2.201	1.240
21	Implement and better the university-business sector with regard to future employment to graduating students.	27	2.190	1.375
31	To remove geographical barriers to university education.	28	2.180	1.247
6	To include local leaders in the planning of university education programs that will affect the local community.	29	2.168	1.210
17	To provide relevant learning experience that reflects the needs of the individual.	30	2.167	1.186
27	To use local resources to solve local problems.	31	2.154	1.198
28	To use the university as the educational and socio-cultural center of the community.	32	2.149	1.254
29	To provide learning activities for students of varied abilities and amibitions.	33	2.148	1.181
25	To constantly promote educational innovation to attend the needs of society.	34	2.127	1.289
23	To utilize the university for the study of community problems.	35	2.112	1.290
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	36	1.992	1.274

The students respondents perceive the 36 actual goal statements as having low priority. The goals are all ranked below "Of medium importance". The average mean ratings range from ($\bar{x}$ = 1.992) to ($\bar{x}$ = 2.584).

Perceptions of Students Concerning Ideal Goals

Research question number four asked:

How do students perceive and rank order the possible ideal goals of university education?

Table 4.16 shows the perceptions of students concerning ideal goal statements in rank order, means, and standard deviation.

TABLE 4.16

RANK ORDER OF PERCEIVED IMPORTANCE OF THE IDEAL GOALS BY STUDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
14	To provide students with various avenues to reach success in their professional careers.	1	4.550	.723
33	To emphasize lifelong education as priority for future professional success of the students.	2	4.514	.776
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	3	4.507	.737
15	To emphasize lifelong education.	4	4.417	.850
36	To develop a policy of admissions of students that are prepared for university work.	5	4.413	.877
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	6	4.399	.779

TABLE 4.16 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY STUDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
7	To provide vocational and academic counseling to the students.	7	4.397	.810
35	To develop a university system whose academic credits can be transferred to other universities.	8	4.361	.865
8	To help students identify their own personal goals.	9	4.356	.859
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	10	4.348	.837
32	To remove economic barriers to university education.	11	4.346	.838
9	To assist students in exploring various alternative careers.	12	4.344	.839
4	To facilitate involvement of students in neighborhood and community service activity.	13	4.336	.800
34	To attend to the educational needs of the community where the university is located.	14	4.328	.839
1	To provide opportunities for adult education in the local area.	15	4.311	.717
3	To provide training opportunities and skilled manpower for local area business, industry and government.	16	4.280	.823
26	To realistically prepare students for the job market.	17	4.276	.904
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	18	4.232	.907

TABLE 4.16 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY STUDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
21	Implement and better the university-business sector with regard to future employment to graduating students.	19	4.230	.911
25	To constantly promote educational innovation to attend the needs of society.	20	4.228	.834
19	To provide training which prepares students to function effectively as members of the community.	21	4.225	.896
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	22	4.212	.943
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	23	4.206	.909
18	To provide a flexible curriculum that responds to the changing needs of society.	24	4.194	.854
28	To use the university as the educational and socio-cultural center of the community.	25	4.185	.932
5	To facilitate involvement of faculty members in neighborhood and community service activity.	26	4.163	.975
31	To remove geographical barriers to university education.	27	4.148	.851
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	28	4.130	.903
23	To utilize the university for the study of community problems.	29	4.116	1.004
22	To provide educational programs relevant to the evolving interest of the community.	30	4.111	.920

TABLE 4.16 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY STUDENTS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
17	To provide relevant learning experience that reflects the needs of the individual.	31	4.081	.890
12	To confer equal prestige to academic as well as professional programs.	32	4.058	.866
2	To provide retraining opportunities for professionals whose job skills have become out of date.	33	3.984	.935
27	To use local resources to solve local problems.	34	3.926	.927
29	To provide learning activities for students of varied abilities and ambitions.	35	3.917	1.115
6	To include local leaders in the planning of university education programs that will affect the local community.	36	3.840	1.108

As shown in Table 4.16 the students respondents perceive the 36 possible ideal goal statements as having top priority. A total of 32, or 88.8 percent of the goal statements are at or above the "Of high importance" category. The following three goal statements are the preferred ones by the students: "To provide students with various avenues to reach success in their professional careers" (Goal number 14); "To emphasize lifelong education as priority for future professional success of the students" (Goal number 33); To

develop a university which offers both academic and professional programs to serve the needs of students and community" (Goal number 30). On the other hand, the three least preferred goal statements by the group of students are as follows: "To use local resources to solve local problems" (Goal number 27); "To provide learning activities for students of varied abilities and ambitions" (Goal number 29); "To include local leaders in the planning of university education programs that will affect the local community (Goal number 6). The average mean ratings range from ($\bar{x}$ = 3.840) to ($\bar{x}$ = 4.550).

Perceptions of Faculty Members Concerning Actual Goals

Research question number five asked:

How do faculty members perceive and rank order the possible actual goals of university education?

Table 4.17 shows the perceptions of faculty members concerning actual goal statements in rank order, means, and standard deviation.

TABLE 4.17

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	1	2.426	.993
35	To develop a university system whose academic credits can be transferred to other universities.	2	2.410	1.045

TABLE 4.17 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
7	To provide vocational and academic counseling to the students.	3	2.376	1.076
3	To provide training opportunities and skilled manpower for local area business, industry and government.	4	2.245	.953
1	To provide opportunities for adult education in the local area.	5	2.238	.918
4	To facilitate involvement of students in neighborhood and community service activity.	6	2.208	1.003
5	To facilitate involvement of faculty members in neighborhood and community service activity.	7	2.186	.992
33	To emphasize lifelong education as priority for future professional success of the students.	8	2.186	1.106
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	9	2.178	1.033
28	To use the university as the educational and socio-cultural center of the community.	10	2.178	.984
19	To provide training which prepares students to function effectively as members of the community.	11	2.175	1.052
34	To attend to the educational needs of the community where the university is located.	12	2.167	.945
2	To provide retraining opportunities for professionals whose job skills have become out of date.	13	2.158	1.093
31	To remove geographical barriers to university education.	14	2.149	1.024

TABLE 4.17 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	15	2.147	1.009
26	To realistically prepare students for the job market.	16	2.125	1.002
32	To remove economic barriers to university education.	17	2.107	1.093
12	To confer equal prestige to academic as well as professional programs.	18	2.100	.905
17	To provide relevant learning experience that reflects the needs of the individual.	19	2.090	1.055
23	To utilize the university for the study of community problems.	20	2.079	.987
14	To provide students with various avenues to reach success in their professional careers.	21	2.059	1.124
21	Implement and better the university-business sector with regard to future employment to graduating students.	22	2.051	.862
36	To develop a policy of admissions of students that are prepared for university work.	23	2.051	1.110
22	To provide educational programs relevant to the evolving interest of the community.	24	2.050	.910
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	25	2.039	1.107
27	To use local resources to solve local problems.	26	2.020	.995

TABLE 4.17 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
8	To help students identify their own personal goals.	27	2.019	1.111
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	28	2.010	1.049
29	To provide learning activities for students of varied abilities and ambitions.	29	2.000	.979
18	To provide a flexible curriculum that responds to the changing needs of society.	30	1.981	1.075
25	To constantly promote educational innovation to attend the needs of society.	31	1.971	1.019
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	32	1.931	.947
15	To emphasize lifelong education.	33	1.864	1.058
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	34	1.861	1.000
9	To assist students in exploring various alternative careers.	35	1.851	1.024
6	To include local leaders in the planning of university education programs that will affect the local community.	36	1.768	.998

The faculty members perceive the 36 actual goal statements as having low priority. The goals are all ranked below "Of medium importance". The average mean ratings range from ($\bar{x}$ = 1.768) to ($\bar{x}$ = 2.426).

Perceptions of Faculty Members Concerning Ideal Goals

Research question number six asked:

How do faculty members perceive and rank order
the possible ideal goals of university education?

Table 4.18 shows the perceptions of faculty members concern-

ing ideal goal statements in rank order, means, and standard devia-

tion.

TABLE 4.18

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
36	To develop a policy of admissions of students that are prepared for university work.	1	4.495	.757
26	To realistically prepare students for the job market.	2	4.422	.681
33	To emphasize lifelong education as priority for future professional success of the students.	3	4.337	.803
7	To provide vocational and academic counseling to the students.	4	4.327	.723
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	5	4.301	.712
27	To use local resources to solve local problems.	6	4.294	.712
28	To use the university as the educational and socio-cultural center of the community.	7	4.294	.712
32	To remove economic barriers to university education.	8	4.294	.851

TABLE 4.18 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
25	To constantly promote educational innovation to attend the needs of society.	9	4.282	.692
18	To provide a flexible curriculum that responds to the changing needs of society.	10	4.260	.812
19	To provide training which prepares students to function effectively as members of the community.	11	4.250	.773
23	To utilize the university for the study of community problems.	12	4.250	.797
21	Implement and better the university-business sector with regard to future employment to graduating students.	13	4.248	.910
4	To facilitate involvement of students in neighborhood and community service activity.	14	4.245	.681
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	15	4.243	.810
34	To attend to the educational needs of the community where the university is located.	16	4.235	.773
5	To facilitate involvement of faculty members in neighborhood and community service activity.	17	4.233	.730
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	18	4.225	.757
22	To provide educational programs relevant to the evolving interest of the community.	19	4.223	.740

TABLE 4.18 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	20	4.155	.837
15	To emphasize lifelong education.	21	4.147	.905
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	22	4.147	.763
14	To provide students with various avenues to reach success in their professional careers.	23	4.146	.944
9	To assist students in exploring various alternative careers.	24	4.107	.917
8	To help students identify their own personal goals.	25	4.087	.940
2	To provide retraining opportunities for professionals whose job skills have become out of date.	26	4.059	.983
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	27	4.000	.821
35	To develop a university system whose academic credits can be transferred to other universities.	28	3.990	.933
17	To provide relevant learning experience that reflects the needs of the individual.	29	3.980	.791
12	To confer equal prestige to academic as well as professional programs.	30	3.971	.789
3	To provide training opportunities and skilled manpower for local area business, industry and government.	31	3.970	.897

TABLE 4.18 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY FACULTY MEMBERS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
31	To remove geographical barriers to university education.	32	3.961	.911
29	To provide learning activities for students of varied abilities and ambitions.	33	3.921	.757
1	To provide opportunities for adult education in the local area.	34	3.873	.886
6	To include local leaders in the planning of university education programs that will affect the local community.	35	3.765	1.016
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	36	3.563	1.126

As shown in Table 4.18 the faculty members respondents perceive the 36 possible ideal goal statements as having top priority. A total of 31, or 86.1 percent of the responses are at or above the "Of high importance" category. Five responses are at or above the "Of medium importance" category. The average mean ratings range from ($\bar{x}$ = 3.563) to ($\bar{x}$ = 4.495).

The following are the three goal statements most preferred by the faculty members as a group: "To develop a policy of admissions of students that are prepared for university work" (Goal number 36); "To realistically prepare students for the job market"

(Goal number 26); "To emphasize lifelong education as priority for future professional success of the students" (Goal number 33).

In terms of the least preferred goal statements, the faculty members listed the following: "To provide opportunities for adult education in the local area" (Goal number 1); "To include local leaders in the planning of university education programs that will affect the local community" (Goal number 6); "To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc." (Goal number 10).

Perceptions of Administrators Concerning Actual Goals

Research question number seven asked:

How do administrators perceive and rank order the possible actual goals of university education?

Table 4.19 shows the perceptions of administrators concerning actual goal statements in rank order, means, and standard deviation.

TABLE 4.19

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	1	2.080	.820
5	To facilitate involvement of faculty members in neighborhood and community service activity.	2	2.058	.845

TABLE 4.19 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
3	To provide training opportunities and skilled manpower for local area business, industry and government.	3	2.056	.981
35	To develop a university system whose academic credits can be transferred to other universities.	4	2.023	.742
2	To provide retraining opportunities for professionals whose job skills have become out of date.	5	1.966	.872
4	To facilitate involvement of students in neighborhood and community service activity.	6	1.943	.798
7	To provide vocational and academic counseling to the students.	7	1.921	.895
23	To utilize the university for the study of community problems.	8	1.919	.770
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	9	1.906	.766
26	To realistically prepare students for the job market.	10	1.898	.831
14	To provide students with various avenues to reach success in their professional careers.	11	1.895	.767
25	To constantly promote educational innovation to attend the needs of society.	12	1.895	.797
34	To attend to the educational needs of the community where the university is located.	13	1.895	.736
18	To provide a flexible curriculum that responds to the changing needs of society.	14	1.885	.738

TABLE 4.19 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
32	To remove economic barriers to university education.	15	1.885	.933
28	To use the university as the educational and socio-cultural center of the community.	16	1.844	.693
21	Implement and better the university-business sector with regard to future employment to graduating students.	17	1.875	.932
1	To provide opportunities for adult education in the local area.	18	1.865	.855
31	To remove geographical barriers to university education.	19	1.841	.869
36	To develop a policy of admissions of students that are prepared for university work.	20	1.828	.795
33	To emphasize lifelong education as priority for future professional success of the students.	21	1.818	.796
22	To provide educational programs relevant to the evolving interest of the community.	22	1.802	.733
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	23	1.802	.764
27	To use local resources to solve local problems.	24	1.802	.717
8	To help students identify their own personal goals.	25	1.795	.912
15	To emphasize lifelong education.	26	1.784	.718

TABLE 4.19 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE ACTUAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	27	1.779	.658
12	To confer equal prestige to academic as well as professional programs.	28	1.759	.681
19	To provide training which prepares students to function effectively as members of the community.	29	1.742	.762
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	30	1.727	.840
17	To provide relevant learning experience that reflects the needs of the individual.	31	1.724	.604
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	32	1.719	.812
29	To provide learning activities for students of varied abilities and ambitions.	33	1.702	.724
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	34	1.663	.891
9	To assist students in exploring various alternative careers.	35	1.607	.820
6	To include local leaders in the planning of university education programs that will affect the local community.	36	1.584	.720

The administrators perceive the 36 actual goal statements as
having low priority. The goals are all ranked below "Of medium

importance". The average mean ratings range from ($\bar{x}$ = 1.584) to ($\bar{x}$ = 2.080).

Perceptions of Administrators Concerning Ideal Goals

Research question number eight asked:

How do administrators perceive and rank order the possible ideal goals of university education?

Table 4.20 shows the perceptions of administrators concerning ideal goal statements in rank order, means, and standard deviation.

TABLE 4.20

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
36	To develop a policy of admissions of students that are prepared for university work.	1	4.414	.756
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	2	4.386	.615
5	To facilitate involvement of faculty members in neighborhood and community service activity.	3	4.384	.754
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	4	4.372	.882
23	To utilize the university for the study of community problems.	5	4.360	.631
18	To provide a flexible curriculum that responds to the changing needs of society.	6	4.345	.696
28	To use the university as the educational and socio-cultural center of the community.	7	4.345	.587

TABLE 4.20 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
32	To remove economic barriers to university education.	8	4.341	.709
26	To realistically prepare students for the job market.	9	4.337	.713
14	To provide students with various avenues to reach success in their professional careers.	10	4.322	.581
7	To provide vocational and academic counseling to the students.	11	4.318	.687
4	To facilitate involvement of students in neighborhood and community service activity.	12	4.302	.555
25	To constantly promote educational innovation to attend the needs of society.	13	4.302	.721
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows sts. dev. as per indv. needs.	14	4.270	.780
22	To provide educational programs relevant to the evolving interest of the community.	15	4.264	.619
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	16	4.256	.672
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	17	4.256	.689
15	To emphasize lifelong education.	18	4.250	.861
21	Implement and better the university-business sector with regard to future employment to graduating students.	19	4.239	.758

TABLE 4.20 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
3	To provide training opportunities and skilled manpower for local area business, industry and government.	20	4.218	.769
33	To emphasize lifelong education as priority for future professional success of the students.	21	4.216	.765
8	To help students identify their own personal goals.	22	4.184	.800
19	To provide training which prepares students to function effectively as members of the community.	23	4.182	.796
34	To attend to the educational needs of the community where the university is located.	24	4.170	.805
31	To remove geographical barriers to university education.	25	4.161	.697
27	To use local resources to solve local problems.	26	4.140	.799
1	To provide opportunities for adult education in the local area.	27	4.125	.770
2	To provide retraining opportunities for professionals whose job skills have become out of date.	28	4.125	.828
29	To provide learning activities for students of varied abilities and ambitions.	29	4.095	.705
35	To develop a university system whose academic credits can be transferred to other universities.	30	4.091	.825
12	To confer equal prestige to academic as well as professional programs.	31	4.082	.640

TABLE 4.20 (continued)

RANK ORDER OF PERCEIVED IMPORTANCE OF
THE IDEAL GOALS BY ADMINISTRATORS

GOAL NUMBER	GOAL STATEMENT	RANK	MEAN	S.D.
17	To provide relevant learning experience that reflects the needs of the individual.	32	4.035	.710
9	To assist students in exploring various alternative careers.	33	4.000	.884
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	34	4.000	.758
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	35	3.966	.988
6	To include local leaders in the planning of university education programs that will affect the local community.	36	3.886	.988

As shown in Table 4.20 the administrators perceive the 36 possible ideal goal statements as having top priority. A total of 96.6 percent of the responses are at or above the "Of high importance" category. Only two responses fell below such category. The average mean ratings range from ($\bar{x}$ = 3.886) to ($\bar{x}$ = 4.414).

The administrators list the following three goal statements as their most preferred ones: "To develop a policy of admissions of students that are prepared for university work" (Goal number 36); "To develop educational programs geared to new and emerging career fields, like computer science/informatics" (Goal number 16); "To

facilitate involvement of faculty members in neighborhood and community service activity" (Goal number 5).

For the administrators, the least preferred goal statements are the following: "To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc." (Goal number 10); "To include local leaders in the planning of university education programs that will affect the local community" (Goal number 6).

Group Differences of Perceptions Concerning Actual Goals

Research question number nine asked:

What are the differences that exist in the perceptions of students, faculty members, and administrators, concerning the actual goals of university education?

Table 4.21 shows a comparison of the perceptions of the three groups, based upon rank order for each actual goal statement.

TABLE 4.21

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING ACTUAL UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
1	To provide opportunities for adult education in the local area.	2	5	18
2	To provide retraining opportunities for professionals whose job skills have become out of date.	9	13	5

Key: A = Students
B = Faculty members
C = Administrators

TABLE 4.21 (continued)

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING ACTUAL UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
3	To provide training opportunities and skilled manpower for local area business, industry and government.	3	4	3
4	To facilitate involvement of students in neighborhood and community service activity.	8	6	6
5	To facilitate involvement of faculty members in neighborhood and community service activity.	7	7	2
6	To include local leaders in the planning of university education programs that will affect the local community.	29	36	36
7	To provide vocational and academic counseling to the students.	1	3	7
8	To help students identify their own personal goals.	21	27	25
9	To assist students in exploring various alternative careers.	25	35	35
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	4	34	34
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows students to dev. as per indv. needs.	12	28	32
12	To confer equal prestige to academic as well as professional programs.	15	18	28
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	22	9	9

TABLE 4.21 (continued)

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING ACTUAL UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
14	To provide students with various avenues to reach success in their professional careers.	13	21	11
15	To emphasize lifelong education.	16	33	26
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	5	1	1
17	To provide relevant learning experience that reflects the needs of the individual.	30	19	31
18	To provide a flexible curriculum that responds to the changing needs of society.	26	30	14
19	To provide training which prepares students to function effectively as members of the community.	6	11	29
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	17	25	30
21	Implement and better the university-business sector with regard to future employment to graduating students.	27	22	17
22	To provide educational programs relevent to the evolving interest of the community.	18	24	22
23	To utilize the university for the study of community problems.	35	20	8
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	36	32	23
25	To constantly promote educational innovation to attend the needs of society.	34	31	12

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TABLE 4.21 (continued)

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING ACTUAL UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
26	To realistically prepare students for the job market.	23	16	10
27	To use local resources to solve local problems.	31	26	24
28	To use the university as the educational and socio-cultural center of the community.	32	10	16
29	To provide learning activities for students of various abilities and ambitions.	33	29	33
30	To develop a university which offers both academic and professional programs to serve the needs of students and community.	24	15	27
31	To remove geographical barriers to university education.	28	14	19
32	To remove economic barriers to university education.	20	17	15
33	To emphasize lifelong education as priority for future professional success of the students.	11	8	21
34	To attend to the educational needs of the community where the university is located.	19	12	13
35	To develop a university system whose academic credit can be transferred to other universities.	10	2	4
36	To develop a policy of admissions of students that are prepared for university work.	14	23	20

Table 4.21 offers a wide range of alternative interpretations. The most noteworthy result of this analysis is the congruence between students, faculty members, and administrators on the majority of the actual goal statements. There is congruence amongst the respondents in 61.1 percent of the actual goals. Also, it can be observed the existence of congruence in two of the three distinct groups, or 38.9 percent of the goal statements.

Group Differences of Perceptions Concerning Ideal Goals

Research question number ten asked:

What are the differences that exist in the perceptions of students, faculty members, and administrators, concerning the ideal goals of university education?

Table 4.22 shows a comparison of the perceptions of the three groups, based upon rank order for each ideal goal statement.

TABLE 4.22

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING IDEAL   UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
1	To provide opportunities for adult education in the local area.	15	34	27
2	To provide retraining opportunities for professionals whose job skills have become out of date.	33	26	28
3	To provide training opportunities and skilled manpower for local area business, industry and government.	16	31	20
4	To facilitate involvement of students in neighborhood and community service activity.	13	14	12
5	To facilitate involvement of faculty members in neighborhood and community service activity.	26	17	3
6	To include local leaders in the planning of university education programs that will affect the local community.	36	35	36
7	To provide vocational and academic counseling to the students.	7	4	11
8	To help students identify their own personal goals.	9	25	22
9	To assist students in exploring various alternative careers.	12	24	33

Key:

A = Students
B = Faculty members
C = Administrators

TABLE 4:22 (continued)

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING IDEAL UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	23	36	35
11	To provide a diversified and flexible curriculum that reflects experiential learning which allows students to dev. as per indv. needs.	6	18	14
12	To confer equal prestige to academic as well as professional programs.	32	30	31
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	18	5	16
14	To provide students with various avenues to reach success in their professional careers.	1	23	10
15	To emphasize lifelong education.	4	21	18
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	28	20	2
17	To provide relevant learning experience that reflects the needs of the individual.	31	29	32
18	To provide a flexible curriculum that responds to the changing needs of society.	24	10	6
19	To provide training which prepares students to function effectively as members of the community.	21	11	23
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	10	27	34

TABLE 4.22 (continued)

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING IDEAL UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
21	Implement and better the university-business sector with regard to future employment to graduating students.	19	13	19
22	To provide educational programs relevent to the evolving interest of the community.	30	19	15
23	To utilize the university for the study of community problems.	29	12	5
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	22	15	4
25	To constantly promote educational innovation to attend the needs of society.	20	9	13
26	To realistically prepare students for the job market.	17	2	9
27	To use local resources to solve local problems.	34	6	26
28	To use the university as the educational and socio-cultural center of the community.	25	7	7
29	To provide learning activities for students of various abilities and ambitions.	35	33	29
30	To develop a university which offers both academic and professional programs to serve students and community.	3	22	17
31	To remove geographical barriers to university education.	27	32	25

TABLE 4:22 (continued)

GROUP DIFFERENCES OF PERCEPTIONS
CONCERNING IDEAL UNIVERSITY GOALS

GOAL NUMBER	GOAL STATEMENTS	A	B	C
32	To remove economic barriers to university education.	11	8	8
33	To emphasize lifelong education as priority for future professional success of the students.	2	3	21
34	To attend to the educational needs of the community where the university is located.	14	16	24
35	To develop a university system whose academic credit can be transferred to other universities.	8	28	30
36	To develop a policy of admissions of students that are prepared for university work.	5	1	1

Table 4.22 offers a wide range of alternative interpretations.

There is congruence amongst the respondents in 47.2 percent of the ideal goals. The three groups agree that the following goal statements are of high importance: "To facilitate involvement of students in neighborhood and community service activity" (Goal number 4); "To provide vocational and academic counseling to the students" (Goal number 7); "To provide a diversified and flexible curriculum that reflects experiential learning which allows students to develop as per individual needs" (Goal number 11); "To develop a university where students and professors can constantly have

opportunity to interact and meet informally" (Goal number 13); "To realistically prepare students for the job market" (Goal number 26); To remove economic barriers to university education" (Goal number 32); "To develop a policy of admissions of students that are prepared for university work" (Goal number 36).

It can be observed, also, the existence of congruence in two of the three distinct groups, or 52.8 percent of the goal statements. The following goal statements are of high importance for the students, and there is congruence of low importance for the faculty members, and administrators: "To provide opportunities for adult education in the local area" (Goal number 1); "To help students identify their own personal goals" (Goal number 8); "To assist students in exploring various alternative careers" (Goal number 9); "To offer educational opportunity for all segments of the people to fulfill economic and social potential" (Goal number 20); "To develop a university which offers both academic and professional programs to serve students and community" (Goal number 30); and "To develop a university system whose academic credits can be transferred to other universities (Goal number 35).

As for the goal statement number 33 "To emphasize lifelong education as priority for future professional success of the students", there is congruence of high importance for the students and faculty members.

The students and administrators agree as of high importance the goal statements "To provide training opportunities and skilled

manpower for local area business, industry and government" (Goal number 3); and "To provide students with various avenues to reach success in their professional careers" (Goal number 14).

The faculty members and administrators perceive with congruence of high importance, the following: "To provide a flexible curriculum that responds to the changing needs of society" (Goal number 18); "To utilize the university for the study of community problems" (Goal number 23); "To constantly promote educational innovation to attend the needs of society" (Goal number 25); and "To use the university as the educational and socio-cultural center of the community" (Goal number 28).

The following goal statements are perceived as of high importance for the group of administrators. "To facilitate involvement of faculty members in neighborhood and community" (Goal number 5); "To develop educational programs geared to new and emerging career fields, like computer science/informatics" (Goal number 16); and "To utilize universities to plan projects of community betterment, together with branches of the local administration" (Goal number 24).

Only the group of faculty members perceive as of high importance the goal statements "To provide training which prepares students to function effectively as members of the community" (Goal number 19); and "To use local resources to solve local problems" (Goal number 27).

Further analysis of Table 4.22 indicates least and most preference by groups:

Students

The most preferred goal statements by the students are goal numbers 14, 33, 30, and 15.

For the same group, the least preferred are goal numbers 6, 29, 27, and 2.

Faculty Members

These are the goal statements mostly preferred by the faculty members: 36, 26, 33, and 7.

The least preferred are the goal numbers 29, 1, 6, and 10.

Administrators

The following goal statements are the ones most preferred by the administrators: 36, 16, 5, and 7.

This group perceive the following goals as the least preferred ones: 6, 10, 20, and 9.

Table 4.23 shows a summary of the perceptions and goal discrepancies by the groups.

TABLE 4.23

RESPONSE TO UNIVERSITY GOALS, BY TOTAL GROUPS,
PERCEIVED AND PREFERRED SCORES

GOAL NUMBER	GOAL STATEMENTS	RESPONSE TYPE	MEANS	STANDARD DEVIATION	DISCREPANCY SCORE*
1	To provide opportunities for adult education in the local area.	Perceived	2.279	1.072	1.844
		Preferred	4.123	.807	
2	To provide retraining opportunities for professionals whose job skills have become out of date.	Perceived	2.203	1.094	1.844
		Preferred	4.047	.922	
3	To provide training opportunities and skilled manpower for local area business, industry and government.	Perceived	2.300	1.157	1.867
		Preferred	4.167	.841	
4	To facilitate involvement of students in neighborhood and community service activity.	Perceived	2.220	1.132	2.078
		Preferred	4.298	.702	
5	To facilitate involvement of faculty members in neighborhood and community service activity.	Perceived	2.251	1.073	1.994
		Preferred	4.245	.846	

*Discrepancy score equals average mean preferred score minus average mean perceived score for each goal. Further all discrepancy scores are statistically significant at or beyond the .001 level.

TABLE 4.23 (continued)

RESPONSE TO UNIVERSITY GOALS, BY TOTAL GROUPS,
PERCEIVED AND PREFERRED SCORES

GOAL NUMBER	GOAL STATEMENTS	RESPONSE TYPE	MEANS	STANDARD DEVIATION	DISCREPANCY SCORE*
6	To include local leaders in the planning of university education programs that will affect the local community.	Perceived	1.886	1.058	1.943
		Preferred	3.829	1.045	
7	To provide vocational and academic counseling to the students.	Perceived	2.339	1.197	2.014
		Preferred	4.353	.749	
8	To help students identify their own personal goals.	Perceived	2.061	1.165	2.164
		Preferred	4.225	.876	
9	To assist students in exploring various alternative careers.	Perceived	1.939	1.139	2.235
		Preferred	4.174	.886	
10	To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.	Perceived	2.055	1.161	1.880
		Preferred	3.935	1.038	
11	To provide a diversified and flexible curc. that reflects experiential learning which allows students to dev. as per indv. needs.	Perceived	2.088	1.164	2.222
		Preferred	4.310	.774	

TABLE 4.23 (continued)

RESPONSE TO UNIVERSITY GOALS, BY TOTAL GROUPS,
PERCEIVED AND PREFERRED SCORES

GOAL NUMBER	GOAL STATEMENTS	RESPONSE TYPE	MEANS	STANDARD DEVIATION	DISCREPANCY SCORE*
12	To confer equal prestige to academic as well as professional programs.	Perceived	2.096	1.023	1.941
		Preferred	4.037	.788	
13	To develop a university where students and professors can constantly have opportunities to interact and meet informally.	Perceived	2.138	1.058	2.122
		Preferred	4.260	.789	
14	To provide students with various avenues to reach success in their professional careers.	Perceived	2.134	1.199	2.230
		Preferred	4.364	.784	
15	To emphasize lifelong education.	Perceived	2.024	1.088	2.265
		Preferred	4.289	.876	
16	To develop educational programs geared to new and emerging career fields, like computer science/informatics.	Perceived	2.342	1.077	1.865
		Preferred	4.207	.819	
17	To provide relevant learning experience that reflects the needs of the individual.	Perceived	2.022	1.029	2.015
		Preferred	4.037	.813	
18	To provide a flexible curriculum that responds to the changing needs of society.	Perceived	2.049	1.081	2.206
		Preferred	4.255	.801	

TABLE 4.23 (continued)

RESPONSE TO UNIVERSITY GOALS, BY TOTAL GROUPS,
PERCEIVED AND PREFERRED SCORES

GOAL NUMBER	GOAL STATEMENTS	RESPONSE TYPE	MEANS	STANDARD DEVIATION	DISCREPANCY SCORE*
19	To provide training which prepares students to function effectively as members of the community.	Perceived	2.169	1.102	2.052
		Preferred	4.221	.830	
20	To offer educational opportunity for all segments of the people to fulfill economic and social potential.	Perceived	2.058	1.166	2.090
		Preferred	4.148	.827	
21	Implement and better the university-business sector with regard to future employment to graduating students.	Perceived	2.062	1.128	2.176
		Preferred	4.238	.870	
22	To provide educational programs relevant to the evolving interest of the community.	Perceived	2.078	1.023	2.110
		Preferred	4.188	.793	
23	To utilize the university for the study of community problems.	Perceived	2.050	1.077	2.173
		Preferred	4.223	.858	
24	To utilize universities to plan projects of community betterment, together with branches of the local administration.	Perceived	1.922	1.054	2.342
		Preferred	4.264	.886	

TABLE 4.23 (continued)

RESPONSE TO UNIVERSITY GOALS, BY TOTAL GROUPS,
PERCEIVED AND PREFERRED SCORES

GOAL NUMBER	GOAL STATEMENTS	RESPONSE TYPE	MEANS	STANDARD DEVIATION	DISCREPANCY SCORE*
25	To constantly promote educational innovation to attend the needs of society.	Perceived	2.015	1.092	2.250
		Preferred	4.265	.760	
26	To realistically prepare students for the job market.	Perceived	2.116	1.081	2.223
		Preferred	4.339	.790	
27	To use local resources to solve local problems.	Perceived	2.019	1.032	2.080
		Preferred	4.099	.843	
28	To use the university as the educational and socio-cultural center of the community.	Perceived	2.087	1.048	2.175
		Preferred	4.262	.784	
29	To provide learning activities for students of various abilities and ambitions.	Perceived	1.984	1.028	1.981
		Preferred	3.965	.914	
30	To develop a university which offers both academic and professional programs to serve students and community.	Perceived	2.089	1.075	2.239
		Preferred	4.328	.748	

TABLE 4.23 (continued)

RESPONSE TO UNIVERSITY GOALS, BY TOTAL GROUPS,
PERCEIVED AND PREFERRED SCORES

GOAL NUMBER	GOAL STATEMENTS	RESPONSE TYPE	MEANS	STANDARD DEVIATION	DISCREPANCY SCORE*
31	To remove geographical barriers to university education.	Perceived	2.079	1.095	2.014
		Preferred	4.093	.835	
32	To remove economic barriers to university education.	Perceived	2.116	1.193	2.212
		Preferred	4.328	.807	
33	To emphasize lifelong education as priority for future professional success of the students.	Perceived	2.169	1.176	2.210
		Preferred	4.379	.789	
34	To attend to the educational needs of the community where the university is located.	Perceived	2.137	1.026	2.119
		Preferred	4.256	.810	
35	To develop a university system whose academic credits can be transferred to other universities.	Perceived	2.296	1.109	1.875
		Preferred	4.171	.889	
36	To develop a policy of admissions of students that are prepared for university work.	Perceived	2.115	1.140	2.324
		Preferred	4.439	.808	

Goal Statement Discrepancies

Table 4.23 shows the response to university goals, by total groups, both perceived and preferred scores. Means and standard deviation are shown for each goal. In the extreme right-hand column there appears the goal statement discrepancies, which, for a given statement, are simply the differences between the preferred and perceived means for that statement. It appears important to observe that each goal statement in the study has received a higher preferred mean, than the perceived mean. This indicates that the total group of respondents believe that the goal statements in the questionnaire should be of particular importance to the institution.

The discrepancy scores range from 1.844 (Goal numbers 1 and 2) to 2.342 (Goal statement number 24).

Based on the discrepancies displayed in Table 4.23, the following can be stated:

(a) The respondents as a group agree that more emphasis should be placed on increasing the participation of the university in meeting local needs.

(b) The three groups agree that the university has as one of its responsibility, the task of offering vocational/technical programs for the students, vis-à-vis their qualification and preparation for careers in computer/informatics, and other emerging fields.

The three mostly agreed goals of the university--teaching, research, and extension, should be exercised in such a manner as to facilitating the involvement of students, faculty members and

administrators of the institution and community service activity, and in projects beneficial to the community.

The university must be a true supplier of skilled manpower for local employment in business, industry and government. To accomplish this, the university must offer training opportunities and practical courses leading to acquisition of knowledge in demand locally.

All groups, particularly the students, are especially interested in personal development, and in counseling and advising. Most of the students have manifested their perception about counseling, advising and personal development, which in fact are career counseling, personal counseling services, academic advising, and job placement services. It seems wise, as per the perceptions of the participants, for the university to start such services/or upgrade them.

Administrators and faculty members are concerned with the integration of current research and scientific thinking into the curriculum; the development of human potential, and the preparation of students for life, rank high amongst these groups.

All participants agree that human resources development is an essential feature of the university. The respondents charge the university with the responsibility of preparation of students for the job market, capacitating students with skills currently needed locally.

Revise and promote change in curriculum in order to attend current societal needs.

To emphasize lifelong education, better qualifying human potential and constant promotion of human resource.

Inception of a democratic policy of admissions, seeking first those students capable of undertaking university work.

Elitist and meritocratic philosophies of education must give way to a current egalitarian form of education, one which can more effectively upgrade the human resource potential with technical skills to fulfill demands of the high-technology era. A better qualified work force can contribute more to the wealth of the nation, with greater participation in its destiny.

Analysis of Variance (ANOVA)

The six research hypotheses of this study were tested to determine if there were significant difference in perceptions of the 36 possible university goals, in both perceived and preferred forms. Analysis of variance (ANOVA) was used to determine which goals have difference in perceptions by groups. The hypotheses were tested at the alpha .05 level. As there were 36 goals, the overall alpha had to be divided by thirty six. Therefore, the individual alpha for each goal statement to be significant was .0014.

Table 4.24 and 4.25 show the sum of squares, degree of freedom, mean square, value of F, and significance of F for each actual and ideal goal statements, respectively.

TABLE 4.24

ANOVA FOR ACTUAL GOALS

GOAL NUMBER	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE OF F
1	22.586	2	11.193	11.365	.001
2	6.645	2	3.322	2.978	.052
3	7.235	2	3.617	2.876	.058
4	5.639	2	2.820	2.436	.089
5	4.249	2	2.125	1.908	.150
6	11.690	2	5.795	5.636	.004
7	14.656	2	7.328	5.703	.004
8	7.295	2	3.598	2.832	.060
9	12.709	2	6.355	5.462	.005
10	27.295	2	13.646	11.794	.001
11	15.265	2	7.632	6.262	.002
12	12.360	2	6.180	6.374	.002
13	4.296	2	2.148	2.068	.128
14	8.473	2	4.236	3.058	.048
15	17.998	2	8.999	8.406	.001
16	6.600	2	3.300	2.965	.053
17	7.891	2	3.945	4.010	.019
18	2.260	2	1.130	1.054	.350

TABLE 4.24 (continued)

ANOVA FOR ACTUAL GOALS

GOAL NUMBER	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE OF F
19	22.469	2	11.234	10.360	.001
20	13.857	2	6.929	5.445	.005
21	3.096	2	1.275	1.275	.281
22	9.224	2	4.612	4.877	.008
23	1.669	2	.834	.775	.461
24	1.236	2	.618	.578	.562
25	1.748	2	.874	.783	.458
26	5.151	2	2.576	2.484	.085
27	2.798	2	1.399	1.468	.232
28	4.599	2	2.299	2.172	.116
29	7.077	2	3.538	3.647	.027
30	9.745	2	4.872	4.485	.012
31	4.259	2	2.129	1.956	.143
32	4.456	2	2.228	1.659	.192
33	12.660	2	6.330	4.914	.008
34	6.035	2	3.018	2.994	.052
35	7.802	2	3.901	3.351	.036
36	11.215	2	5.608	4.515	.012

TABLE 4.25

ANOVA FOR IDEAL GOALS

GOAL NUMBER	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE OF F
1	9:296	2	4:648	7:670	:002
2	1.768	2	.884	1.052	.350
3	7.101	2	3.550	5.275	.006
4	.868	2	.434	.894	.410
5	2.743	2	1.371	1.901	.151
6	1.150	2	.575	.540	.583
7	1.025	2	.512	.970	.380
8	4.722	2	2.361	3.145	.044
9	8.463	2	4.231	5.523	.004
10	27.117	2	13.558	13.783	.001
11	3.252	2	1.626	2.787	.063
12	.707	2	.354	.568	.567
13	.065	2	.032	.056	.945
14	12.417	2	6.209	10.726	.001
15	5.867	2	2.934	4.159	.016
16	3.135	2	1.567	2.379	.094
17	.663	2	.332	.501	.607
18	.751	2	.376	.603	.548

TABLE 4.25 (continued)

ANOVA FOR IDEAL GOALS

GOAL NUMBER	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIFICANCE OF F
19	.328	2	.164	.244	.784
20	9.170	2	4.585	6.965	.001
21	.053	2	.027	.036	.965
22	.981	2	.490	.798	.451
23	2.350	2	1.175	1.629	.198
24	.941	2	.470	.614	.542
25	.142	2	.071	.121	.886
26	1.298	2	.649	1.020	.362
27	7.822	2	3.911	5.733	.004
28	1.626	2	.813	1.304	.274
29	1.502	2	.751	.914	.402
30	7.917	2	3.959	7.306	.001
31	2.836	2	1.413	2.035	.132
32	.559	2	.279	.454	.635
33	6.017	2	3.009	4.940	.008
34	1.547	2	.774	1.185	.307
35	10.493	2	5.246	7.124	.001
36	.325	2	.162	.250	.779

As can be observed in Table 4.24 the goal statement numbers 1, 6, 7, 9, 10, 11, 12, 13, 15, 17, 19, 20, 22, 29, 30, 33, 35, and 36 have a significant difference at the alpha level .05.

In Table 4.25 the goal statement numbers 1, 3, 8, 9, 10, 14, 15, 20, 27, 30, 33, and 35 have a significant difference at the alpha level .05.

Scheffée Test of Post-Hoc Multiple-Comparison

The Scheffée test was conducted to perform a post-hoc comparison of the goal statements which were found to be significantly different in the ANOVA. The alpha level used was set at .0014. The results of the Scheffée test are shown in Tables 4.26 and 4.27.

TABLE 4.26

ACTUAL GOALS WITH SIGNIFICANT
DIFFERENCES BY PAIRS OF GROUPS

PAIRS OF GROUPS	GOAL STATEMENT NUMBERS
Students and faculty members	10
Students and administrators	1, 6, 7, 9, 10, 11, 12, 19
Faculty members and administrators	nihil

TABLE 4.27

IDEAL GOALS WITH SIGNIFICANT
DIFFERENCES BY PAIRS OF GROUPS

PAIRS OF GROUPS	GOAL STATEMENT NUMBERS
Students and faculty members	1, 10, 14, 30
Students and administrators	nihil
Faculty members and administrators	nihil

Testing of Hypotheses

The first hypotheses of the study states:

H_{0_1} :   There are no significant differences in perceptions of students and faculty members, with regards to the actual possible goals of university education.

There was a significant difference in perceptions of students and faculty members with regards to the following actual goal statement:

Goal Number 10:   To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.

The students placed a higher importance in this goal than the faculty members. This goal was ranked number 4 in importance by the students and number 34 by the faculty members. The F probability for this goal was less than .0001. Therefore, the null hypotheses was rejected.

The second hypotheses of the study states:

H_{O_2} : There are no significant differences in perceptions of students and faculty members, with regards to the ideal possible goals of university education.

There was a significant difference in perceptions of students and faculty members with regards to the following ideal goal statements:

Goal Number 1:   To provide opportunities for adult education in the local area.

The students placed a higher importance in this goal than the faculty members. This goal was ranked number 15 in importance by the students and number 34 by the faculty members. The F probability for this goal was .0002.

Goal Number 10:   To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.

The students placed a higher importance in this goal than the faculty members. This goal was ranked number 23 in importance by the students and number 36 by the faculty members. The F probability for this goal was less than .0001.

Goal Number 14:   To provide students with various avenues to reach success in their professional careers.

The students placed a higher importance in this goal than the faculty members. This goal was ranked number 1 in importance by the students and number 23 by the faculty members. The F probability for this goal was .0003.

Goal Number 30:   To develop a university which offers both academic/
                  professional programs to serve needs of students
                  and community.

The students placed a higher importance in this goal than

the faculty members. This goal was ranked number 3 in importance

by the students and number 22 by the faculty members. The F

probability for this goal was .0006.

Thus, the null hypotheses was rejected.

The third hypotheses of this study states:

H_{o_3} :   There are no significant differences in perceptions
              of students and administrators, with regards to the
              actual possible goals of university education.

There was a significant difference in perceptions of students

and administrators with regards to the following actual goal state-

ments:

Goal Number 1:   To provide opportunities for adult education in
                 the local area.

The students placed a higher importance in this goal than

the administrators. This goal was ranked number 2 in importance by

the students and number 18 by the administrators. The F probability

for this goal was less than .0001.

Goal Number 6:   To include local leaders in the planning of
                 university education programs that will affect
                 the local community.

The students placed a higher importance in this goal than

the administrators. This goal was ranked number 29 in importance

by the students and number 36 by the administrators. The F probabi-

lity for this goal was .0001.

Goal Number 7:   To provide vocational and academic counseling
                 to the students.

The students placed a higher importance in this goal than the administrators. This goal was ranked number 1 in importance by the students and number 7 by the administrators. The F probability for this goal was .0002.

Goal Number 9: To assist students in exploring various alternative careers.

The students placed a higher importance in this goal than the administrators. This goal was ranked number 25 in importance by the students and 35 by the administrators. The F probability for this goal was .0002.

Goal Number 10: To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing), Math, etc.

The students placed a higher importance in this goal than the administrators. This goal was ranked number 14 in importance by the students and number 34 by the administrators. The F probability for this goal was less than .0001.

Goal Number 11: To provide a diversified and flexible curriculum that reflects experiential learning which allows students to develop as per individual needs.

The students placed a higher importance in this goal than the administrators. This goal was ranked number 12 in importance by the students and number 32 by the administrators. The F probability for this goal was .0001.

Goal Number 12: To confer equal prestige to academic as well as professional programs.

The students placed a higher importance in this goal than the administrators. This goal was ranked number 15 in importance

by the students and number 28 by the administrators. The F probability for this goal was .0004.

Goal Number 19: To provide training which prepares students to function effectively as members of the community.

The students placed a higher importance in this goal than the administrators. This goal was ranked number 6 in importance by the students and number 29 by the administrators. The F probability for this goal was less than .0001.

Therefore, the null hypotheses was rejected.

The fourth hypotheses of this study states:

H_{O_4} : There are no significant differences in perceptions of students and administrators, with regards to the ideal possible goals of university education.

The null hypotheses was not rejected. This indicates that there were no significant differences in perceptions of students and administrators, with regards to ideal possible goals of university education, as shown in Table 4.27.

The fifth hypotheses of this study states:

H_{O_5} : There are no significant differences in perceptions of faculty members and administrators, with regards to the actual possible goals of university education.

The null hypotheses was not rejected. This indicates that there were no significant differences in perceptions of faculty members and administrators, with regards to the actual possible goals of university education, as shown in Table 4.26.

The sixth hypotheses of this study states:

H_{O_6} : There are no significant differences in perceptions of faculty members and administrators, with regards to the ideal possible goals of university education.

The null hypotheses was not rejected. This indicates that there were no significant differences in perceptions of faculty members and administrators, with regards to the ideal possible goals of university education, as shown in Table 4.27.

Goals Written by the Respondents

The questionnaire was designed to provide space for the respondents to add other goals they have, different than those in the survey. In fact, the respondents were encouraged to utilize items 37, 38, 39, and 40 in the questionnaire to write their own goals for university education. While it is difficult to categorize and quantify these responses, such goals are nonetheless important to enumerate, since they seem to be significant to the respondents and possibly to others in the population.

The goals suggested by the respondents were analyzed by groups. Almost all respondents, at all levels, indicated that no or little importance was given to the stated goals of a university. And, almost without exception, they agreed that each goal was of high or extremely high importance. Their individually-stated goals followed this same pattern.

Throughout the seven campuses, there were 39 students who wrote goals, in the questionnaire.

Students' Goals

A total reform in all levels of education in Brazil, upgrading the curriculum, quality of professors (training, education,

ability to teach, desire to assist students, and, especially, access of <u>all</u> people to education. This last point was the one most frequently mentioned: that the university is an elitist, undemocratic institution which admits and educates only members of the highest classes and excludes the poor.

The curriculum is not relevant; it does not train students for the practicalities of life and work. There need to be practical courses in health care, training for industry jobs and the technical skills, so that graduates can serve the community as well as find and hold jobs.

The internal university bureaucracy is undemocratic and does not provide for the needs of the students.

Faculty Members' Goals

Additional goals were listed by 31 faculty members, in all campuses. The most recurring ones were as follows:

Raise the intellectual level of the university and, therefore, of students. Provide them with a rigorous course of study that is relevant to their needs and future goals, taught by faculty who can challenge them.

Make the university the center of the community in a democratic society, so that all have access to the university, not just those with money or from the upper class, and the university has relevancy for the community.

To integrate current research and scientific thinking into the curriculum so that the course of study is up to date and relevant;

and, in conjunction with this, to acknowledge the value of a well-stocked library and work toward that goal.

To pay professional salaries to faculty so that they would feel appreciated and, therefore, more dedicated to academic life. At the same time, offer free or inexpensive education to all students.

Offer practical courses for students that differ from region to region throughout the country as needs demand, allowing for input from communities into those courses and dissemination of their products into the community.

Administrators' Goals

The following goals were listed by 12 administrators at the Federal University of Paraiba, in its seven campuses.

Develop the student wholly, being concerned with the totality of his/her ambitions and potential, preparing them not only with specific knowledge but with education for life.

Create job opportunities for the benefit of students and the community, integrating the needs of society and the needs of students into a well-rounded educational program.

Promote, develop, stress research as a fundamental characteristic of the university and a necessity for maintenance in a complex world. Research must be integrated with teaching in order to enhance the university, the student, and the country. Technology must be adjusted to the needs of each region, and the production of Brazilian know-how must be emphasized to avoid foreign dependence.

Comments Written by the Respondents

Comments, by group, about education in Brazil were given by respondents throughout the campuses. The number of people indicating comments appears in parentheses at the end of each comment.

Students' Comments

The Brazilian education system is elitist and serves the ruling class, not all people (14).

Faculty are ill-prepared to teach, incompetent, low-paid, and not interested in the well-being of their students (11).

The education system needs radical changes, and it would be wonderful if the "ideals" identified in this questionnaire could be put into practice (10).

The questionnaire is clear and concise as well as objective (10).

Education in Brazil is too political and interested only in business; the problem is that it caters to a capitalist society (7).

Almost all comments indicated in some way that Brazilian education is in trouble; many even used the word "dying." They indicated that a study of this nature is needed, but feared that the government would not listen to its results or put suggestions into practice. Their comments were much more about the educational system than the questionnaire.

Only three people criticized the questionnaire, one claiming that it was "not clear," one stating that questions were repetitive, and one criticizing the "real vs. ideal" choice pattern.

Faculty Members' Comments

The questionnaire is clear and objective, concise and comprehensive (12).

Too reflective of North American, not Brazilian education (5).

Missing a reference to or emphasis on research, which is important in a university setting (5).

Utopic in its goals; it would be nice to see them put into practice, but there is great doubt that the system will change (11).

The university emphasizes social promotion and upward mobility; one seeks prestige and a diploma, not knowledge and work (9).

Lack of money will prevent the idealistic goals of the study from being put into effect (5).

Administrators' Comments

The questionnaire is clear, complete, and objective (5).

It is too "Americanized," not Brazilian enough, or not reflective enough of the poor section of Brazil in which it is being tested (4).

The study is valid and necessary, but there is doubt that its lofty goals will ever be put into practice (5).

The university is inattentive to the needs of society; there must be a deeply-seated reform of the democratic structure of the university (5).

Summary

This chapter began with an identification of some specific information used in the data analysis. The data was collected through a survey questionnaire (see Appendix E). The survey questionnaire was administered by the researcher in face-to-face contact with university students, faculty members, and administrators in the seven campuses of the Federal University of Paraiba, in Brazil.

The data was organized and presented through the display of tables. Appropriate demographic information was presented, followed by information regarding perceptions of the groups of respondents about university goals and objectives, including their own written goals and comments.

Throughout this chapter, the researcher presented detailed tables containing the data collected in-country, and highlighted the significant findings of this study.

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter summarizes the study and presents conclusions and recommendations for further research which are based on the findings. It features the following sections: (1) A brief review of the study, (2) summary of the findings, (3) comments written by the respondents, (4) conclusions, and (5) recommendations.

A Brief Review of the Study

In a developing country such as Brazil, the educational system has a great responsibility for helping to solve existing social problems, meeting the needs of its people, and assisting in the realization of the potentiality and aspirations of the nation. Universities must demonstrate their capacity to adapt to the nation's research, scientific and professional needs. The development of human resources is an area which must not be overlooked by higher education institutions. A market-oriented, more utilitarian system of higher education is needed to qualify university students to fulfill the demands of the high-technology era.

The research study was designed to analyze and describe perceptions of educational participants concerning possible goals and objectives of higher education.

The conceptual framework and literature review dealt with broader issues of economics of education, sociology, organization, and administration of higher education.

The researcher conducted an in-country survey with distribution of N = 450 questionnaires to three distinct groups of university students (N = 150), faculty members (N = 150), and administrators (N = 150), in order to assess their perceptions of what the educational system actually "is" and their perceptions of what they think it ideally "should be."

The setting for the research was the Federal University of Paraiba (UFPB) and its seven campuses. The significance of the study lies in that, to the best knowledge of the investigator, it was the first research undertaken at UFPB which sought to obtain perceptions of university participants, concerning goals and objectives of higher education. Being foundational in nature, the study provides basic information to educational planners interested in upgrading curricular activities and programmatic features of the university. It also lends pertinent information for future research.

The survey methodology chosen to gather information was a questionnaire which contained two parts. Part one dealt with demographic information related to the characteristics of the respondents. Part two consisted of 36 possible goals for higher education. Overall the questionnaire consisted of eight pages. The responses were to be given in two ways. One representing the respondent's perceptions about what the current educational system "is", and,

then, what it "should be". For each one of the goal statements appearing in the questionnaire, the respondents were asked to check the degree of importance for higher educational development on a five point Likert scale. Response choices were as follows: (1) Of no importance; (2) Of low importance; (3) Of medium importance; (4) Of high importance; (5) Of extremely high importance. Of the N = 450 questionnaires distributed, a total of N = 343 (76.22 percent) were returned, containing all the sufficient information needed for analysis.

The responses were analyzed utilizing a large mainframe computer (Cyber 170/750) at Michigan State University, using the Statistical Package for the Social Sciences (Nie, et al, 1975). Analysis of Variance (ANOVA) was used to test significant differences for all 36 goal statements within total group and subgroup tables. The statistical data obtained from the ANOVA was used to perform the Scheffée test, which is a post-hoc multiple-comparison of means. The objective for performing the Scheffée test was to examine which pairs of comparisons were significantly different. Common, recurring patterns were identified in the descriptive data.

Summary of the Findings

The findings of this study are summarized as follows: In the analysis of actual goals of university education, there is congruence amongst total group as well as each individual subgroup. The respondents perceive the university goals as having low emphasis.

The whole group of respondents feel that low importance is being given to the development of educational programs concerning new and emerging fields, like computer science/informatics (Goal 16), vocational and academic counseling (Goal 7), and training opportunities and skilled manpower for local area (Goal 3).

The group of students perceive low importance is being given to vocational and academic counseling (Goal 7), opportunities for adult education (Goal 1), and training opportunities and skilled manpower for local area (Goal 3).

For the faculty members low importance is given to the development of educational programs concerning new and emerging fields (Goals 16), the transference of academic credits to other universities (Goal 35), and vocational and academic counseling (Goal 7).

As for the administrators, they perceive as receiving low importance the development of educational programs concerning new and emerging fields (16), the involvement of faculty members in neighborhood and community service (Goal 5), and training opportunities and skilled manpower (Goal 3).

Regarding ideal goals, there is also congruence perceived amongst the groups of respondents. They all think that higher importance should be placed to the 36 possible goals which appear in the questionnaire.

The whole group believes that a better policy of admissions should be developed (Goal 36), lifelong education should be

emphasized (Goal 33), and guidance and counseling should be provided to the students, concerning professional careers (Goal 14).

The students also believe that guidance and counseling should be provided (Goal 14). They hold that lifelong education as priority for future professional success of the students should be emphasized (Goal 33), and for them the university should strive to offer both academic and professional programs aiming at serving the needs of students and community (Goal 30).

For the faculty members a better policy of admissions should be developed (Goal 36), the university should prepare students for the job market (Goal 26), and lifelong education should be more emphasized (Goal 33).

Insofar as the administrators are concerned, the university should develop a better policy of admissions (Goal 36), to develop educational programs geared to new and emerging careers (Goal 16), and facilitate involvement of faculty members in community activity (Goal 5).

Goal statement discrepancies were shown in Table 4.23, by total groups, both perceived and preferred scores. Means and standard deviation were shown for each goal. The following is a summary of statements which were based on the discrepancies displayed in such a table.

The respondents as a group agree that more emphasis should be placed on increasing the participation of the university in meeting local needs.

The three groups agree that the university has as one of its responsibility, the task of offering vocational/technical programs for the students, vis-à-vis their qualification and preparation for careers in computer/informatics, and other emerging fields.

The three mostly agreed goals of the university--teaching, research, and extension, should be exercised in such a manner as to facilitating the involvement of students, faculty members, and administrators of the institution and community service activity, and in projects beneficial to the community.

The university must be a true supplier of skilled manpower for local employment in business, industry and government. To accomplish this, the university must offer training opportunities and practical courses leading to acquisition of knowledge in demand locally.

All groups, particularly the students, are especially interested in personal development, and in counseling and advising. Most of the students have manifested their perception about counseling, advising and personal development, which in fact are career counseling, personal counseling services, academic advising, and job placement services. It seems wise, as per the perceptions of the participants, for the university to start such services/or upgrade them.

Administrators and faculty members are concerned with the integration of current research and scientific thinking into the curriculum; the development of human potential, and the preparation of students for life, rank high amongst these groups.

All participants agree that human resources development is an essential feature of the university. The respondents charge the university with the responsibility of preparation of students for the job market, capacitating students with skills currently needed locally. Revise and promote change in curriculum in order to attend current societal needs. Emphasize lifelong education, better qualifying human potential and constant promotion of human resource. Inception of a democratic policy of admissions, seeking first those students capable of undertaking university work.

Elitist and meritocratic philosophies of education must give way to a current egalitarian form of education, one which can more effectively upgrade the human resource potential with technical skills to fulfill demands of the high-technology era. A better qualified work force can contribute more to the wealth of the nation, with greater participation in its destiny.

There were six hypotheses under consideration in this study.

They were tested using the Analysis of Variance (ANOVA), and the Scheffée Test. The hypotheses were stated as follows:

H_{0_1}: There are no significant differences in perceptions of students and faculty members, with regards to the actual possible goals of university education.

H_{0_2}: There are no significant differences in perceptions of students and faculty members, with regards to the ideal possible goals of university education.

H_{0_3}: There are no significant differences in perceptions of students and administrators, with regards to the actual possible goals of university education.

H_{O_4} : There are no significant differences in perceptions of students and administrators, with regards to the ideal possible goals of university education.

H_{O_5} : There are no significant differences in perceptions of faculty members and administrators, with regards to the actual possible goals of university education.

H_{O_6} : There are no significant differences in perceptions of faculty members and administrators, with regards to the ideal possible goals of university education.

Hypotheses numbers one, two, and three were rejected based on the results of the ANOVA and Scheffée tests, since it was observed a significant difference in perceptions of students and faculty members with regards to actual and ideal goals. Also, there was a significant difference of perceptions of students and administrators concerning actual goals.

Hypotheses numbers four, five, and six were not rejected. There was no significant difference observed in perceptions of students and administrators, faculty members and administrators, concerning ideal goals, and faculty members and administrators concerning actual goals.

In the open-ended questionnaire, the participants wrote their own goals as well as comments about university education. The following is a summary of what they said.

Students' Goals

A total reform in all levels of education in Brazil, upgrading the curriculum, quality of professors (training, education, ability to teach, desire to assist students), and, especially,

access of <u>all</u> people to education. This last point was the one most frequently mentioned: that the university is an elitist, undemocratic institution which admits and educates only members of the highest classes and excludes the poor.

Faculty Members' Goals

Raise the intellectual level of the university and, therefore, of students. Provide them with a rigorous course of study that is relevant to their needs and future goals, taught by faculty who can challenge them. Make the university the center of the community in a democratic society, so that all have access to the university, not just those with money or from the upper class, and the university has relevancy for the community. To integrate current research and scientific thinking into the curriculum so that the course of study is up to date and relevant; and, in conjunction with this, to acknowledge the value of a well-stocked library and work toward that goal. Offer practical courses for students that differ from region to region throughout the country.

Administrators' Goals

Promote, develop, and stress research as a fundamental characteristic of the university and a necessity for maintenance in a complex world. Research must be integrated with teaching in order to enhance the university, the student, and the country. Technology must be adjusted to the needs of each region, and the production of Brazilian know-how must be emphasized to avoid foreign

dependency. Develop the student wholly, being concerned with the totality of his/her amibitions and potential, preparing them not only with specific knowledge but with education of life.

Comments Written by the Respondents

The respondents wrote comments about education in Brazil. The number of people indicating comments appears in parentheses at the end of each comment.

Students' Comments

The Brazilian education system is elitist and serves the ruling class, not all people (14). Faculty are ill-prepared to teach, incompetent, low-paid, and not interested in the well-being of their students (11). The education system needs radical changes, and it would be wonderful if the "ideals" identified in this questionnaire could be put into practice (10). The questionnaire is clear and concise as well as objective (10).

Faculty Members' Comments

The university emphasizes social promotion and upward mobility; one seeks prestige and a diploma, not knowledge and work (9). Too reflective of North American, not Brazilian education (5). Missing a reference to or emphasis on research, which is important in a university setting (5). Lack of money will prevent the idealistic goals of the study from being put into effect (5).

Administrators' Comments

The university is inattentive to the needs of society; there must be a deeply-seated reform of the democratic structure of the university (5). It is too "Americanized", not Brazilian enough, or not reflective enough of the poor section of Brazil in which it is being tested (4). The study is valid and necessary, but there is doubt that its lofty goals will ever be put into practice (5). The questionnaire is clear, complete, and objective (5).

Conclusions

After analyzing the findings of this study one can conclude that the university is perceived by its participants as an institution which is not attending the felt needs of the academic and local community.

Political, social and economic change and development are occurring in Brazil at a phenomenal rate. As a result of this fast pace development, new challenges and new problems are being faced. University education must be provided qualitatively as well as quantitatively. The proper development of higher education is crucial to meeting these new challenges and solving the arising new problems. More and more factories and industries are being installed in the regions of the country. Manpower can be properly trained by the institutions of higher education. Development of human resources should be a responsibility attributed to the university which can be better equipped to assess the training needs in the region where it is located.

The respondents are not satisfied with the current university reality. All of the goals stated in the questionnaire do not currently receive the necessary importance, and more importance should be given to all of the goals in the survey.

There were discrepancies in the perceptions of individual groups with regards to some goals. This may be an indicator of how unsatisfied the participants are with the current programmatic features of the university. Overall they all agree that more importance should be given to the goal statements. However, when analyzing the perceptions of the individual groups, we clearly observe their vested interest.

According to the comments made by the university participants one can conclude that there is strong interest in having a more participatory democracy. The respondents indicated desire of having the educational system changed to better qualify students with skills and know-how in demand locally. A reform of the educational system is called for, in the overall perceptions of these participants.

Recommendations

The following recommendations can be posited based on the findings and conclusions of this study.

(1) The result of this study should be made available to university participants, educational planners, including the Ministry of Education.

(2)   A similar research, using the framework outlined in
        this study should be undertaken in other universities
        located in other regions.

(3)   Modification on the goal statements, adding new
        goals and deleting irrelevant ones, can be made in
        order to meet the different local realities.

(4)   The population used in further studies should be
        extended, not only in number of participants but
        also in different categories.

(5)   A comparison of the findings of the studies between
        different universities and regions should be made,
        so that more generalizable conclusions might result.

(6)   Those goal statements identified as significantly
        important by the respondents should become integral
        parts of the university's on-going planning and
        articulating of its mission and purpose.

APPENDICES

APPENDIX A

MAP OF BRAZIL

APPENDIX A. Map of Brazil: The shaded area depicts the State of
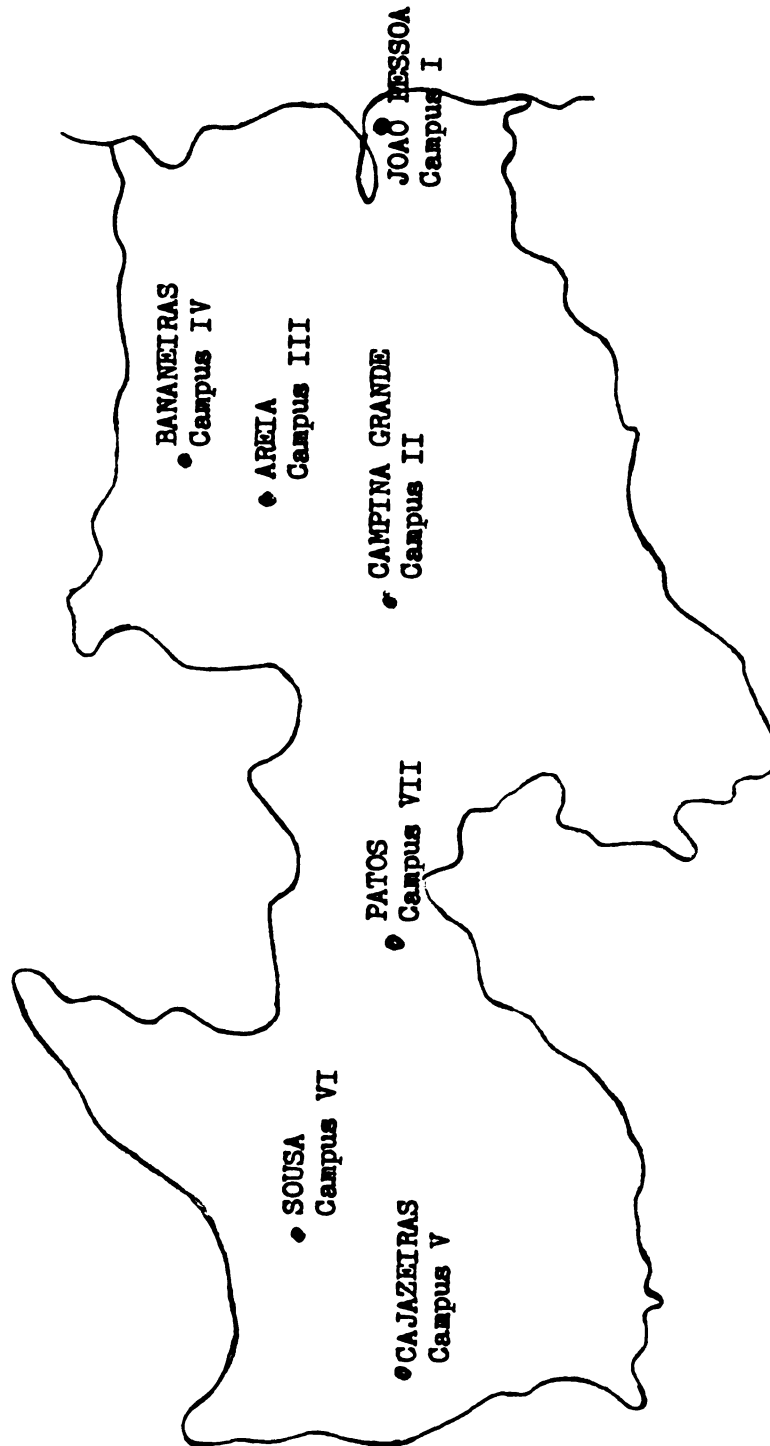   Paraiba.

APPENDIX B

MAP OF THE STATE OF PARAIBA

APPENDIX B. Map of the State of Paraiba, depicting campus
locations of the Federal University of Paraiba

APPENDIX C

ENGLISH AND PORTUGUESE VERSION OF A LETTER SENT TO
PARTICIPANTS OF THE PRETESTING OF THE QUESTIONNAIRE

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824-1034

October 2, 1984

Dear Colleague:

As an integral part of my doctoral program in Educational administra-
tion, I will travel to Brazil with the intention of administering
450 questionnaires. These questionnaires will be distributed to
three (3) distinct groups consisting of university students, faculty
members, and administrators. Once completed by the members of these
groups, the instruments will reflect the goals which the respondents
have for higher education. The marked responses will represent
their perception of current and ideal emphases of post-secondary
education in Brazil.

Therefore, I am asking you to help me in this important task of
pretesting by filling out the attached instrument. Your written
commentary concerning any matter, including the clarity of expres-
sion in the Portuguese language, will be very welcome. Any sugges-
tions will be considered by this researcher and his Academic Com-
mittee at Michigan State University. Please give your candid and
free opinions about the items, including their format. If you
disagree with any affirmation, please write your comments about
this.

After completing this task, please return the questionnaire on or
before October 10, using the addressed and stamped envelope which
is attached.

I wish to take this opportunity to express my sincere thanks for
your assistance in this extremely important aspect of my studies.

Sincerely,

Luiz R. Lima
919-H Cherry Lane
East Lansing, MI 48823

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824-1034

October 2, 1984

Prezado colega:

Como parte integrante do meu programa de doutorado em Administração Educacional, farei uma viagem ao Brasil com o intuito de administrar 450 questionários. Estes referidos questionários serão distribuídos a três (3) grupos distintos consistindo de estudantes universitários, professores, e administradores. Depois de preenchidos pelos membros destes grupos, os instrumentos refletirão os goals que os respondentes mantêm para a educação superior. As respostas marcadas representarão sua percepção sobre a ênfase atual e a ideal da educação pós-secundária no Brasil.

Por isso mesmo, solicito-lhe assistir-me nesta importante tarefa de pretestagem, preenchendo o instrumento que segue em anexo. Seu comentário escrito sobre qualquer quesito, inclusive a claridade de expressão da língua portuguesa, será muito bem vindo. Quaisquer sugestões serão consideradas por este pesquisador e seu Comitê Acadêmico na Michigan State University. Favor opinar, candida e livremente, sobre os quesitos, inclusive o formato. Caso você discorde de qualquer afirmação, queira, por gentileza, escrever um comentário sobre isto.

Após completar esta tarefa queira retornar o questionário antes ou no dia 10 de outubro, usando o envelope previamente endereçado e selado que segue anexo.

Nesta oportunidade gostaria de expressar meu sincero agradecimento pela sua assistência neste aspecto que é de suma importância em meus estudos.

Sinceramente,

Luiz R. Lima
919-E Cherry Lane
East Lansing-MI 48823

APPENDIX D

ENGLISH AND PORTUGUESE VERSION OF A LETTER SIGNED BY

A COMMITTEE MEMBER SENT TO PARTICIPANTS OF THE

PRETESTING OF THE QUESTIONNAIRE

LATIN AMERICAN STUDIES CENTER
CENTER FOR INTERNATIONAL PROGRAMS   MICHIGAN STATE UNIVERSITY   EAST LANSING · MICHIGAN 48824

October 2, 1984

Dear Brazilian Student:

Your colleague Luiz Lima is currently involved in the pretesting phase of the instrument (questionnaire) which he will take to Brazil to collect data for his dissertation research. As a member of his orientation committee, I ask you to help him with this phase by filling out the current version of the questionnaire and offering critical comments on the same.

Thank you for your cooperation.

Sincerely,

James Buschman
Director

LATIN AMERICAN STUDIES CENTER
CENTER FOR INTERNATIONAL PROGRAMS   MICHIGAN STATE UNIVERSITY   EAST LANSING • MICHIGAN 48824 1097
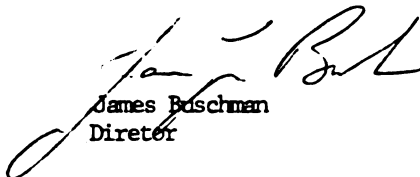
2 de outubro de 1984

Caro estudante brasileiro:

O seu colega Luiz Lima atualmente está envolvido na fase de pretestagem
do instrumento (questionário) que ele levará ao Brasil para coletar os
dados da sua pesquisa de dissertação. Como membro do Comitê de Orienta-
ção, peço-lhes que ajudem nesta fase, preenchendo a atual versão do
questionário e oferecendo comentários críticos referentes ao mesmo.

Agradeço de antemão esta colaboração.

Sinceramente,

James Buschman
Diretor

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APPENDIX E

ENGLISH AND PORTUGUESE VERSION OF THE

FINAL PRINTED QUESTIONNAIRE

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824-1034

QUESTIONNAIRE
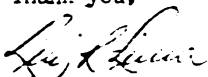
Dear Respondent:

The objective of the questionnaire is to investigate the perception that administrators, professors and university students have about possible objectives of university education in Brazil. This study is an integral part of the doctorate in Educational Administration, which will have as title:

PERCEPTIONS OF BRAZILIAN EDUCATIONAL PARTICIPANTS
CONCERNING SELECTED GOALS FOR HIGHER EDUCATION

This research is a fundamental part in my studies. Your participation is of extreme importance. Therefore, I ask you to assist me in this task of data collection by filling out and returning to me the enclosed questionnaire. A high degree of confidentiality will be observed with respect to data gathered.

Thank you,
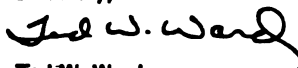
Luiz R. Lima
Assistant Professor
Center for Applied Social Sciences-UFFB

Dear Respondent:

Your participation in this survey will increase the importance of the research that Professor Lima has undertaken.

Because of my interest in higher education in Brazil I am pleased to join Professor Lima in making this request for your time and thoughtful response.

Sincerely,

Ted W. Ward
Professor of Educational Administration

EXPLANATION ABOUT THE QUESTIONNAIRE

The instrument consists of two parts. In the first part the questionnaire characterizes administrators, professors and university students who participated in the study, insofar as demographic data are concerned. The second part of the instrument consists of 36 affirmatives of possible objectives of university education. Using the example given below, I ask you to respond to each affirmation in two distinct ways: one representing your perception about the actual emphasis, and the other representing your perception about the emphasis ideal of university education in Brazil

1. **ACTUAL:** How important is the goal of university education at the present time?

2. **IDEAL:** How important should the goal of university education be?

Please circle the number in each one of the statements that corresponds to the answer of your choice and is representative of your perception of the emphasis currently given to university education. Also, circle a number which corresponds to the answer of your choice and is representative of your perception of the ideal, that is, that which should be given to university education.

EXAMPLE	Of no importance	Of low importance	Of medium importance	Of high importance	Of extremely high importance
1. To prepare students for the job market — ACTUAL	1	2	3	4	5
1. To prepare students for the job market — IDEAL	1	2	3	4	5

In the example, the respondent has indicated that he believes the goal "to prepare students for the job market" is presently of low importance in university education, but it should be of high importance.

In giving "should be" responses, do not be restrained by your beliefs about whether the goal can ever be realistically attained.

At the end of the questionnaire space is provided for comments and suggestions, numbers 37 to 40.

QUESTIONNAIRE

FIRST PART: Information on the respondents:

A. Please circle the number that corresponds to your category:

1. Student
2. Professor
3. Administrator

B. Number of years in the above category:

1. Up to 1 year
2. Up to 2 years
3. Up to 3 years
4. Up to 4 years
5. Up to 5 years
6. From 6 to 10 years
7. From 11 to 20 years
8. Above 21 years

C. Sex:

1. Male
2. Female

D. Age:

1. 17-24 years
2. 25-44 years
3. 45-64 years
4. Over 65 years

E. Campus of affiliation:

1. Joao Pessoa
2. Campina Grande
3. Areia
4. Bananeiras
5. Cajazeiras
6. Sousa
7. Patos

F. Marital Status:

1. Married
2. Single
3. Other (Please specify)

G. Academic Position:

1. Professor
2. Adjunctor Professor
3. Assistant Professor
4. Auxiliary Professor
5. Other (Please specify)

H. Academic Discipline: Please circle a field of teaching, research or study of your interest:

1. Economics
2. Administration
3. Education
4. Engineering
5. Math/Statistics
6. Physics
7. Chemistry
8. Technology
9. Arts/humanities
10. Social Sciences
11. Biological Sciences
12. Other field (Please specify)

I. Work condition:

1. Full time*
2. 40 hours
3. 20 hours
4. Other (Please specify)

J. Occupation (administrators only)

1. Department Chairman
2. Coordinator of the Master Degree Program
3. Director
4. Pro-Rector
5. Vice-Rector
6. Rector
7. Other (Please specify)

*Full time means that the employee may not accept job responsibility in another enterprise.

SECOND PART: 26 possible objectives of university education

Please circle a number of your choice in the line following the item ACTUAL and a circle in the line following the item IDEAL.		Of no importance	Of low importance	Of medium importance	Of high importance	Of extremely high importance
1. To provide opportunities for adult education in the local area.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
2. To provide retraining opportunities for professionals whose job skills have become out of date.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
3. To provide training opportunities and skilled manpower for local area business, industry and government.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
4. To facilitate involvement of students in neighborhood and community service activity.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
5. To facilitate involvement of faculty members in neighborhood and community service activity.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
6. To include local leaders in the planning of univ.educ. programs that will affect the local community.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
7. To provide vocational and academic counseling to the students.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
8. To help students identify their own personal goals.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
9. To assist students in exploring various alternative careers.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
10. To offer developmental or remedial programs in basic skills in Portuguese (Reading and Writing) math, etc.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5

SECOND PART: 14 possible objectives of university education.

Please circle a number of your choice in the line following the item ACTUAL and a circle in the line following the item IDEAL.

		Of no importance	Of low importance	Of medium importance	Of high importance	Of extremely high importance
11. To provide a diversified and flexible curric. that reflects experiential learning which allows stu.dev.as per indv. needs.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
12. To confer equal prestige to academic as well as professional programs.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
13. To develop a university where students and staff can constantly have opportunity to interact and meet informally.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
14. To provide students with various avenues to attain success in their professional careers.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
15. To emphasize lifelong education.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
16. To develop educational programs geared to new and existing career fields, like computer science/information.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
17. To provide relevant learning experiences that reflects the needs of the individual.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
18. To provide a flexible curriculum that responds to the changing needs of society.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
19. To provide training which prepares students to function effectively as members of the community.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
20. To offer educational opportunity for all segments of the people to fulfill economic and social potential.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5

SECOND PART: 30 possible objectives of university education.

Please circle a number of your choice in the line following the item ACTUAL and a circle in the line following the item IDEAL.

		Of no importance	Of low importance	Of medium importance	Of high importance	Of extremely high importance
21. Implement and better the university–business sector with regard to future employment to graduating students.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
22. To provide educational programs relevant to the evolving interest of the community.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
23. To utilize the university for the study of community problems.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
24. To utilize universities to plan try/out of community better it, together with branches of the local administration.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
25. To constantly renew educational innovation to attain the needs of society.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
26. To realistically prepare students for the job market.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
27. To use local resources to solve local problems.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
28. To use the university as the educational and socio-cultural center of the community.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
29. To provide learning activities for students of various abilities and ambitions.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
30. To develop a university which offers both academic/professional programs to serve needs of students and community.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5

SECOND PART: 36 possible objectives of university education

Please circle a number of your choice in the line following the item ACTUAL and a circle in the line following the item IDEAL.		Of no importance	Of low importance	Of medium importance	Of high importance	Of extremely high importance
31. To remove geographical barriers to university education.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
32. To remove economic barriers to university education.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
33. To emphasize lifelong education as priority for future professional success of the students.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
34. To attend to the educational needs of the community where the university is located.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
35. To develop a university system whose academic credits can be transferred to other universities.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
36. To develop a policy of admissions of students that are prepared for university work.	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5

Please write here other possible objectives of university education that you have in mind and that have not been included above, as indicated on page 2 of this questionnaire:

37. Your objective:	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
38. Your objective:	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
39. Your objective:	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5
40. Your objective:	ACTUAL	1	2	3	4	5
	IDEAL	1	2	3	4	5

Please use this space to write your critical reaction to the objec-
tivity and clarity of this questionnaire. Please write also other
suggestions and comments about this research.

End of the questionnaire. Thank you very much for your cooperation.

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF EDUCATIONAL ADMINISTRATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824-1034

QUESTIONÁRIO

Prezado Respondente:

O objetivo desde questionário é para investigar a percepção que administradores, professores e estudantes universitários tem sobre possíveis objetivos da educação superior no Brasil. Este estudo é parte integrante do meu programa de doutorado em Administração Educacional, que terá como título:

PERCEPTIONS OF BRAZILIAN EDUCATIONAL PARTICIPANTS CONCERNING SELECTED GOALS FOR HIGHER EDUCATION.

Esta pesquisa é parte fundamental de meus estudos. Sua participação é de extrema importância. Porisso, solicito-lhe assistir-me nesta tarefa de coleta de dados, preenchendo e devolvendo-me o questionário que segue. O tratamento dos dados obtidos obedecerá ao criterio de estrita confidencialidade.

Muito obrigado

Luiz Lima
Professor Assistente
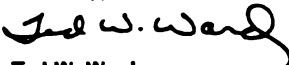Centro de Ciencias Sociais Aplicadas - UFPB

Dear Respondent:

Your participation in this survey will increase the importance of the research that Professor Lima has undertaken.

Because of my interest in higher education in Brazil I am pleased to join Professor Lima in making this request for your time and thoughtful response.

Sincerely,

Ted W. Ward
Professor of Educational Administration

ESCLARECIMENTOS SOBRE O QUESTIONÁRIO

O instrumento consiste de duas partes. A primeira parte do questionário objetiva caracterizar administradores, professores e estudantes universitários participantes no estudo, em termos de dados demográficos. A segunda parte do questionário consiste de 36 afirmativas de possíveis objetivos da educação universitária. Valendo-se do exemplo demonstrado abaixo, solicito-lhe responder a cada afirmativa de duas maneiras diferentes. Uma representando sua percepção sobre a ênfase atual, e a outra representando sua percepção sobre a ênfase ideal de educação universitária no Brasil:

1.   ATUAL: Que importância tem atualmente o
              objetivo da educação universitária?

2.   IDEAL: Que importância deveria ter o
              objetivo da educação universitária?

Queira, por favor, marcar com um círculo o número correspondente a resposta de sua escolha, em cada um dos quesitos, representantes da sua percepção sobre a ênfase real, dada atualmente a educação universitária. Queira colocar um círculo também no número correspondente a resposta de sua escolha, que represente sua percepção sobre a ênfase ideal, ou seja, aquela que deveria ser dada a educação superior.

E X E M P L O		De nenhuma importância	De pequena importância	De média importância	De grande importância	De importância extremamente grande
1. Preparar estudantes para o trabalho	atual	1	②	3	4	5
	ideal	1	2	3	④	5

No exemplo acima, o respondente indicou acreditar que o objetivo "preparar estudantes para o trabalho" é, atualmente, de pequena importância em educação universitária, mas que idealmente deveria ser de grande importância.

* Ao marcar suas respostas na linha ideal, não se limite a sua convicção sobre se os objetivos educacionais podem realisticamente ser ou não atingidos.

Ao final do questionário há espaço para comentários e sugestões, números 37 a 40.

QUESTIONÁRIO

PRIMEIRA PARTE: Informações sobre o respondente:

A. Favor marcar com um círculo, o número que corresponda a sua categoria

    1. Estudante
    2. Professor
    3. Administrador

B. Número de anos na categoria acima

    1. até um ano
    2. até dois anos.
    3. até três anos
    4. até quatro anos
    5. até cinco anos
    6. De seis a dez anos
    7. De onze a vinte anos.
    8. Acima de 21 anos

C. Sexo

    1 Masculino
    2 Feminino

D. Idade:

    1. 17-24 anos
    2. 25-44 anos
    3. 45-64 anos
    4. Acima de 65 anos

E. Campus ao qual está vinculado

    1. João Pessoa
    2. Campina Grande
    3. Areia
    4. Bananeiras
    5. Cajazeiras
    6. Souza
    7. Patos

F. Estado Civil

    1. Casado
    2. Solteiro
    3. Outro (favor especificar) _____

G. Posição Acadêmica:

    1. Professor Titular
    2. Professor Adjunto
    3. Professor Assistente
    4. Professor Auxiliar
    5. Outra posição (favor especificar) _____

H. Disciplina Acadêmica: Favor marcar um campo de ensino, pesquisa ou estudos, de seu interesse

    1. economia
    2. administração
    3. educação
    4. engenharia
    5. matemática /estatística
    6. Física
    7. Química
    8. tecnologia
    9. artes/humanidades
    10. ciências sociais
    11. ciências biológicas
    12. Outro campo (favor especificar)

    _____

I. Regime de Trabalho
    1. Dedicação Exclusiva
    2. 40 horas
    3. 20 horas
    4. Outro (favor especificar)_____

J. Cargo (Somente para administradores)
    1. Chefe de Departamento
    2. Coordenador de Mestrado
    3. Diretor
    4. Pro-Reitor
    5. Vice-Reitor
    6. Reitor
    7. Outro cargo (favor especificar) _____

    _____

SEGUNDA PARTE: 36 possíveis objetivos de educação superior

Favor marcar com um círculo o número de sua escolha na linha atual e um círculo na linha ideal		De nenhuma importância	De pequena importância	De média importância	De grande importância	De importância extremamente grande
1. Oferecer oportunidades de educação permanente para adultos, em sua comunidade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
2. Oferecer oportunidades de reciclagem a profissionais em atividade, cujas habilidades se tornaram obsoletas.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
3. Oferecer oportunidades de treinamento de mão—de—obra qualificada e específica para satisfazer a demanda oriúnda da indústria do comércio e agências governamentais.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
4. Facilitar o envolvimento e entrosamento de estudantes em atividades de serviço da comunidade.	atual	1	2	3	4	5
	ideal	1.	2	3	4	5
5. Facilitar o envolvimento e entrosamento de professores em atividades de serviço da comunidade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
6. Incluir os líderes locais no planejamento de programas de educação universitária que afetarão a comunidade local.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
7. Oferecer aconselhamento académico e orientação técnico-profissional aos estudantes.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
8. Auxiliar estudantes na identificação de suas metas e objetivos pessoais.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
9. Assistir aos estudantes na seleção e procura de várias carreiras alternativas de trabalho.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
10. Oferecer programas objetivando a instrução e educação básica de Portupués (Ler e Escrever), Matemática, Administração e Economia Doméstica (administração de recursos disponíveis a família).	atual	1	2	3	4	5
	ideal	1	2	3	4	5

Favor marcar con um círculo o número de sua escolha na linha **atual** e um círculo na linha _ideal_		De nenhuma importância	De pequena importância	De média importância	De grande importância	De importância extremamente grande
11. Oferecer um currículo diversificado e flexível refletindo experiência de aprendizagem que permita aos universitários um desenvolvimento de acordo com as necessidades e talentos individuais.	atual	1	2	·3	4	5
	ideal	1	2	3.	4	5
12. Estimular prestígio similar tanto aos programas profissionalizantes como aos acadêmicos.	atual	1	2	3	4	5
	ideal	1	2	·3	4	5
13. Desenvolver uma instituição universitária que proporcione a estudantes e professores constante oportunidade de interação e discussões informais.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
14. Proporcionar aos estudantes várias opções para se alcançar sucesso em suas carreiras profissionais.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
15. Enfatizar educação permanente em todos os níveis de idade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
16. Desenvolver programas educacionais relacionados com novos e emergentes campos profissionais, como por exemplo, o campo da ciência de computação/informática.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
17. Proporcionar experiências relevantes de aprendizagem que reflitam os objetivos individuais dos estudantes.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
18. Planejar um currículo flexível que corresponda as constantes transformações da sociedade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
19. Educar e instruir estudantes para o exercício pleno de cidadania como membros da comunidade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
20. Oferecer oportunidade educacional aos indivíduos adultos da comunidade local para realização do potencial sócio-econômico e educacional.	atual	1	2	3	4	5
	ideal	1	2	3	4	5

Favor marcar con um círculo o número de sua escolha na linha atual e um círculo na linha ideal		De nenhuma importância	De pequena importância	De média importância	De grande importância	De importância extremamente grande
21. Incrementar e implementar a relação "escola-empresa" com vistas a oportunidades futuras de trabalho para o estudante egresso da universidade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
22. Proporcionar programas educacionais relevantes aos interesses da comunidade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
23. Utilizar instituições universitárias para o estudo de problemas da comunidade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
24. Utilizar instituições universitárias para planejar projetos de melhoramento da comunidade, em conjunto com a administração dos poderes executivo, legislativo, judiciário, entidades de classe, etc.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
25. Promover constante inovação educacional que venha atender as reais necessidades da sociedade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
26. Realisticamente preparar estudantes para as demandas do mercado de trabalho regional.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
27. Sempre que possível, utilizar recursos físicos e humanos disponíveis a comunidade na solução de problemas locais.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
28. Utilizar a instituição universitária como centro sócio-cultural e educacional na comunidade.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
29. Oferecer atividades educacionais a estudantes com várias habilidades e ambições.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
30 Desenvolver instituição universitária oferecendo programas técnico-profissionais para atender as necessidades da comunidade e do estudante.	atual	1	2	3	4	5
	ideal	1	2	3	4	5

Favor marcar con um círculo o número de sua escolha na linha atual e um círculo na linha ideal		De nenhuma importância	De pequena importância	De media importância	De grande importância	De importância extremamente grande
31. Remover barreiras geográficas da oportunidade de educação universitária.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
32. Remover barreiras econômicas da oportunidade de educação universitária.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
33. Valorizar a educação permanente como prioridade para o sucesso profissional futuro dos estudantes.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
34. Atender as necessidades educacionais da comunidade onde se localiza a instituição universitária.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
35. Desenvolver uma instituição universitária cujos créditos acadêmicos do mesmo nível sejam transferíveis para outras universidades.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
36. Desenvolver uma política de admissão a universidade de estudantes preparados e capacitados.	atual	1	2	3	4	5
	ideal	1	2	3	4	5
Queira escrever aqui outros possíveis objetivos da educação superior que você tem e que não estejam incluídos acima, conforme indicado na página 2 deste questionário:						
37. Seu objetivo:	atual	1	2	3	4	5
	ideal	1	2	3	4	5
38. Seu objetivo:	atual	1	2	3	4	5
	ideal	1	2	3	4	5
39. Seu objetivo:	atual	1	2	3	4	5
	ideal	1	2	3	4	5
40. Seu objetivo:	atual	1	2	3	4	5
	ideal	1	2	3	4	5

Favor usar este espaço para sua reação crítica à objetividade e clareza do questionário.

Escreva tambem outras sugestões e comentários sobre este estudo.

Final do questionário. Muito obrigado pela sua valiosa cooperação.

APPENDIX F

ENGLISH AND PORTUGUESE VERSION OF A

LETTER SIGNED BY THE RECTOR OF THE

FEDERAL UNIVERSITY OF PARAIBA

UNIVERSIDADE FEDERAL DA PARAÍBA
GABINETE DO REITOR

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Joao Pessoa December 3, 1984

Dear Sir:

It is my pleasure to introduce to you Professor Luiz Ramos de Lima, of the Center for Applied Social Sciences of this university, who is at the moment enrolled in a Doctoral program in Administration of Higher Education at Michigan State University, in the United States of America.

I ask your cooperation to facilitate his work regarding data collection which are necessary for his dissertation.

Sincerely,

Jose Jackson Carneiro de Carvalho
Rector

UNIVERSIDADE FEDERAL DA PARAÍBA
GABINETE DO REITOR

João Pessoa, 03 de dezembro de 1984

Prezado Senhor:

Tenho a satisfação de lhe apresentar o Professor LUIZ RAMOS DE LI
MA, do Centro de Ciências Sociais Aplicadas desta Universidade, ora realizan
do curso de Doutorado em Administração de Ensino Superior na Universidade Es
tadual de Michigan, dos Estados Unidos da América.

Solicito a sua colaboração no sentido de facilitar os   trabalhos
do referido professor relativos à coleta de dados necessários à sua Tese.

Atenciosamente,

José Jackson Carneiro de Carvalho
REITOR

APPENDIX G

THE MODELS OF TEACHING CLASSIFIED

BY FAMILY AND MISSION

THE MODELS OF TEACHING CLASSIFIED BY FAMILY AND MISSION

	Model	Major Theorist	Family or Orientation	Mission or Goals for which Applicable
1.	Inductive teaching model	Hilda Taba	Information processing	Primarily for development of inductive mental processes and academic reasoning or theory-building, but these capacities are useful for personal and social goals as well.
2.	Inquiry training model	Richard Suchman	Information processing	
3.	Science inquiry model	Joseph J. Schwab (also much of the Curriculum Reform Movement; see Jerome Bruner, The Process of Education for the Rationale)	Information processing	Designed to teach the research system of the discipline but also expected to have effects in other domains (i.e., socio-logical methods may be taught in order to increase social understanding and social problem-solving).
4.	Jurisprudential teaching model	Donald Oliver and James P. Shriver	Social interaction	Designed primarily to teach the jurisprudential frame of reference as a way of processing information but also as a way of thinking about and resolving social issues.
5.	Concept attainment model	Jerome Bruner	Information processing	Designed primarily to develop inductive reasoning
6.	Developmental model	Jean Piaget, Irving Sigel, Edmund Sullivan	Information processing	Designed to increase general intellectual development, especially logical reasoning, but can be applied to social and moral development as well (see Kohlberg).

THE MODELS OF TEACHING CLASSIFIED BY FAMILY AND MISSION
(continued)

	Model	Major Theorist	Family or Orientation	Mission or Goals for which Applicable
7.	Advanced organizer model	David Ausubel	Information processing	Designed to increase the efficiency of information-processing capacities to meaningfully absorb and relate bodies of knowledge.
8.	Group investigation model	Herbert Thelen, John Dewey	Social interaction	Development of skills for participation in democratic social process through combined emphases on inter-personal and social (group) skills and academic inquiry. Aspects of personal development are important out-growths of this model.
9.	Social inquiry model	Byron Massiolas, Benjamin Cox	Social interaction	Social problem-solving primarily through academic inquiry and logical reason-ing.
10.	Laboratory method model	National Training Laboratory (NTL), Bethel, Maine	Social interaction	Development of interper-sonal awareness and flexi-bility. Emphasis on build-ing capacity for self-instruction and through this, personal development in terms of self-understanding, self-discovery, and self-concept.
11.	Non-directive model	Carl Rogers	Person	Emphasis on building capa-city for self-instruction and through this personal development in terms of self-understanding, self-discovery, and self-concept.
12.	Classroom meeting model	William Glasser	Person	Development of self-under-standing and self-responsibility. This would have latent benefits to other kinds of functioning, i.e., social.

THE MODELS OF TEACHING CLASSIFIED BY FAMILY AND MISSION
(continued)

	Model	Major Theorist	Family or Orientation	Mission or Goals for which Applicable
13.	Awareness training model	William Schutz	Person	Increasing personal capacity for self-exploration and self-awareness. Much emphasis on development of interpersonal awareness and understanding.
14.	Synectics model	William Gordon	Person	Personal development of creativity and creative problem solving.
15.	Conceptual systems model	David E. Hunt	Person	Designèd to increase personal complexity and flexibility. Matches environments to students.
16	Operant conditioning model	B. F. Skinner	Behavior modification	General applicability. A domain-free approach though probably most applicable to information-processing function.

Source: Joyce, Bruce and Weil, Marsha. (1980). Models of teaching. Englewood Cliffs, NJ: Prentice-Hall.

BIBLIOGRAPHY

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1. Abreu, J. (1968). Pesquisa e planejamento em educação. In J. Abreu (Ed.). Educação, sociedade e desenvolvimento. Rio de Janeiro: CBPE, INEP, Ministério de Educação e Cultura.

2. Altbach, P. C. (1981). The university as center and periphery. Teachers College Record, 82, 600-621.

3. American Association of Community and Junior Colleges (1985). Community, junior, and technical college directory (annual). Washington, D.C.: AACJC.

4. American Psychological Association. (1966). Standards for educational and psychological tests and manuals. Washington, D.C.: APA.

5. _____. (1974). Standards for educational and psychological tests. Washington, D.C.: APA.

6. Anuário Brasileiro de Educação-1964. (1966). Rio de Janeiro: INEP, MAnistério de Educação e Cultura.

7. Argyris, C. (1962). Interpersonal competence and organizational effectiveness. Homewood, IL: The Dorsey Press, Inc.

8. Argyris, C., and Schön, D. A. (1974). Theory in practice. San Francisco, CA: Jossey-Bass, Publishers.

9. Armore, S. J. (1966). Introduction to statistical analysis and inference for psychology and evaluation. New York: John Wiley & Sons.

10. Arnold, M. (1927). Prose and poetry. New York: Scribner's.

11. Ary, D., Jacobs, L. C., and Rozavieh, A. (1972). Introduction to research in education. New York: Holt, Rinehart, and Winston.

12. Babbie, E. R. (1973). Survey research methods. Belmont, CA: Wadsworth Publishing Co.

13. Balderston, F. E. (1974). _Managing today's university_. San Francisco, CA: Jossey-Bass, Publishers.

14. Baldridge, J. V. (Ed.). (1971a). _Academic governance: Research on institutional politics and decision-making_. Berkeley, CA: McCutchen.

15. _____. (1971b). _Power and conflict in the university_. New York: John Wiley & Sons, Inc.

16. Beard, C. A. (1937). _The role of administration in government. The work unit in federal administration_. Chicago: Public Administration Service.

17. Becker, G. S. (1964). _Human capital_. New York: Columbia University Press.

18. Becker, G. S., Landes, E. M., and Michael, R. T. (1977). An economic analysis of marital instability. _Journal of Political Economy_, _85_, 1141-1187.

19. Bennis, W. G., Benne, K. D., and Chin, R. (Eds.). (1976). _The planning of change_. New York: Holt, Rinehart and Winston.

20. Berdahl, R. O. (1971). _Statewide coordination of higher education_. Washington, D.C.: American Council on Education.

21. Berg, I. E. (1970). _Education and jobs: The great training robbery_. New York: Praeger.

22. Bhatnagar, G. S. (1972). _Education and social change_. Calcutta: The Minerva Associates.

23. Blau, P. M. (1964). _Exchange and power in social life_. New York: J. Wiley.

24. Bledstein, B. J. (1976). _The culture of professionalism: The middle class and the development of higher education in America_. New York: W. W. Norton & Co. Inc.

25. Bloom, B. T. (Ed.). (1975). _Psychological stress in the campus community_. New York: Behavioral Publications, Inc.

26. Bogdan, R. C., and Biklen, S. K. (1982). _Qualitative research for education: An introduction to theory and methods_. Boston, MA: Allyn & Bacon.

27. Bogue, J. P. (1950). The community college. New York: McGraw-Hill.

28. Borg, W. R., and Gall, M. D. (1979). Educational Research: An introduction. New York: Longman.

29. Bowen, H. R. (Ed.). (1974). Evaluating institutions for accountability. New Direction for Institutional Research, 1, 1-123.

30. _____. (1977). Investment in learning: The individual and social value of American higher education. San Francisco, CA: Jossey-Bass, Publishers.

31. Bowen, H. R., and Servelle, P. (1972). Who benefits from higher education and who should pay? Washington, D.C.: American Association of Higher Education.

32. Breuder, R. L., and King, M. C. (1976). Institutional goals in planning. Community and Junior College Journal, 47, 8-12.

33. Brubacher, J. S., and Rudy, W. (1976). Higher education in transition: A history of American colleges and universities, 1636-1976. New York: Harper & Row, Publishers.

34. Burnett, C. W. (Ed.). (1977). The community and junior college. Lexington, KY: University of Kentucky.

35. Camargo, P. N. (1960). Ensino Agricola. Rio de Janeiro: Encontros Regionais de Educadores Brasileiros. (mimeographed).

36. Cammack, E. F. (1971). Long-range planning. In P. L. Dressel and Associates (Eds.). Institutional research in the university. San Francisco, CA: Jossey-Bass, Publishers.

37. Carnegie Commission on Higher Education. (1970). The open-door colleges: Policies for community college. New York: McGraw-Hill.

38. _____. (1973a). Higher education: Who pays? Who benefits? Who should pay? New York: McGraw-Hill.

39. _____. (1973b). The purposes and the performance of higher education in the United States. New York: McGraw-Hill.

40. _____. (1973c). Continuity and Discontinuity. New York: McGraw-Hill.

41. Carnoy, M. (1967). Rates of returning to schooling in Latin America. _Journal of Human Resources, 1-2_, 359-374.

42. Carr, N. (1984). A merger between the new university of Ulster and Ulster polytechnic: Possibilities and constraints for higher education planning (Doctoral dissertation, Michigan State University, 1984). _Dissertation Abstracts International, 45_, 995A.

43. Cartwright, D., and Zander, A. (Eds.). (1953). _Group Dynamics._ Evanston, IL: Row, Peterson & Company.

44. Caruthers, J. K., and Lott, G. B. (1981). _Mission review: Foundation for strategic planning._ Boulder, CO: National Center for Higher Education Management Systems.

45. Churchman, C. W. (1968). _The system approach._ New York: Dell.

46. Clark, B. R. and others. (1972). _Students and colleges: Interaction and change._ Berkeley, CA: Center for Research and Development in Higher Education, University of California.

47. Cohen, A. M., and Brawer, F. B. (1982). _The American Community College._ San Francisco: Jossey-Bass, Publishers.

48. Cohn, E. (1979). _The economics of education._ Cambridge, MA: Ballinger, Publishing Company.

49. Conrad, C. F. (1974). University goals: An operative approach. _Journal of Higher Education, 45_, 504-516.

50. _____. (1978). _The undergraduate curriculum: A guide to innovation and reform._ Boulder, CO: Westview.

51. Conrad, C. F., and Wyer, J. C. (1980). _Liberal education in transition._ Washington, D.C.: American Association for Higher Education.

52. Corson, J. J. (1975). _The governance of colleges and universities._ New York: McGraw-Hill.

53. Corwin, R. G. (1974). Models of educational organizations. _Review of Research in Education, 2_, 247-295.

54. Cowen, R., and McLean, M. (Eds.). (1984). _International handbook of education systems._ New York: John Wiley & Sons.

55. Craig, J. (1981). The expansion of education. Review of Research in Education, 9, 151-213.

56. Cross, P. (1980). The new frontier. AACJC 1980 Meritorious Award (Tape 2). Washington, D.C.: American Association of Community and Junior Colleges.

57. _____. (1982). Thirty years have passed. New Directions for Community College, 40, 11-20.

58. Denison, E. F. (1962). The sources of economic growth in the United States and the alternative before us. New York: Committee for Economic Development.

59. Dewey, J. (1916). Democracy in education: An introduction to the philosophers of education. New York: MacMillan Co.

60. Diegues Junior, M. (1964). Imigração, urbanização, industrialização. Rio de Janeiro: CBPE, INEP, Ministério de Educação e Cultura.

61. Dimock. M. E., and Dimmock, G. O. (1953). Public administration. New York: Rinehart & Company, Inc.

62. Doucette, D. S., Richardson, R. C., and Fenske, R. H. (1985). Defining institutional mission: Application of a research model. Journal of Higher Education, 56, 189-205.

63. Douglass, G. K. (1977). Economic returns of investments in higher education. In H. R. Bowen (Ed.), Investment in learning. San Francisco, CA: Jossey-Bass, Publishers.

64. Drabek, R. E., and Campman, J. B. (1973). On assessing organization priorities: Concept and method. The Sociological Quarterly, 14, Summer, 359-75.

65. Drucker, P. F. (1973). Management: Tasks, responsibilities, practices. New York: Harper & Row Publishers.

66. Duncan, G. J. (1976). Earnings functions and nonpecuniary benefits. Journal of Human Resources, 11, 462-483.

67. Durkheim, E. (1956). Education and sociology. Glencoe, IL: The Free Press.

68. Ellis, A. C. (1917). The money value of education, (Bureau of Education Bulletin No. 22). Washington, D.C. Government Printing Office.

69. Emmerij, L. (1974). <u>Can the school build a new social order?</u> Amsterdam: Elsevier Scientific Publication Co.

70. Etzioni, A. (1964). <u>Modern organizations.</u> Englewood Cliffs, NJ: Prentice-Hall.

71. Fägerlind, I. (1975). <u>Formal education and adult earnings.</u> Stockholm: Almquist and Wiksell.

72. Faure, E., et al. (1972). <u>Learning to be: The world of education today and tomorrow.</u> Paris: UNESCO.

73. Fenske, R. H. (1980). Setting institutional goals and objectives. In P. Jedamus, M. Peterson, and Associates (Eds.). <u>Improving academic management.</u> San Francisco, CA: Jossey-Bass, Publishers.

74. Fernandes, F. (1960). O Cientista brasileiro e o desenvolvimento da ciência. <u>Revista Brasileira de Estudos Pedagógicos, 34</u> (80), 31-59.

75. Fidelis, G. (1982). Brazilian university administrators' perceptions of their training and the administrative appointment process: A case study (Doctoral Dissertation, Michigan State University, 1982). <u>Dissertation Abstract International, 43,</u> 318A.

76. Fielden, J. (1973). <u>Planning and management in universities: A study of British universities.</u> London: Chatto and Windus.

77. Freeman, R. B. (1976). <u>The over-educated American.</u> New York: Academic Press.

78. _____. (1978). The effect of trade unionism on fringe benefits. <u>National Bureau of Economic Research,</u> (Working paper number 292). Washington, D.C.: Government Printing Office.

79. Freire, P. (1970). <u>The pedagogy of the oppressed.</u> New York: Seabury Press.

80. Gardner, J. W. (1964). <u>Self-renewal: The individual and the innovative society.</u> New York: Harper & Row Publishers.

81. Gay, L. R. (1981). <u>Educational research: Competencies for analysis and application.</u> Columbus, OH: Charles E. Merril Publishing Co.

82. Georgiou, P. (1973). The goal paradigm and notes toward a counter paradigm. Administrative Science Quarterly, 18, 291-310.

83. Gleazer, E. (1980). Values, vision and vitality. Washington, D.C.: American Association of Community and Junior Colleges.

84. Goodman, P. (1964). Compulsory miseducation. New York: Horizon Press.

85. Goody, J. R. (1977). The domestication of the savage mind. Cambridge, England: Cambridge University Press.

86. Gouveia, A. J. (1957). A escola e o professor na opinião dos pais. Educacão e Ciências Sociais, 2 (5), 179-208.

87. Grant, W. V., and Eiden, L. J. (1980). Digest of education statistics, 1980. Washington, D.C.: National Center for Education Statistics.

88. Gross, E. (1968). Universities as organizations: A research approach. American Sociological Review, 33, 518-44.

89. Gross, E., and Grambsch, P. V. (1968). University goals and academic power. Washington, D.C.: American Council on Education.

90. _____. (1974). Changes in university organization: 1964-1971. New York: McGraw-Hill.

91. Grossman, M. (1975). The correlation between health and schooling. In E. E. Terleckyj (Ed.). Household production and consumption. New York: National Bureau of Education Research.

92. Handlin, O., and Handlin, M. F. (1970). The American college and American culture: Socialization as a function of higher education. New York: McGraw-Hill.

93. Harbison, F. H., and Myers, C. A. (1964). Education, manpower and economic growth: Strategies for human development. New York: McGraw-Hill.

94. Harvard Committee. (1945). General education in a free society. Cambridge, MA: Harvard University Press.

95. Hausman, L. (1972). Pressure, benefits and options. In L. Wilson (Ed.). Universal higher education. Washington, D.C.: American Council on Education.

96. Haussman, F., and Haar, J. (1978). Education in Brazil. Hamden, CT: Archon Books.

97. Heard, A. (1973). The modern culture of higher education: many missions and nothing sacred. Nashville, TN: United Methodist Church, Board of Higher Education.

98. Heckman, J. J. (1976). A life cycle model of earnings, learning and consumption. Journal of Political Economy 84, 511-544.

99. Henderson, E. S., and Nathenson, M. B. (1984). Independent learning in higher education. Englewood Cliffs, NJ: Educational Technology Publications.

100. Henry, D. D. (1972). Accountability: To whom, for what, by what means? Educational Record, 53, (Fall), 287-92.

101. Hyman, H. H., Wright, C. R., and Reed, J. S. (1975). The enduring effects of education. Chicago: University of Chicago Press.

102. Illich, I. D. (1972). Deschooling society. New York: Harper & Row Publishers.

103. Isaac, S., and Michael, W. B. (1971). Handbook in research and evaluation. San Diego, CA: Robert R. Knapp, Publisher.

104. Johnson, H. G. (1960). The political economy of opulence. The Canadian Journal of Economics and Political Science. 26, 552-564.

105. Jolly, R. (1969). Planning education for African development. Nairobi, East Africa Publishing House.

106. Joyce, B., and Weil, M. (1980). Models of teaching. Englewood Cliffs, NJ: Prentice-Hall.

107. Kaysen, C. (1969). The higher learning, the universities and the public. Princeton, NJ: Princeton University Press.

108. Keane, A. H. (1896). Ethnology. Cambridge, England: The University Press.

109. King, M. C., Marquess, A. P., and Breuder, R. L. (1973). A model process for institutional goals-setting. (ERIC document reproduction service number ED 097067). Washington, D.C.: National Institute of Education.

110. King, W. R., and Cleland, D. I. (1978). Strategic planning and policy. New York: Van Nostrand Reinhold.

111. Knowles, A. S. (1977). The international encyclopedia of higher education. San Francisco, CA: Jossey-Bass, Publishers.

112. Kuhn, T. S. (1957). The Copernican Revolution. Cambridge, MA: Harvard University Press.

113. Kuhn, T. S. (1962). The structure of scientific revolution. Chicago, IL: University of Chicago Press.

114. Ladd, E. C. Jr., and Lipset, S. M. (1975). The divided academy: Professors and politics. New York: McGraw-Hill.

115. Likert, R. (1967). The human organization. New York: McGraw-Hill.

116. Lucas, R. E. B. (1977). Hedonic wage equations and psychic wages in the returns to schooling. American Economic Review, 67, 549-558.

117. Lukenbill, J. D., and McCabe, R. H. (1982). Getting started: Straightforward advice. New Directions for Community College, 40, (December), 83-97.

118. Lumsden, K. G. (Ed.). (1974). Efficiency in universities: The La Paz papers. Amsterdam: Elsevier Scientific Publication Co.

119. Lyons, R. (1979). Economics of education. International Review of Education, 25, 425-432.

120. Machlup, F. (1962). The production and distribution of knowledge in the United States. Princeton, NJ: Princeton University Press.

121. _____. (1976). Education and economic growth. Lincoln, NE: University of Nebraska Press.

122. Malinowski, B. (1922). The argonauts of the western pacific. London: Routledge and Keagan Paul.

123. Marshall, A. (1890a). The principles of economics. London: MacMillan Company (6th edition, 1910).

124. _____. (1890b). The principles of economics. London: MacMillan Company (9th edition, 1961).

125. Martin, J. R. (1982). Excluding women from the educational realm. Harvard Educational Review, 52, 2, 133-148.

126. Martorana, S. V. (1975). The community college in Michigan. Lansing, MI: Michigan Legislative Study Committee on Higher Education.

127. McNeil, M. R. (1970). Guidelines to problems of education in Brazil. New York: Teachers College Press.

128. Micek, S. S., and Arney, W. R. (1973). Outcome-oriented planning in higher education: An approach or an impossibility? Boulder, CO: National Center for Higher Education Management Systems.

129. Michael, R. T. (1973). Education and nonmarket production. Journal of Political Economy, 81, 306-327.

130. Mincer, J. (1958). Investment in human capital and personal income distribution. Journal of Political Economy, 66, 281-302.

131. _____. (1979). Human capital and earnings. In D. Windham (Ed.). Economic dimensions of education. Washington, D.C.: National Academy of Education.

132. Mortimer, K. P. (1972). Accountability in higher education. Washington, D.C.: American Association of Higher Education.

133. National Society for the Study of Education. (1970; 1982). General education in the American college, Part 2, 38th Yearbook. Bloomington, IN: NSSE.

134. Newman (Cardinal), J. H. (1960). In M. J. Svaglic (Ed.). The idea of a university, defined and illustrated: in 9 discourses delivered to the Catholics of Dublin. New York: Holt, Rinehart and Winston.

135. Nie, N. H. (1975). Statistical package for the social sciences (SPSS). New York: McGraw-Hill.

136. Oliveira Junior, E. L. (1959). Os fatores sociais e humanos que influem no produtividade. Rio de Janeiro: Instituto de Ciências Sociais da Universidade do Brasil.

137. Open Doors. (1982). Report on International education exchange. New York: Institute of International Education.

138. Ottoway, A. K. C. (1962). Education and society. London: Routledge and Keagan Paul.

139. Pace, C. R. (1957). The environment as a factor in the criterion of college success (Paper presented at the 65th annual meeting of the American Psychological Association.

140. Packwood, G. (1981). The impact of community colleges on Michigan and its economy. A research Report sponsored by the 29 community colleges of Michigan.

141. Pagano, J. O. (1977). Linking a community of learners with a community of scholars. International Review of Education, 23, 205-216.

142. Palola, E. G., Lehmann, T., and Blischke, W. R. (1970). Higher education by design: The sociology of planning. Berkeley, CA: Center for Research and Development in Higher Education. University of California.

143. Palola, E. G., and Padgett, W. (1971). Planning for self-renewal: A new approach to planned organizational change. Berkeley, CA: Center for Research and Development in Higher Education. University of California.

144. Palola, E. G., and Lehmann, T. (1976). Improving student outcomes and institutional decision making with PERC. In T. Lenning (Ed.). Improving educational outcomes. San Francisco, CA: Jossey-Bass, Publishers.

145. Paradise, L. V., and Long, T. J. (1981). Counseling in the community college: Models and approaches. New York: Praeger Publishers.

146. Parsons, T., et al (Eds.). (1961). Theories of society. New York: The Free Press of Glencoe, Inc.

147. Parsons, T., and Platt, G. M. (1973). The American university. Cambridge, MA: Harvard University Press.

148. Penrose, W. O. (1961). Structure of higher education. The Hague: Uitgeverij Van Keulen, N. V.

149. Perrow, C. (1961). The analysis of goals in complex organizations. American Sociological Review, 26, 854-866.

150. Perry, W. G., Jr. (1970). Forms of intellectual and ethical Development in the college years. New York: Holt, Rinehart and Winston.

151. Peterson, M. (1974a). Organization and administration in higher education: Sociological and social-psychological perspectives. Review of Research in Education, II, 296-347.

152. Peterson, R. E. (1970). The institutional research program for higher education: The crisis of purpose: Definition and uses of institutional goals. (ERIC document reproduction service number ED 042934). Washington, D.C.: National Institute of Education.

153. _____. (1973a). College goals: Practical and ideological uses. (ERIC document reproduction service number ED 077407). Washington, D.C.: National Institute of Education.

154. _____. (1973b). College goals and challenge of effectiveness. (ERIC document reproduction service number ED 078735). Washington, D.C.: National Institute of Education.

155. _____. (1973c). Toward institutional goal-consciousness. (ERIC document reproduction service number ED 080037). Washington, D.C.: National Institute of Education.

156. _____. (1974b). The institutional research program for higher education: Strategies for assessing differential institutional effectiveness. (ERIC document reproduction service number ED 088390). Washington, D.C.: National Institute of Education.

157. Peterson, R. E., and Uhl, N. P. (1975). IGI comparative data. Princeton, NJ: Educational Testing Service.

158. _____. (1977). Formulating college and university goals: A guide for using the IGI. Princeton, NJ: Educational Testing Service.

159. Peterson, R. E., and Vale, C. A. (1973). Strategies for Assessing differential effectiveness in multi-campus systems. Berkeley, CA: Educational Testing Service.

160. Plato. (1974). In D. Lee (Trans.; 2nd ed.). The Republic. Middlesex, England: Penguin Books.

161. Pratt, L. K., and Reichard, D. R. (1983). Assessing institutional goals. In N. P. Uhl (Ed.). New Directions for Institutional Research, 37, 53-66.

162. Price, J. L. (1968). Organizational effectiveness: An inventory of propositions. Homewood, IL: Irwin.

163. Randour, M. L., et al. (1982). Women in higher education: Trends in enrollments and degrees earned. Harvard Educational Review, 52, 189-202.

164. Redemsky, L. W. (1972). Vocational-technical aspect of junior college terminal education. Junior College Journal XXIII (December), 224.

165. Riley, G. L., and Baldridge, J. V. (Eds.). (1977). Governing academic organizations. Berkeley, CA: McCutchan Publishing Co.

166. Rodgers, K. (1977). General administration, organization for. In A. S. Knowles (Ed.). The international encyclopedia of higher education. San Francisco, CA: Jossey-Bass, Publishers.

167. Roeber, R. J. C. (1973). The organization in a changing environment. Reading, MA: Addison-Wesley Publishing Co.

168. Rogers, C. (1961). On becoming a person. Boston, MA: Houghton Mifflin.

169. Romney, L. C., and Bogen, G. K. (1978). Assessing institutional goals: Proceed with caution. In R. H. Fenske (Ed.). Using goals in research planning. San Francisco, CA: Jossey-Bass, Publishers.

170. Rudolph, F. (1962). The American college and university. New York: Vintage.

171. Samuelson, P. A. (1961). Economics: An introductory analysis. New York: McGraw-Hill.

172. Sanford, N. (1969). Where colleges fail. San Francisco, CA Jossey-Bass, Publishers.

173. Sanyal, B. C. (1982). Alternative structures of higher education and the world of work. International Review of Education, 28, 239-257.

174. Sax, G. (1968). Empirical foundations of educational research. Englewood Cliffs, NJ: Prentice-Hall.

175. Schmidt, G. P. (1957). The liberal arts college: A chapter in American cultural history. New Brunswick, NJ: Rutgers University Press.

176. Schultz, T. W. (1960). Capital formation by education. Journal of Political Economy, 68, 571-583.

177. _____. (1961). Investment in human capital. American Economic Review, 51, 1-17.

178. Shils, E. A. (Ed.). (1974). Max Weber on universities: The Power of the state and the dignity of the academic calling in inperial Germany. Chicago: The University of Chicago Press

179. Shimbori, M. (1979). Sociology of education. International Review of Education. 25, 2-3. 393-413.

180. Silberman, H. F. (1978). Academic versus vocational education in the U.S. International Review of Education, 24, 2. 167-176.

181. Simon, H. (1964). On the concept of organizational goal. Administrative Science Quarterly, 8, 1-22.

182. Smith, A. (1776). The wealth of nations. New York: MacMillan and Co. (1910 edition).

183. Solmon, L. C., and Taubman, P. J. (1973). Does college matter? New York: Academic Press.

184. Stroup, H. (1966). Bureaucracy in higher education. New York: The Free Press.

185. Suchman, E. A. (1967). Evaluative research. New York: Russel Sage.

186. Swartz, D. (1977). Pierre Bourdieu: The cultural transmission of social inequality. Harvard Educational Review, 47, 4, 545-555.

187. Szczepanski, J. (1974). Higher education in Eastern Europe. New York: International Council for Educational Development.

188. Task Force IV. (1971). Qualitative and quantitative performance and achievement in higher education. Hartford, CT: Connecticut Commission for Higher Education.

189. Tead, O. (1951). The art of administration. New York: McGraw-Hill.

190. Teixeira, A. S. (1957). Educational research in countries other than the United States-Brazil. Review of Educational Research, 27, 92-107.

191. Thompson, J., and McEwen, W. J. (1958). Organization goals and environment. American Sociological Review, 23, 23-50.

192. Thurow, L. C. (1975). Generating inequality: Mechanisms of distribution in the U.S. economy. New York: Basic Books.

193. Toffler, A. (1971). Future shock. New York: Random House.

194. Ulich, R. (1968). Three thousand years of educational wisdom. Cambridge, MA: Harvard University Press.

195. United Nations Education, Scientific, and Cultural Organization. (1982). Statistical Yearbook. New York: UNESCO.

196. U.S. Army Area Handbook for Brazil. (1964). Washington, D.C.: Department of the Army Pamphlet Number 550-20.

197. U.S. Department of Education: National Center for Educational Statistics. (1982). Washington, D.C.: Government Printing Office.

198. Vaizey, J. (1962). The economics of education. New York: The Free Press of Glencoe, Inc.

199. Van Dalen, D. B., and Meyer, W. J. (1962). Understanding education research: An introduction. New York: McGraw-Hill.

200. Van den Berghe, P. L. (1973). Power and privilege at an African university. Cambridge, MA: Schenkman.

201. Walpole, R. E. (1974). Introduction to statistics. New York: MacMillan Company.

202. Walsh, J. R. (1935). Capital concept applied to man. Quarterly Journal of Economics, (February), 255-85.

203. Walsh, W. B. (1973). Theories of Person-environment Interaction: Implications for the College student. Iowa City: American College Testing Program.

204. Warner, E. (1982-1983). Student guidebook. Lansing Community College.

205. Weber, M. (1946). In H. H. Gerth, and C. W. Mills (Eds.). From Max Weber: Essays in sociology. New York: Oxford University Press.

206. Webster's New World Dictionary of the American Language. (1962). (College edition). Cleveland, OH: The World Publishing Company.

207. Weisbrod, B. A. (1966). Investing in human capital. Journal of Human Resources. 1 (Summer), 5-21.

208. Willower, D. J. (1980). Contemporary issues in theory in educational administration. _Educational Administration Quarterly_, _16_, 3, (Fall), 1-25.

209. Yarrington, R. (1981). A report of five round tables on the Brookings study. _Community and Junior College Journal_. (May), 14-21.