FACULTY PERCEPTIONS OF QUALITATIVE CRITERIA IN GRADUATE EDUCATION IN VENEZUELA

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CHAPTER I

INTRODUCTION

Everyone concerned with higher education is aware of the fact that the last two decades have been directed toward educational growth. The quantitative development of post-secondary education has been a common phenomenon in all countries in the world. This quantitative development has brought about different problems, among them how to manage colleges and universities in the 1980s.

However, perhaps one of the greatest problems of higher education is the maintenance of academic quality. Thus "the period ahead, of necessity, will see less emphasis on quantitative growth. Attention can now turn and should turn to the quality of the effort."[1]

Latin America has also been part of this growth trend, and higher education has experienced vigorous development

> . . . with a growth rate of 16.1 per cent in the five year period from 1970-1975, compared with 3.9 per cent for primary schooling and 9.3 per cent for secondary schooling. In absolute figures, this means that the number of enrollments rose from 1.5 million in 1970 to nearly 3.5 million in 1975.[2]

This explosion and diffusion of post-secondary education in many Latin American countries has generated a new

environment which needs clarification and analysis of purposes, and a new and coherent definition of policies for the different elements of higher education.

Escotet observed that the effort in Latin America is good, but the scientific contribution in education is almost nil. The universities are not committed to the creation of new scientific knowledge. The research done is of low quality. The university must change, and a most important need is the development of quality research. What is indispensable is a new attitude and a new strategy in the educational system with the purpose of creating a new methodology of teaching and research.[3]

Venezuela is a country which has given to higher education an increasing responsibility for the realization of equality of opportunity for everyone in the society. Thus, Venezuela is considered in the Latin American community as the country which expends most effort in higher education today. For example, the enrollment jumped from 11,003 students in 1957-1958 to 265,671 students in 1977-1978 in higher education,[4] an increase of 24 times. In addition, there was an increase in the budget for higher education from 527.7 million bolivars ($122.7 million) in 1970 to 3,023.2 million bolivars ($703.0 million) in 1978, which means that support from the government to this sector has grown almost six times in that period.[5]

Graduate education as a component of total higher learning in Venezuela is facing major challenges with issues

related to the definition of purposes, financial and fiscal accountability, increase of faculty salaries, lack of coordination among the institutions, and especially the preservation and improvement of quality.

On the subject of quality, the sixth Plan of the Nation (1981-1985) recommended that after the initial expansion of postsecondary education, it is essential to establish the factor of quality as a priority objective in the improvement of this educational sector particularly at the graduate level in the aspects of research and extension.[6]

The situation described above requires a wise use of the resources assigned to graduate education in order to employ these resources most productively. One way to do that is to seek information about the different components of what might be called a model of graduate education in Venezuela. One important aspect related to this model must be to discover the indicators that are needed for achieving quality within graduate education in Venezuela.

Statement of the Problem

The purpose of this study was to investigate the perceptions of faculty regarding criteria to be used in determining the quality of graduate education in Venezuela. Specifically, the following questions were addressed:

1. What criteria are considered important by faculty members in the determination of quality of graduate faculty in Venezuela?

2. What criteria are considered important by faculty members in the assessment of the quality of graduate programs in Venezuela?
3. What minimal criteria are considered by faculty members as essential to insure quality within graduate education in Venezuela?

Hypotheses

In addition to the questions, several hypotheses were tested regarding the differences in viewpoint among the faculty. The following hypotheses were tested:

H.1. There will be no significant difference in the criteria utilized in determining quality within graduate education in Venezuela among the faculty of Universidad Central de Venezuela, Universidad de Carabobo, and Universidad Centro Occidental Lisandro Alvarado.

H.2. There will be no significant difference in the criteria utilized in determining quality within graduate education in Venezuela among the faculty by rank of faculty appointment.

H.3. There will be no significant difference among the publication rate of faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

H.4. There will be no significant difference between the number of national meetings of professional societies attended by faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

H.5. There will be no significant difference among the level of degree of faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

H.6. There will be no significant difference in perceptions of criteria of quality within graduate education in Venezuela between groups of faculty graduating from national universities and those graduating from foreign universities.

Scope and Limitations

Several researchers have been interested in establishing criteria related to quality.[7-11] Different criteria were utilized, but most studies depended on personal judgments of quality in their assessments. This study also utilized faculty judgments of quality criteria as an adequate description of quality.

This research was limited to three selected Venzuelan universities due to the pioneering effort undertaken, and

instruments and analysis used in related research in the United States were adapted to the special characteristics of Venezuelan graduate education.

This study was not designed to determine a quality ranking in Venezuelan graduate education but to determine the criteria the faculty consider the most influential in the quality of graduate education in Venezuela.

There exists a lack of bibliography on this topic in Venezuela. Only recently the educational authorities have attempted to initiate and design criteria and norms of what would be a model of graduate education in Venezuela.

This research was limited to the views of the faculty members who teach and do research at the graduate level in the universities selected.

Assumptions

This study was predicated upon the following assumption:

The perceptions expressed by faculty members in this study were honest perceptions of their concern and feelings toward the items of the questionnaire presented.

Definitions of Terms

Quality: Definition of educational quality normally includes references to excellence of faculty, students, programs, and resources. In this study quality was defined as the degree of excellence in graduate faculty and programs in these areas as perceived by the graduate faculties in the

institutions selected.

Graduate Education: In this study graduate education has been defined as any course taken after the first university level degree which leads to the degree of Master's, Doctor's, or other post-baccalaureate degree or certificate.

ENDNOTES

[1]Carnegie Commission on Higher Education. Priorities for Action: Final Report of the Carnegie Commission on Higher Education (New York, 1973), p. 27.

[2]Carlos Tünnermann Berhein, "The Problem of Democratizing Higher Education in Latin America," Prospects Quarterly Review of Education, Vol. IX, No 1 (1979), p. 80.

[3]Miguel A. Escotet, "Necesidad para la Sobrevivencia Cultural de la América Latina," Papeles Universitarios, Año 3, No. 20 (n.d.), pp. 154-155.

[4]Consejo Nacional de Universidades, Matrícula Estudiantil Personal Docente y de Investigación y Egresados de Educación Superior, Boletín Estadístico No. 5 (Caracas, 1978), p. 111.

[5]Ibid., p. 519.

[6]Cordiplan, Sexto Plan de la Nación 1981-1985. Sector Educativo: Versión Preliminar (Caracas, 1980), pp. 51-52.

[7]R. M. Hughes, A Study of the Graduate Schools of America (Oxford, Ohio, 1925).

[8]Hayward Keniston, Graduate Study and Research in the Arts and Sciences at the University of Pennsylvania (Philadelphia, 1959).

[9]Allan M. Cartter, An Assessment of Quality in Graduate Education (Washington, DC, 1966).

[10]Kenneth D. Roose and Charles J. Andersen, A Rating of Graduate Programs (Washington, DC, 1970).

[11]Judith R. Lawrence and Kenneth C. Green, A Question of Quality: The Higher Education Ratings Game (Washington, DC, 1980).

CHAPTER II

BACKGROUND AND REVIEW OF LITERATURE

This chapter is divided into three main sections. The first section is a description and analysis of the most important characteristics of the Venezuelan educational system, especially at the higher education level. The second section includes a discussion of different studies by recognized researchers from the United States assessing the quality of graduate programs. Finally, the third section reviews literature concerning a variety of approaches which have been developed by scholars in Venezuela regarding the criteria of graduate education quality.

Background of Higher Education in Venezuela

Venezuela in the last two decades has been an example of commitment to education, facing a tremendous task of educational reconstruction. In the decade of the 1960s its action was oriented toward developing educational facilities and extending opportunities to outlying districts; in the last decade the action has been on educational reform. This reform placed emphasis on administrative decentralization, diversification of intermediate and higher education, and

initiation of a nationwide preschool program.[1]

One of the most important characteristics of the Venezuelan educational system is the quantitative growth at all levels due to rapid population and urbanization growth, industrialization, and social mobility. Thus, the total enrollment at all levels (preschool, elementary, secondary, and higher education) increased dramatically from 1,448,896 students in 1960-1961 to 2,653,114 students in 1970-1971. The growth in the last decade has been impressive with the creation of 1,688,871 new places for students, and the educational system reached an enrollment of 4,341,985 students for the year 1979-1980.[2]

This quantitative development has been oriented toward democratization and free access to the schools and has included the following objectives: to reduce dropouts, to provide scholarships to students from low socioeconomic backgrounds, to improve and to bring about actualization of the educational programs, to improve the evaluation system, to create new opportunities for studies and enhance the possibilities of examining, choosing, and researching strategies for better teaching and learning, to assist in service of teacher training, and to improve the working conditions of teaching personnel. The rapid expansion of the educational system in the last decade with the creation of 3 million new places has resulted in an increase of teaching personnel, school buildings, and a new administrative structure that sometimes does not have the necessary human resources or

adequate physical facilities.[3]

Therefore, this quantitative explosion has generated a deterioration of the quality of the educational system which has brought about many problems that inhibit the educational system from becoming an efficient solution to the development of the cultural, social, and economical demands of the country.[4]

The Sub-System of Higher Education

In 1958 there were seven institutions of higher education classified as follows: four public universities, two private, and one for college teachers. The public universities are: Universidad Central de Venezuela (Central University of Venezuela, founded in 1721), Universidad de los Andes (University of Los Andes founded in 1810), Universidad del Zulia (University of Zulia, founded in 1891, closed in 1904, and reopened in 1946), Universidad de Carabobo (University of Carabobo, founded in 1892, closed shortly after opening, and reopened in 1958).[5]

The private universities are: Universidad Católica Andrés Bello (Catholic University Andrés Bello, founded in 1953), and Universidad Santa Maria (University of Santa Maria, founded in 1953).[6]

The institute for college teachers is Instituto Universitario Pedagógico de Caracas (The Pedagogical Institute of Caracas, founded in 1936).[7]

After two decades of a new government policy, higher education has come to represent one of the great social developments in Venezuela. Thus, the new system is presently composed of a hundred institutions and branch campuses of postsecondary education.[8] This system is divided into public and private institutions where the public system is the predominant one.

This jump from seven institutions in 1957-1958 to a hundred institutions and branch campuses in 1978-1979 has generated an increase in all the constituents in the system of higher education. Table I shows the growth of student enrollment in postsecondary education in that period. Table II demonstrates the development and expansion of the faculty in the same sector. Unfortunately, this system has been characterized by a high degree of dispersion and lack of coordination so that sometimes it is not possible to see higher education as a system but as a group of institutions without any linkages among them. This situation is not only characteristic among institutions but also inside each one of them. Some universities maintain an administrative structure which inhibits close relationships among colleges and departments. In addition, the growth of the system has not taken into account the facilities and the faculty needed; therefore, the scarcity of faculty has affected the quality of teaching and learning.

TABLE I

ENROLLMENTS OF HIGHER EDUCATION IN VENEZUELA
FOR THE YEARS 1957-58 THROUGH 1978-79

Years	Total	Universities		Institutes and Colleges	
		N	%	N	%
1957-1958	11,003	10,657	98.86	346	3.14
1958-1959	16,795	15,936	94.89	859	5.11
1959-1960	22,088	20,652	93.50	1,436	6.50
1960-1961	24,907	22,696	91.12	2,211	8.88
1961-1962	30,489	28,062	92.04	2,427	7.96
1962-1963	33,571	30,766	91.64	2,805	8.36
1963-1964	38,999	34,202	92.44	2,797	7.56
1964-1965	40,427	37,719	93.30	2,708	6.70
1965-1966	45,879	43,049	93.83	2,830	6.17
1966-1967	50,376	47,099	93.49	3,277	6.51
1967-1968	56,137	52,599	93.70	3,538	6.30
1968-1969	62,449	58,674	93.96	3,775	6.04
1969-1970	70,816	66,218	93.51	4,598	6.49
1970-1971	85,675	80,598	94.07	5,077	5.93
1971-1972	95,294	88,505	92.88	6,789	7.12
1972-1973	115,462	107,541	93.14	7,921	6.86
1973-1974	159,269	145,462	91.33	13,807	8.67
1974-1975	193,262	165,238	85.50	28,024	14.50
1975-1976	221,581	185,518	83.72	36,063	16.28
1976-1977	247,518	202,422	81.78	45,096	18.22
1977-1978	265,671	218,392	82.20	47,279	17.80
1978-1979	282,074	230,719	81.79	51,355	18.21

Source: Consejo Nacional de Universidades, Oficina de Planification del Sector Universitario. Boletin Estadistico No. 6 (Nov., 1979), p. 105.

TABLE II

NUMBER OF FACULTY IN HIGHER EDUCATION IN VENEZUELA FOR THE YEARS 1958-59 THROUGH 1978-79

Years	Total	Universities		Institutes and Colleges	
		N	%	N	%
1958-1959	1,700	1,592	93.65	108	6.35
1959-1960	2,054	1,899	92.45	155	7.55
1960-1961	2,639	2,438	92.38	201	7.62
1961-1962	3,051	2,836	92.96	215	7.04
1962-1963	3,404	3,178	93.36	226	6.64
1963-1964	3,844	3,584	93.24	260	6.76
1964-1965	3,935	3,641	92.53	294	7.47
1965-1966	4,784	4,470	93.44	314	6.56
1966-1967	5,523	5,155	93.33	368	6.67
1967-1968	6,309	5,892	93.39	417	6.61
1968-1969	6,865	6,387	93.04	478	6.96
1969-1970	7,298	6,799	93.16	499	6.84
1970-1971	7,644	7,118	93.12	526	6.88
1971-1972	8,141	7,490	92.01	651	7.99
1972-1973	9,140	8,408	91.99	732	8.01
1973-1974	11,076	10,052	90.75	1,024	9.25
1974-1975	14,604	11,661	79.85	2,943	20.15
1975-1976	16,185	12,849	79.39	3,336	20.61
1976-1977	19,787	15,391	77.78	4,396	22.22
1977-1978	21,480	16,621	77.38	4,859	22.62
1978-1979	23,454	18,308	78.06	5,146	21.94

Source: Consejo Nacional de Universidades, Oficina de Planificatión del Sector Universitario. Boletin Estadistico No. 6 (Nov., 1979), p. 110.

Legal Basis for Higher Education

In 1958 the Council of Ministers (The Presidential Cabinet) set forth a new law of universities which gave to the universities complete autonomy in relation to administrative control regarding faculty, students, and graduates. In addition, the university campus was called "inviolable."[9] The highest authority in each university rests in the university council composed of the rector (president), the vice-rector (vice-president), the secretary, the deans of the several faculties, a delegate elected by ex-students, and three delegates elected by the student body. The highest administrative officers (rector, vice-rector, secretary, and deans) must be qualified academically and elected by the votes of faculty, students, and ex-students in specified proportions.[10]

The same decree of 1958 created the National Council of Universities, the main purpose of which is to coordinate the work of the public and private universities. This council, headed by the Minister of Education, has representation from each university through its rector (president), one representative from each one of the faculty bodies of the autonomous university, the non-autonomous university, and private universities, one student representative from each one of the autonomous, non-autonomous, and private universities, two faculty chosen by the National Congress, one representative of the "Consejo Nacional de Investigaciones Científicas y

Técnologicas" (National Council of Scientific and Technological Research), one representative of the Office for University Planning, one representative of the Office of Higher Education, and one representative of the Ministry of Finance.[11]

In 1970, a reform of the University law was carried out. This reform included, among other aspects, limitations of the concept of autonomy, specification of the functions of teaching, research, and administration, and the creation of experimental national universities with special limitations on autonomy allowing the Ministry of Education to choose rectors. In addition, the National Council of Universities has power over the creation of new universities, both public and private, and there is a provision for an office for University Planning which will be a technical support for the National Council of Universities.[12]

Purpose and Characteristics of the Universities

The main purpose of public and private universities is stated in the University law which in Article One declares:

> the university is basically a community of spiritual interests which unites professors and students in the search for truth and the effort to consolidate the transcedental values of mankind.[13]

The most important characteristic of Venezuelan universities is related to their autonomy. They are divided into the following categories: Autonomous universities, which are the oldest and the most prestigious institutions. Their

more important features are that they regulate their internal affairs in the areas of administration, finances, and academics. They have full legal power for selecting their highest administrative and academic officers (rector, vice-rector, secretary, and deans). Non-autonomous universities: Unlike the national autonomous universities, their governing boards are designated by the Minister of Education. However, the non-autonomous universities can make decisions regarding academic activities, curriculum planning, and managing their endowment.

Teaching Staff at the Universities

There are five basic teaching ranks in the universities:

Instructor

Assistant Professor

Aggregate Professor

Associate Professor

Titular Professor (Full Professor)

Professors can progress in the ranks of the university and receive pay increases from year to year according to scientific credentials and academic merit, graduate study in process or completed, and publications. When they have completed the time required in one level, or have done work that counts toward promotion, a committee or jury examines their credentials and the work submitted as evidence of merit and decides about progressing to the next level by presenting a thesis of promotion. This is a piece of

research, a book, or a monograph, which is discussed and evaluated by colleagues.[14]

Not all faculty are full-time professors. There exist four classifications with regard to the teaching load: professor with "dedicación exclusiva" (exclusive dedication), that is, the professor must not teach in other universities or hold other employment and is generally expected to work a minimum of 36 hours a week, full-time professors who work 30 hours a week and are thus permitted to do some additional teaching elsewhere, professors who teach half-time, and professors who are paid by the hour and teach only a single course.[15]

Quality and the Trend of Graduate Education in Venezuelan Universities

One of the most important aims of Venezuelan universities today, after the explosion of growth, is to raise the standards of quality. The Sixth Plan of the Nation (1981-1985) commented that the institutions of higher education, and especially the universities, must support and increase their programs of research and extension as well as all the resources, such as libraries, that are indispensable for academic improvement and for the development of teaching activities, research, and diffusion of knowledge.[16] Moreover, it is important to design a sophisticated national system of information research and development, and

evaluation which should be created and placed in service, as well as to improve the coordination and articulation among the different subsystems of higher education based on a national master plan.[17]

In July of 1975, Decree No. 1000 was issued for the purpose of creating the Gran Mariscal de Ayacucho Foundation, the main purpose of which is to train personnel to the highest level in order to develop human resources in major priority areas in the country's present stage of development. In 1979, after four years of functioning, almost 16,000 of the 20,000 scholarships awarded were still in force, most of them in foreign countries (60 percent).[18] This program has been characterized by its high quality of scholarship holders. However, the intention is that in the near future the foundation will award its fellowships on the basis of a competitive examination.

On the other hand, the development of higher education, especially at the university level, brought about the activation of graduate education in Venezuela. This area was introduced in 1938; however, today most Venezuelan students go abroad, especially to Europe and the United States, to follow post-graduate studies. This area has been considered extremely important for Venezuelan educational planners. For that reason, the National Council of Universities, in 1978, through the Office for University Planning, made an inventory (Table III) of the number of post-graduate courses at the national level as well as the degrees conferred for

TABLE III

NUMBER OF GRADUATE COURSES OFFERED BY VENEZUELAN UNIVERSITIES IN 1978

I N S T I T U T I O N S	Total	Doctor	Master	Special-ist	Certif-icate	Exten-sion
T O T A L	193	14	138	21	6	14
U N I V E R S I T I E S						
Universidad Central De Venezuela	109	12	85	-	-	12
Universidad de Los Andes	11	-	11	-	-	-
Universidad del Zulia	19	-	7	12	-	-
Universidad de Carabobo	7	-	7	-	-	-
Universidad de Oriente	2	-	2	-	-	-
Universidad Centro Occidental	2	-	-	1	1	-
Universidad Simon Bolivar	7	-	7	-	-	-
Universidad Catolica Andres Bello	4	1	1	2	-	-
Universidad Santa Maria	1	1	-	-	-	-
M I N I S T R I E S						
Ministry of Education	7	-	5	-	-	2
Ministry of Health and Social Work	6	-	-	5	1	-

TABLE III (Continued)

INSTITUTIONS	Total	Doctor	Master	Special-ist	Certif-icate	Exten-sion
OTHER INSTITUTIONS						
Venezuelan Institute of Scientifc Research	12	-	12	-	-	-
National School of Public Administration	3	-	-	-	3	-
Foundation for the Development of the Central Western Region	1	-	-	-	1	-
Venezuelan Red Cross	1	-	-	1	-	-
Institute of Higher Studies of Admistration	1	-	1	-	-	-

Source: National Council of Universities, Office of University Sector Planning, Boletin Estadistico No. 5, p. 505.

Note: Majors or courses in process of recognition are not included.

every institution in order to seek some minimal information in a sector which has been judged as "unplanned and uncoordinated."[19]

Taking into account the importance of graduate education, the Sixth Plan of the Nation (1981-1985) stated that a national policy on graduate education will be developed, which will be closely related to the requirements and needs of national development and related to the demands of technical and scientific information of the faculty for teaching and research in the system of higher education. In addition, a program of "Development of Science and Technology" will be created for the purpose of making a contribution to the advance of science in the country, supporting the organization of research and graduate education. In order to achieve this purpose, it is essential to stimulate the formation of experts in aspects of the creation, development, and adaptation of technologies, as well as the increase of researchers in several different areas and the improvement of faculty and research.[20]

There also exists a concern among critics of graduate education in Venezuela regarding the standards, policies, and the protection of quality. Thus, the faculty of sciences in the Universidad Central de Venezuela (Central University of Venezuela) made the following three recommendations: (1) graduate education must be a priority activity in the planning and developing of the faculty, (2) it is important to define a policy of support related to aspects of economics

and academics, and (3) it is essential to establish norms for graduate students in relation to their teaching at the undergraduate level.[21]

Unfortunately, the system of graduate education in Venezuela is characterized by a lack of planning, a lack of coordination, and a transplanting of foreign norms to Venezuela with no apparent relationship between the number of graduate programs in certain fields and the educational priorities of the nation.[22]

Additionally, the expansion of this sector is stimulated by the notion that graduate education automatically bestows academic quality on the institution that offers the program. This situation has generated competition among institutions in order to manage a greater number of courses in different areas without taking into account the real demand for them, and bringing about a variety of requirements and qualities which are not useful from the societal point of view.[23]

Finally, Venezuelan higher education is characterized by rapidly rising costs which threaten the entire system of higher education. For instance, the national government is facing serious problems of financing the system of higher education because the annual rate of growth in costs of this sector was 17.1 percent in the period 1974-1979, which was higher than the growth of fiscal revenue of the country during the same period. In addition, the projections of the finance budget of the university sector for the year 1983

show an amount of 5.8 billion bolivars ($1.35 billion), which is higher than the total budget of the Ministry of Education in 1976.[24]

This means that this increase in costs of 3 billion bolivars ($.7 billion) over the financial budget of 1978 cannot be supported by the ordinary fiscal revenue of the country. Therefore, it is essential to make decisions in relation to administrative and academic aspects which allow a better use of the financial resources that the country allocates to this sector.[25]

Literature on Quality in Graduate Education

Concern with quality of graduate education is not new in education. Hughes in 1924, then president of Miami University in Ohio, developed a study representing 20 fields of instruction; he requested every faculty member of these 20 fields to prepare a list of from 40 to 60 selected scholars who were teaching their respective subjects in colleges and universities in this country. A questionnaire was sent to each of these scholars asking them to rate the particular institutions which they regarded as most desirable for graduate work. From the results of this study Hughes concluded that "At the present time there are some institutions that are doing graduate work of some distinction."[26]

A second study was done by Hughes in 1934 for the purpose of drawing up a list of graduate schools offering

adequate facilities for work in the various fields of graduate study. This study was designed thus: 100 distinguished scholars from different disciplines were submitted a list of the staff members at each university offering work for the Ph.D. in their particular fields. They were requested to point out those departments which, in their opinion, had adequate staff and equipment to prepare candidates for the doctorate; the answers were collected and analyzed, and the departments were classified in two categories: distinguished and adequate.[27]

A third major study evaluating graduate education was undertaken by Keniston at the University of Pennsylvania in 1957. The purpose of this research was to learn the reputation of departments which offer programs leading to the doctorate. Twenty-five chairmen of departments of 25 leading universities of this country were consulted. The list was collected, taking into account their membership in the Association of American Universities, number of Ph.D.'s awarded in recent years, and geographical distribution. Each chairman was requested to rate the strongest department in his field on the basis of the quality of their Ph.D. work and the quality of the faculty as scholars.[28]

Keniston concluded his study saying:

> . . . The limitations of such a study are obvious; the ranks reported do not reveal the actual merit of the individual departments. They depend on highly subjective impressions; they reflect old and new loyalties; they are subject to lag, and the halo of past prestige. But they do report the

> judgment of the men whose opinion is most likely to have weight. (and it is a) . . . close approximation to what informed people think about the standing of the departments in each of the fields.[29]

Perhaps one of the most remarkable assessments in quality within graduate education was a study by Cartter in 1966, who attempted to assess quality among a large number of institutions (106), and nearly 4,000 scholars. This study concentrated on individual departments instead of the university as a whole because universities have different commitments toward each area of study and therefore it is not possible to make evaluations upon averages of departmental ratings. In addition, there are different areas of study in every university which do not allow comparability.[30]

Cartter held that quality in an educational institution is an elusive attribute, not easily subjected to measurement. Quality is an abstract item, therefore, no single factor such as size of endowment, number of books in the library, publication record of the faculty, level of faculty salaries, number of Nobel laureates or members of the National Academy of Sciences are sufficient measures to estimate adequately the true worth of an educational institution.[30] Cartter's findings indicated that

> . . . to maintain strength in one field of study requires the presence of strong departments in other closely allied disciplines. For instance, it is difficult to have a distinguished physics department without also having a strong mathematics department. . . . The library is the heart of the university; no other single nonhuman factor is as closely related to the quality of

> graduate education. . . . Departmental strength is directly associated with quantity of publication performance and with academic salaries in the upper two professional ranks.[31]

One of the most recent studies of quality was designed by Astin in 1980. He made an examination of the different current views of quality and concluded thus: (1) there is a mythical conception which states that quality in higher education cannot be defined because activities of the institutions are elusive; (2) there is a reputational view that defines quality on the basis of a "consensus of opinion"; (3) the resources approach considers quality based on bright students, highly-trained and prestigious faculty, and affluence; (4) the main point of the outcome view is that the assessment of quality should focus on institutional outcomes; (5) the value-added view is characterized by the institution's ability to affect its students favorably to make a positive difference in their intellectual and personal development, that is, to make an impact on the student's knowledge, personality, and career development.[32]

Astin sympathized with the last approach, and he noted that institutions, in order to get better quality, should gear their educational policies to maximize the learner's knowledge of results and time of tasks (learners here are not only students but also faculty and administrators). The main point of Astin is that institutions need to take a more student-oriented approach and to give faculty opportunities to develop their teaching skills under minimally threatening

conditions. Astin concluded saying that quality is equated as a continuing process of critical self-examination that focuses on the institution's contribution to the student's intellectual and personal development.[33]

In 1973 the Graduate Record Examination (GRE) and the Council of Graduate Schools (CGS) developed a methodology for assessing the quality of Ph.D. programs. They limited the study to a chosen few Ph.D. fields from a varied sample of 60 universities that granted Ph.D.'s from the Northeast, the East, the Midwest, and the South. There was representation from private and public institutions as well as diversity in size of the sample.[34]

They sent two questionnaires to every dean of the selected universities. The first questionnaire asked what characteristics of a graduate program were important to understanding and appraising its quality in relation to faculty members, students, resources, and operations of the graduate program. A Likert scale was developed in order to rate the responses given by the deans in terms of "essential," "important," "not very important," and "useless." Regarding faculty members, the most important factors found were academic training of faculty, research activity, research productivity, and teaching effectiveness. In relation to students, criteria were academic ability, achievements, and professional accomplishments of graduates. The factor of resources was characterized by university financial support, library, laboratory equipment, external

financial support for the program; other important features in the assessment of quality were purpose of the program, course and program offerings, admission policies, and provision for the welfare of faculty members.[35]

The second questionnaire had a different structure from the first one and asked every respondent to judge every criterion of the first questionnaire on a four-point scale. These judgments were averaged and the results, in general, supported the findings of the first questionnaire.[36]

Berelson, in his book on graduate education in the United States, discussed different factors of quality at the graduate level. Based upon his research developed with different constituents such as graduate deans, graduate faculty, recent Ph.D. recipients, college presidents, and industrial employers, he made observations, analyses, and recommendations. He noted:

> The top institutions have more distinguished faculties and apparently turn out better products; it does not necessarily follow that they have better training programs. Are the products better because the training is better or because the students were better in the first place? That is an important question because of the implications it carries for the expansion of training.[37]

He went on to state that training in research and scholarship should be the center of the graduate school's program. In addition, the difference between a university and a leading university is the strength of its doctoral program, which is characterized by high salaries, good libraries, low

teaching loads, research opportunities, good selection of students, and distinguished faculty.[38]

McMurrin explained the relation of quality to other factors and pointed out that lack of competence to do the job for which the faculty was appointed was evidence of poor quality at the graduate level. Today, we are more aware of the importance of selection of the faculty; however, it is more difficult to drop the incompetent, and the tenure situation is likely to maintain the present faculty for some time to come. There are other factors that are generated by the universities themselves, such as the rapidly increasing extension of education beyond the campus and the granting of academic credit for so-called "life experience." According to McMurrin, these elements bring about deterioration of quality in the graduate college.[39]

Beyer and Sniper found that rated departmental quality was closely associated with the reputations of individual faculty members and their standing in the job market. However, the association between the two reputational measures seems to be clear for the physical rather than the social sciences. Average research funding of faculty members is quite an important predictor of quality for physical science departments, however, it was less related to quality in the social sciences.[40]

Morgan, Kearney, and Regens made an analysis of the study of the American Council of Education (Roose-Andersen) which surveyed approximately 8,100 faculty members from 130

doctoral-granting institutions in 1969. They discussed the dilemma of whether to view quality in relation to individual graduate departments or the larger institution itself. Because it would be a difficult task to gather specific departmental information for all the graduate departments included in the ACE ratings, they decided to review the overall reputed quality of the graduate institution and not the prestige of individual departments.[41]

They used four independent variables which were related to 80 percent of the variation in the quality of graduate education: adequate monetary resources, excellent faculty salaries, ample library resources, and low student-faculty ratio. The results of a multiple regression analysis showed that the library resource variable was clearly dominant (β=.68). However, there was decreasing importance of library resources as one moved from humanities (β=.79) through sciences, specifically engineering (β=.40). The variable library was followed by revenue per student, faculty-student ratio, and faculty salaries in the same order.[42]

Gregg and Sims in their research of quality of faculties and programs of graduate departments of educational administration found the same factors as Morgan, Kearney, and Regens. In addition, they reported that all the respondent groups considered quality of students and graduates and teaching effectiveness to be the most important factors in the assessment of quality of educational programs and

faculty, respectively, in departments of educational administration.[43]

Blackburn and Lingenfelter in their exploration of quality in doctoral programs discussed the combination of some objective indicators of excellence for constructing a general index of quality. Among these indicators, it is important to mention scholarly productivity. It was obvious that when the main purpose is the production of knowledge, scholarly output is an important criterion of excellence. Degrees, awards, and other faculty traits were a good index of its quality. The quality of the student is a mark of the quality of the program. Physical facilities, especially the library, were considered an important criterion for quality. Other factors related to quality were the amount of federal funding for academic research and development, the proportion of full professors on a faculty, and graduate student-faculty ratios.[44]

Clark, Harnett, and Baird showed results of the quality of doctoral programs. They combined 30 indicators in order to determine a quality program. These indicators were drawn from opinions of graduate school deans about department chairmen, faculty members, alumni, and students. The indicators of quality examined by Clark were oriented to the research-scholar ideal. For example, one method for evaluating quality of faculty was peer ratings; another was the method to evaluate the quality of students: assessed by the study of students' undergraduate grades and faculty rating

of students. Another indicator was the environment, and it was appraised by the quality of the relationship between student-student, faculty-faculty, and student-faculty. Academic offerings and alumni performance were other indicators taken into account in this study.[45]

Hagstron, in an important research study and through a simple factor analysis, discovered 10 variables that were closely related to the quality and prestige of university departments. He analyzed the variable of research that was considered the more influential in this study and concluded that the amount of financial support available for research activity was an important determinant of productivity. Scientists with money and facilities for research were in a better position to be productive than their less fortunate colleagues. In American universities, this money was almost always in the form of extramural research grants, and these grants tended to be concentrated among departments of high prestige.[46]

Clement and Sturgis completed a quality study which indicated that the quality of the department had an impact upon research productivity. They observed that departments with more money and superior facilities were better equipped to train students in the empirical research methods and techniques that were necessary for successful scholarship and the improvement of quality.[47]

Millet suggested that the best evidence of quality in graduate education was peer-group assessment, efficient use

of resources, volume of federal grants, and research scholarship. This institutional support from the federal government to universities was primarily directed to financing scientific research and supporting the education of research scholars. The social costs for quality in graduate education could be justified nationally in terms of intellectual development for the graduate student but also in terms of the advancement of knowledge and creative abilities needed by society, the supply of highly-educated, talented people needed by various societal institutions and the contribution to the solution of urgent social problems.[48]

Lawrence and Green, in a substantial literature review in 1980, analyzed and made an attempt to assess some studies that had been carried out to evaluate quality in graduate education.

They pointed out throughout the analysis that the indicators which have been more influential in determining quality at the graduate level were faculty achievement, student quality, institutional resources, research productivity, amount of federal funding for academic research and development, higher graduate student-faculty ratios, and publication quality.[49]

On the other hand, they made an examination of the weaknesses and strengths of each one of those indicators and concluded that multiple criteria must be used in the assessment of quality at the graduate level. Opinions from students, graduates, and the employers of graduates should be

taken into account in the assessment of quality. In addition, their recommendations included the establishment of a procedure for collecting quantitative data on physical facilities, faculty quality, and so forth; the recognition that goals and objectives of the program and the characteristics of each discipline require quantifiable criteria for quality, special attention to student input, learning, and growth as well as the output in relation to the social and individual benefits of higher education.[50]

Finally, they concluded that the teaching-learning function had been virtually ignored and that represented one of the greatest weaknesses of quality assessment.[51]

Summary

It is clear that in the different studies there existed some common characteristics which authors have pointed out as indicators of quality at the graduate level. These indicators can be summarized in this way: outstanding faculty which will bring about scholarly productivity and advancement of knowledge; a good selection of students demonstrated by their undergraduate grades, and faculty ratings of commitment and motivation of the students; an excellent environment which includes faculty concern for students, the quality of the relationship among students, faculty, and administrators, the student-faculty ratio, and the quality of resources, the main factor of which is the library. However, it is needless to say that the amount of endowments,

expenditures for students, grants from federal and state governments, financial support from private institutions and the efficiency of management of these resources were also good indicators in the assessment of quality in graduate education in the United States.

On the other hand, some important criteria were identified in this review by researchers in order to identify the quality of faculty in graduate education. Among them, it is important to mention research productivity, teaching effectiveness, and publication record.

Literature on Quality in Venezuela

The Consejo Nacional de Investigaciones Científicas y Técnologicas (National Council for Scientific and Technological Research), one of the institutions that has been working to systematize and develop graduate education and which is responsible for advising the national government on all matters relating to science and technology, established criteria and norms of quality in order to give economic support to programs at the graduate level. Among the most important criteria were the following: (a) faculty: the faculty must be active researchers and must spend most of their time in activities related to research. Moreover, they must have at least an equivalent degree to the level in which they will develop their teaching activities; (b) the quality of student: the student will be selected on the basis of his undergraduate grades and his performance as a professional;

and (c) the institution which has the responsibility of the program must have adequate facilities such as equipment needed in the program, building facilities, and library resources.[52]

Along the same lines, "La Universidad Central de Venezuela" (The Central University of Venezuela), in an important study of graduate education policy in the faculty of humanities and education maintained that all its objectives were closely related to quality. Recommendations included the following: (1) to develop activities of graduate education in all the areas of the college, to strengthen the programs of high quality that exist there, and to promote courses in the fields that are of top priority for this institution; (2) to achieve the qualitative improvement of the programs in graduate education in all areas, taking into account the importance of the courses from the national and/or institutional points of view and their connection with the activities of research, their faculty resources and academic requirements; and (3) to increase the budget of graduate education with the purpose of expanding the priority programs as well as improving their quality.[53]

Allen, in his article entitled "Venezuela's Ivory Tower," made an analysis of Simon Bolivar University, which began its graduate program in 1974 and is considered in Latin America as one of great prestige because of its commitment to high standards of quality. He observed that the most important features of Simon Bolivar University were:

(1) quality of students including a high admission standard with a tough entrance examination; (2) quality of faculty: the faculty is engaged in teaching and doing research. In addition, more than one-half of the 600 faculty members taught full-time, but this was still below Simon Bolivar University's goal of a completely full-time staff; (3) quality of resources: this year (1977) 17 new buildings will be ready for occupancy, equipped with the latest classroom, laboratory, and scientific equipment.[54]

Marta Sosa, in his book, examined two specific factors in relation to the low quality of higher education in Venezuela, which contain implications for analogous situations in graduate education. He observed that (1) low quality is generated by the lack of quality of the faculty related to its academic level, sometimes generated by its overload of activities of teaching; and (2) lack of activities of research or the insufficiency of its quality.[55]

Morazzani Pérez Enciso, former director of graduate education of the Universidad Central of Venezuela, asserted that it is essential to improve the academic level of graduate education. In doing that, it is appropriate to remember that graduate education is research. Furthermore, she suggested that the academic level has been influenced by a lack of endowment, facilities, and a good organization for graduate education.[56]

The research factor has been considered to be one of the most important criteria in the quality of the graduate

colleges of Venezuela. Angel Hernández, Vicerrector Académico de la Universidad Central de Venezuela, noted that it is important to understand that the quality of the output and the active participation in the process of scientific development will be the only base of survival of the university. The university has to create more efficient channels of communication between all university scientific communities in order to improve the quality of the development of science and technology.[57]

Hernández went on to suggest that it is necessary to find new sources of financial resources, to have a better administration of the resources to allow researchers to be in touch with the funds assigned to them, to build and to improve facilities for the advance of research at the university, and to make publications from the findings of research. Thus, research was considered one of the main criteria for the advancement of academic rank at the university.[58]

In a similar fashion, Luis Hernández, Coordinator del Consejo de Desarrollo Científico y Humanístico de la Universidad de los Andes, observed that the faculty in his university did not do research. He cited data describing the situation in 1980 at his university which showed only 28 research publications were submitted by a faculty numbering 2,300 members; this means that there was a ratio of 28/2,300 =0.012 publications per professor each year, or a production rate 300 times less than the standard of a good department.[59]

He went on to note that the number of publications of good quality throughout the world was difficult to estimate, but was over 2,400,000 per year. In consequence, the University was producing 28/2,400,000, or approximately .001 percent of the scientific knowledge of the world. In the next 10 years, this situation would be worse, and the differences in the scientific development between the world and our own country would be greater.[60]

Therefore, Hernández concluded, in order to preserve efficiency and quality at the universities it would be useful to follow some recommendations:

1. To select brilliant students to do research.
2. To detect teams of researchers which have potential in the production of quality research.
3. To improve the administration of the organization.
4. To reward with advancement in rank for faculty who have a production of quality research.
5. To establish a thesis as a mandatory requirement in whatever degree at the graduate level.
6. To improve the facilities of the organization.[61]

Vessuri, in his work, classified the quality at the graduate college in three main aspects: (1) the scientific qualtiy, where new knowledge is made universal through publications in scientific magazines, a thesis presentation by students, citation count, that is, the number of times the researcher is cited by other researchers, and research which is a priority for the improvement of teaching effectiveness;

(2) quality as social relevance, in which the direction of graduate education must be toward areas of social interest; and (3) quality as an impact on the educational system, according to which, one of the essential objectives of graduate education must be to improve the undergraduate level.[62]

Finally, in a technical report from a workshop on analysis and redesign of graduate studies of the Central University of Venezuela in December of 1981, Morles made some propositions related to quality improvement of the graduate school. He maintained that Central University of Venezuela must make a qualitative change in its graduate education system to achieve one of the main objectives of the university to improve the quality of the standard of life of Venezuelan society.

The propositions for the improvement of quality can be divided into two main aspects:

1. Academic aspects:
    a. There is little correlation between a graduate's studies and his research.
    b. A high percentage of part-time graduate students generates difficulties in maintaining a minimum standard of academic level.
    c. Students do not have enough resources (laboratories, library, computers, etc.), and they have problems in obtaining advice for their theses.

d. Few rewards are offered both the full-time faculty members and those who work part-time at the graduate level.

e. The courses usually lack creativity on the part of both faculty and students.

2. General aspects:

a. There exists a diversity of opinion and criteria in assessing the functions of the graduate college in the university.

b. The courses offered at the graduate level do not work systematically.

c. Activities of control of studies at the graduate college is carried out with different criteria from every college without taking into account orientations and recommendations from the central coordination of the graduate college.

Summary

It appears there have been few empirical studies of quality in graduate education in Venezuela. In addition, this segment of education has been characterized by recent beginnings (1938) and proliferation without coordination and planning in the decade of the 70s. Furthermore, the lack of research on quality as well as the fact that the available graduate programs do not appear to meet the needs of the

society are other factors which distinguish graduate education in Venezuela.

However, educational administrators and many other individuals at the graduate college have realized the importance of this sector in the development of a better standard of life in Venezuelan society. Thus, different studies related to the quality of graduate education have pointed out recommendations and suggestions for improving it. Moreover, they have identified indicators which could preserve and enhance quality in that area in Venezuela.

Among the most important criteria that have been pointed out in the review of literature related to the quality of the faculty were: research, level of degree, involvement in the program, and publications.

On the other hand, quality of students as measured by undergraduate grades, building facilities (especially the library), and purpose of the program were indicated as important criteria in assessing program qualtity in Venezuelan graduate education.

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CHAPTER III

METHODOLOGY

Introduction

The purpose of this chapter is to describe the methodology used in this study in order to gather and analyze the data considered.

This part of the study has been organized into four sections under the following general headings:

1. Population and sample.
2. Description of the instrument.
3. Collection of data.
4. Methods of analysis.

Population and Sample

The population used in this study was made up of faculty members at three Venezuelan universities who were working as researchers and/or professors at the graduate level with a rank of aggregate, associate, or full professor at the time this study was carried out.

There are seven public universities in Venezuela which offer graduate courses. The university with the largest graduate program was selected because it offers approximately

50 percent of all graduate courses in Venezuela. It is also considered to be the most prestigious university in the country and a leader in the development of graduate education. It was necessary that a study of graduate education in Venezuela include this university. Two additional universities were selected to provide a broader sampling of graduate faculty. These universities were selected primarily on the basis of feasibility of gathering data. They were within reasonably close geographic location so that visits could be made to them, and the directors of graduate education were receptive to participating in the study. They also provided a mix by type and geographical location.

The universities selected were:

1. From the public autonomous universities which have graduate colleges (Universidad Central de Venezuela, Universidad del Zulia, Universidad de los Andes, and Universidad de Carabobo), the Universidad Central de Venezuela and Universidad de Carabobo were selected.

2. From the public universities that are nonautonomous which have graduate colleges (Universidad de Oriente, Universidad Simón Bolivar, and Universidad Centro Occidental Lisandro Alvarado), the Universidad Centro Occidental Lisandro Alvarado was selected.

The Universidad Central de Venezuela (henceforth, this university will be referred to by its abbreviation: UCV) offers 50 percent of the courses at the graduate level in Venezuela (see Table III, Chapter II). The UCV has a

population of approximately 500 professors in its graduate college.

The Universidad de Carabobo (henceforth, this university will be referred to by its abbreviation: UC) is located in the north central part of the country and has a population of 80 professors in its graduate college.

The Universidad Centro Occidental Lisandro Alvarado (henceforth, this university will be referred to by its abbreviation: UCLA) is located in the western central region of the country, and it has approximately 80 professors in the graduate college.

A list of 80 graduate faculty members of UC was obtained from the director of the graduate program, and a random sample of 30 percent of the graduate faculty was selected. The number of questionnaire respondents by faculty and academic rank is shown in Table IV.

It was not possible to obtain a list of graduate faculty members in UCV. In order to facilitate an acceptable sampling procedure it was necessary to consult with the central coordinator of the graduate college, who provided an estimate that approximately 500 graduate faculty members were working at UCV.

The next step involved the use of the graduate catalog, which listed 101 graduate courses for the 1980-1981 school year excluding the faculty of Law and the Center of Development Studies. These two groups were not included in the sample.

TABLE IV

NUMBER OF QUESTIONNAIRE RESPONDENTS BY FACULTY AND ACADEMIC RANK IN UNIVERSIDAD DE CARABOBO

Faculty	Academic Rank (Professors)			
	Full	Asso-ciate	Aggre-gate	Total
Social and Economic Sciences	2	2	1	5
Area of Graduate College	4	2	3	9
Education		4	4	8
Total	6	8	8	22

Based on this listing of 101 courses, 5 faculty members were assigned to each course offering within a faculty, e.g., the catalog listed 5 graduate courses in Agronomy; the sample was therefore determined to be 5 professors X 5 courses, or 25 professors. From this, a 30 percent sample was selected, or 7 professors would be chosen (see Table V). The number of questionnaire respondents by faculty and academic rank is shown in Table VI.

In regard to UCLA, lists of the schools of Medicine and Agronomy were provided with an estimate of 35 and 25 possible graduate faculty members, respectively. In addition, personal interviews with the director and coordinator of the schools of Sciences and Administration showed an estimate of 12 and 8 graduate faculty members for each school, respectively. From this estimate of 80 graduate faculty members, a sample of 30 percent was taken in each school, and the number of questionnaire respondents by school and academic rank is shown in Table VII. While there was not a truly random sampling procedure used in these two universities, there was no reason to believe that there was a systematic bias in the selection procedure. It was felt that the sample was reasonably representative of the population.

Description of the Instrument

A three-part instrument based on a questionnaire developed by Paul D. Sims[1] was used in this research (Appendix A).

TABLE V

DISTRIBUTION OF APPROXIMATE NUMBER OF COURSES AND PROFESSORS BY FACULTY IN THE GRADUATE COLLEGE OF UNIVERSIDAD CENTRAL DE VENEZUELA

Faculty	Number of Courses	Number of Professors
Agronomy	5	25
Architecture and Urbanism	4	20
Sciences	11	55
Economic and Social Sciences	8	40
Veterinary Sciences	2	10
Pharmacy	4	20
Humanities and Education	12	60
Engineering	20	100
Medicine	30	150
Odontology	5	25
Total	101	505

Note: The Faculty of Law and the Center of Development Studies were not included.

TABLE VI

NUMBER OF QUESTIONNAIRE RESPONDENTS BY FIELD AND ACADEMIC RANK AT UNIVERSIDAD CENTRAL DE VENEZUELA

Faculty	Academic Rank (Professors)			
	Full	Asso-ciate	Aggre-gate	Total
Agronomy	-	-	2	2
Architecture and Urbanism	-	2	1	3
Sciences	-	5	4	9
Economic and Social Sciences	4	3	3	10
Veterinary Sciences	-	4	-	4
Pharmacy	-	1	1	2
Humanities and Education	1	2	6	9
Engineering	3	3	4	10
Area of Graduate College	-	2	1	3
Medicine	9	3	6	18
Odontology	-	1	2	3
Total	17	26	30	73

Note: The faculty of Law and the Center of Development Studies were not included.

TABLE VII

NUMBER OF QUESTIONNAIRE RESPONDENTS BY SCHOOL AND ACADEMIC RANK IN UNIVERSIDAD CENTRO OCCIDENTAL LISANDRO ALVARDAO

School	Academic Rank (Professors)			
	Full	Associate	Aggregate	Total
Agronomy	1	2	4	7
Sciences	3	1	-	4
Administration	1	1	1	3
Medicine	1	2	4	7
Total	6	6	9	21

The letter requesting permission to use the instrument is in Appendix B.

Sims used a three-part instrument in his study based upon ideas obtained from previous studies in the United States. The present study did not attempt to establish rank among Venezuelan graduate colleges. Therefore, the third part of the Sims' instrument was dropped and replaced by a new part constructed by the researcher with some recommendations and suggestions from Dr. Victor Morles, Coordinator of the Graduate College of the UCV. Furthermore, some modifications were made to Sims' instrument in order to adapt it to the special conditions of Venezuelan graduate education and the purpose of this research.

The first part of the questionnaire was essentially devoted to "academic and biographic data," the second part was dedicated to faculty perceptions of qualitative criteria of the graduate colleges. The respondents were asked to indicate and weight by use of percentages those items which they believed were the determinants of quality in the faculty and programs of their respective graduate colleges. The third part was designed to ask faculty members to rate minimal criteria in order to insure quality within graduate education. Forty-four items associated with the quality of graduate education were established. The items presented for the respondents' consideration were selected following a review of the literature (most of the sources originated in the United States). Faculty members were requested to

circle one of the numbers following each of the items. The numbers were stated as follows: 4 for very important, 3 for important, 2 for somewhat important, and 1 for not important.

The questionnaire was developed originally in English, but was translated into Spanish by the researcher. Care was taken to insure an accurate translation.

The Spanish version instrument was pretested with a group of 18 Oklahoma State University graduate students from Venezuela, most of whom had taught in Venezuelan universities. They made recommendations and suggestions for clarity of content and for adaptation to the Venezuelan educational system. Minor working changes in the construction of the final instrument were made in accordance with recommendations made by the group.

Collection of Data

In December, 1981, the researcher made a trip to Venezuela with a letter from the Department of Educational Administration and Higher Education of Oklahoma State University to the deans of the graduate colleges of UCV, UC, and UCLA. The purpose of the letter was to seek the approval and cooperation of the school administrators in the development of a doctoral dissertation dealing with the quality of graduate education in these three universities. The directors of the graduate colleges were unanimous in their support for the proposed study.

In January, a second visit to Venezuela was organized in order to gather the data from the universities named. In April, a third visit to Venezuela was necessary, with the aim of maximizing the response rate and thereby increasing the reliability of the study.

Based upon recommendations by the Central Coordinator of the Graduate College of UCV and the Director of the Graduate College of UC, a decision was made to gather information personally from each of the faculty members of the target population. The same criteria were used in UCLA. This was done for the following reasons:

1. Typically, there has been an extremely low response to this kind of questionnaire in Venezuela.
2. During this important period there were riots, sit-ins, and student unrest, making the collection of data somewhat difficult, especially at the UCLA.
3. There were time constraints in gathering the data.
4. There was relatively easy personal access to faculty members.

Permission for meeting each faculty member was possible by a letter sent from the Coordinator of the Graduate College of UCV and the Director of the Graduate College of UC (Appendices C and D) to faculty requesting them to cooperate with the research. The faculty members were receptive and supportive of the study.

The questionnaire and cover letter explaining the purpose of the study were distributed to 198 faculty members

during the first three weeks of February and during the third week of April, 1981 in the three universities. In some cases faculty members were not available, and the questionnaire was left for them to complete and return to the researcher.

Most of the respondents were contacted individually by this researcher. Thus the researcher clarified questions of respondents concerning some items in the questionnaire so that full responses could be obtained.

At the conclusion of the data collection, information from 126 respondents had been gathered. Of those, 116 were usable responses, with 10 unusable responses being attributed to the fact that most of them (8) were filled in by faculty members who were below the required rank. A summary of the responses by university and academic rank of respondents is shown in Table VIII.

Methods of Analysis

After the data were collected, they were coded and translated into data cards for use in the Statistical Package for Social Sciences (SPSS) computer program. The analysis of the data was structured according to the research questions and the hypotheses stated in Chapter I.

Research Questions

Responses to the research questions were aggregated for the entire sample, and means and standard deviations were

TABLE VIII

NUMBER OF QUESTIONNAIRE RESPONDENTS BY UNIVERSITY AND ACADEMIC RANK

University	Academic Rank (Professors)			
	Full	Associate	Aggregate	Total
Universidad Central de Venezuela[1]	17	26	30	73
Universidad de Carabobo	6	8	8	22
Universidad Centro Occidental Lisandro Alvarado	6	6	9	21
Total Responses	29	40	47	116

[1]The low response from Universidad Central de Venezuela was due to lack of responses to the questionnaires that were left.

calculated for each item response. In the first two questions the respondents were asked to indicate and weight by use of percentage those items which they believed were the determinants of quality in the faculty and programs of their respective graduate colleges.

The third question was designed to determine minimal criteria that faculty members considered in order to insure quality within graduate education in Venezuela. Six groups of factors (students, faculty, resources, finances, content, other indicators) with 44 items were submitted to the faculty members.

Use of the descriptive statistics of the mean and standard deviations for the entire sample were sufficient to answer the research question. The higher the mean, the greater the importance of the item to insure quality; the lower the mean, the lesser the importance of the item to insure quality in the graduate college.

Hypotheses

For each of the first five hypotheses, a non-parametric test (Kruskal-Wallis One-Way Analysis of Variance) was selected to test the differences between the means of the groups because of the heterogeneity of the variances. The Kruskal-Wallis test "inspects the sums of the ranks for each group to determine whether the differences among the groups are obvious."[2]

Siegal comments that

> A nonparametric statistical test is a test whose model does not specify conditions about the parameters of the population from which the sample was drawn.[3]

The Kruskal-Wallis One-Way Analysis of Variance works in a relatively simple way. If there is no discrepancy, the various groups should have essentially the same average rank. (In effect, the null hypothesis would be that the groups were drawn from populations whose distributions were alike.) If the null hypothesis is false, the sums of ranks in the various groups should be quite discrepant from one another.[4]

Hypothesis 6 was tested utilizing a different procedure. Difference of perceptions of criteria of quality between groups of faculty graduating from national universities and those graduating from foreign universities were tested using the Mann-Whitney Test. This non-parametric test was selected because of the heterogeneity of the variances. The Mann-Whitney Test is used in studies

> . . . in which the experimenter had obtained two samples from possibly different populations and wishes to use a statistical test to see if the null hypothesis that the two populations are idential can be rejected.[5]

All of these data were measured using a significance level of .05.

Summary

Chapter III has provided information concerning the implementation of the methodology utilized in the study, the description of the population, the explanation and specification of the instrument and its application, the collection of the data, the testing of the research questions and hypotheses, and finally, the statistical methods used in the analysis of the data.

ENDNOTES

[1]Paul D. Sims, "Assessment of the Quality of Graduate Departments of Educational Administrtion" (unpub. Ph.D. dissertation, University of Wisconsin, 1970).

[2]Marigold Linton and Philip S. Gallo, Jr., The Practical Statistician (Belmont, California, 1975), p. 275.

[3]S. Siegel, Nonparametric Statistics for the Behavioral Sciences (New York, 1956), p. 31.

[4]Linton and Gallo, p. 98.

[5]W. J. Conover, Practical Nonparametric Statistics (2nd ed., New York, 1980), p. 215.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this study was to investigate the perceptions of faculty regarding criteria to be used in determining the quality of graduate education in Venezuela. This chapter contains a review of the data collected to help determine those perceptions.

The presentation and analysis of data were organized around three research questions and six hypotheses.

Question I: What criteria are considered important by faculty members in the determination of quality of graduate faculty in Venezuela?

Question I was represented by Part II, Elements of Quality, Section A in the questionnaire and included seven items: "Academic Level" (Bachelor's, Master's, Doctorate), "Research Activities," "Teaching Effectiveness," "Publications," "Professional Service Contributions" (Consulting memberships in academic societies, etc.), "Special Academic Achievement and Recognition," and "Additional Criteria."

The respondents indicated their interest by weighting the importance each item had in the overall quality of the faculty. Weighting each item allowed the researcher to make

judgments on the relative importance of each item. The responses were reported in the form of mean percentages accorded each criterion named by respondent faculty members of the three universities (UCV, UC, and UCLA).

The mean percentages are shown in Table IX. The criteria are accorded weights for judging faculty quality by university members.

An examination of Table IX revealed differences among the criteria of quality. Thus, "Academic Level," which received an overall weight of 27.29 percent was considered by respondents from the three universities to be the most important criterion in assessing the quality of the faculty in graduate education in the three universities. In addition, "Research Activities" and "Teaching Effectiveness", which received 24.38 and 21.38 percent, respectively, were also considered important criteria in the determination of quality. The rest of the criteria had the following mean weights: "Publications," 13.44; "Professional Service Contributions," 6.59; "Academic Achievement and Recognition," 4.97. Finally, an open-ended section of the instrument, "Additional Criteria," received 1.95 percent from the respondents. Among the suggestions for the assessment of faculty quality were: "training of the faculty," and "human understanding of people and society."

An analysis of the responses from each university was undertaken in order to determine the specific situation in relation to means for each criterion of faculty quality. Table X shows a summary of responses by ranks (full

TABLE IX

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING FACULTY QUALITY BY UNIVERSITY FACULTY MEMBERS

Criteria of Faculty Quality	UCV[1]	UC[2]	UCLA[3]	Total
	N=73	N=22	N=21	N=116
Academic Level	25.01	34.56	27.62	27.29
Research Activities	24.36	20.68	28.33	24.38
Teaching Effectiveness	22.88	21.36	16.19	21.38
Publications	13.18	12.68	15.11	13.44
Professional Services Contributions	7.32	5.41	5.29	6.59
Academic Achievement Recognition	5.48	4.36	3.85	4.97
Additional Criteria	1.77	.95	3.61	1.95
Total	100.00	100.00	100.00	100.00

[1]Universidad Central de Venezuela
[2]Universidad de Carabobo
[3]Universidad Centro Occidental Lisandro Alvarado

TABLE X

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING FACULTY QUALITY BY FACULTY AT EACH RANK IN UNIVERSIDAD CENTRAL DE VENEZUELA

Criteria of Faculty Quality	Full Professor	Associate Professor	Aggregate Professor	Total
	N=17	N=26	N=30	N=73
Academic Level	24.41	24.65	25.67	25.01
Research Activities	23.53	26.65	22.83	24.36
Teaching Effectiveness	26.76	20.38	22.83	22.88
Publications	12.66	14.38	12.51	13.18
Professional Service Contibutions	5.76	6.84	8.60	7.32
Academic Achievement Recognition	4.82	5.69	5.66	5.48
Additional Criteria	2.06	1.41	1.90	1.77
Total	100.00	100.00	100.00	100.00

professor, associate professor, and aggregate professor) of the faculty members of the UCV.

An analysis of that table showed close mean weights on the following criteria: "Academic Level," "Research Activities," and "Teaching Effectiveness" (25.01, 24.36, and 22.88, respectively). It is important to observe some minor variations among the different ranks of each criterion in the university.

Table XI included the responses from faculty members of UC. A study of that table indicated that "Academic Level" was considered by faculty members as the most important criterion in the appraisal of the faculty quality in that university. The overall weight was 34.56 percent. Since the different ranks of respondents on this criterion were in agreement, no important variations could be identified. Moreover, "Research Activities" and "Teaching Effectiveness" received 20.68 and 21.36 percent, respectively. The rest of the criteria had the following mean weights: "Publications," 12.68; "Professional Service Contributions," 5.41; "Academic Achievement Recognition," 4.36; and "Additional Criteria," 0.95 percent.

The data from UCLA were reported in Table XII, and exhibited the responses from faculty members of that university. The analysis of this table indicated significant increases of the criterion "Research Activities," 28.33 percent, in relation to the mean percentage of the three universities. It was considered by respondents the most

TABLE XI

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING FACULTY QUALITY BY FACULTY AT EACH RANK IN UNIVERSIDAD DE CARABOBO

Criteria of Faculty Quality	Full Professor	Associate Professor	Aggregate Professor	Total
	N=6	N=8	N=8	N=22
Academic Level	36.67	32.88	34.63	34.56
Research Activities	20.00	19.13	22.75	20.68
Teaching Effectiveness	24.17	21.00	19.63	21.36
Publications	12.50	13.24	12.23	12.68
Professional Service Contributions	3.33	7.13	5.25	5.41
Academic Achievement Recognition	3.33	4.62	4.88	4.36
Additional Criteria	00.00	2.00	.63	.95
Total	100.00	100.00	100.00	100.00

TABLE XII

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING FACULTY QUALITY BY FACULTY AT EACH RANK IN UNIVERSIDAD CENTRO OCCIDENTAL LISANDRO ALVARADO

Criteria of Faculty Quality	Full Professor	Associate Professor	Aggreate Professor	Total
	N=6	N=6	N=9	N=21
Academic Level	35.00	21.67	26.67	27.62
Research Activities	25.83	27.50	30.56	28.33
Teaching Effectiveness	16.67	17.50	15.00	16.19
Publications	13.50	15.83	15.00	15.11
Professional Service Contributions	5.00	5.00	6.33	5.29
Academic Achievement Recognition	2.33	4.17	4.67	3.85
Additional Criteria	1.67	8.33	1.77	3.61
Total	100.00	100.00	100.00	100.00

important criterion in judging faculty quality. The second most important criterion considered by respondents was "Academic Level," with a weight of 27.62 percent.

It is important to note that from both criteria there were disagreements among respondents' ranks. For example, in the criterion of "Research Activities," respondents from the aggregate professor rank had a weight of 30.56, from associate professor rank 27.50, and from the full professor rank a weight of 25.83. This means that the lower the academic position, the higher the weight of "Research Activities" was assigned by faculty members to the overall assessment of faculty quality.

The criterion of "Academic Level" received responses of 35.00 percent from full professors, 21.67 percent from associate professors, and 26.67 percent from aggregate professors, thus reflecting disagreement among the ranks.

On the other hand, "Teaching Effectiveness" and "Publications" were very close in the weighting of faculty quality, with scores of 16.19 and 15.11 percent, respectively. The other criteria were weighted thus: "Professional Services Contributions," 5.29 percent; "Academic Achievement and Recognition," 3.85 percent; and "Additional Criteria," 3.61. The weight of 3.61 percent was the highest in relation to this criterion among the universities. Suggestions from faculty members included "Involvement of the Faculty" and "Wide Cultural Background of the Faculty."

Question II: What criteria are considered important by faculty members in the assessment of the quality of graduate programs in Venezuela?

Question two was represented by Part II, Elements of Quality, Section B in the questionnaire and included the following items: "Eminency of the Faculty," "Quality of Students and Graduates," "Availability of Supportive Services" (libraries, research facilities, computers, etc.), "Enough Money from Private and Public Sectors," "Quality and Quantity of Research," "Student-Faculty Ratio," and "Additional Criteria."

The respondents to this question were asked to weight the importance that each item had in the overall quality of the program. The responses were reported in the form of mean percentages accorded each criterion named by respondent faculty members of the three universities (UCV, UC, and UCLA). Table XIII shows the mean percentage weights accorded criteria for judging a program's quality.

An evaluation of Table XIII revealed differences among the criteria of a program's quality. "Eminency of Faculty," which received an overall weight of 27.45 percent, was considered by respondents from the three universities to be the most important criterion in the determination of a program's quality in graduate education in the three universities named.

"Quality of Students and Graduates," "Availability of Supportive Services," and "Quality and Quantity of Research"

TABLE XIII

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING PROGRAM QUALITY BY UNIVERSITY FACULTY MEMBERS

Criteria of Program Quality	UCV[1]	UC[2]	UCLA[3]	Total
	N=73	N=22	N=21	N=116
Eminency of Faculty	26.86	30.72	26.05	27.45
Quality of Students and Graduates	20.90	22.23	17.95	20.62
Availability of Supportive Services	16.64	16.77	16.47	16.64
Enough Money From Private and Public Sectors	10.07	8.91	10.48	9.92
Quality and Quantity of Research	15.98	12.96	19.81	16.01
Student-Faculty Ratio	7.70	6.59	6.54	7.36
Additional Criteria	1.85	1.82	2.70	2.00
Total	100.00	100.00	100.00	100.00

[1]Universidad Central de Venezuela
[2]Universidad de Carabobo
[3]Universidad Centro Occidental Lisandro Alvarado

also were considered important criteria in the determination of a program's quality, receiving 20.62, 16.64, and 16.01 percent, respectively. The rest of the criteria had the following means: "Enough Money from Private and Public Sector," 9.92 percent; and "Student-Faculty Ratio," 7.36 percent. Finally, "Additional Criteria," an open-ended section of the instrument, received a 2.00 percent from the respondents. Among other suggestions for assessing a program's quality were "Faculty Involvement with the Program" and "Objectives of the Program Related to the Production Sectors of the Community."

An analysis of each university was carried out in order to determine the mean weight responses for each criterion of program quality. Table XIV shows a summary of responses by ranks (full professor, associate professor, and aggregate professor) of the faculty members of the UCV.

An examination of that table revealed that "Eminency of Faculty" was considered by faculty members of UCV to be the most important criterion in the assessment of program quality, with a weight of 26.86 percent. "Quality of Students and Graduates" and "Quality and Quantity of Research" received 20.90 and 15.98 percent, respectively. It is important to point out the disagreement among the different ranks in relation to the criterion "Availability of Supportive Services," which is associated with the library. Full professors, associate professors, and aggregate professors assigned weights of 13.65, 15.50, and 19.33 percent,

TABLE XIV

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING PROGRAM QUALITY BY FACULTY AT EACH RANK IN UNIVERSIDAD CENTRAL DE VENEZUELA

Criteria of Program Quality	Full Professor	Associate Professor	Aggregate Professor	Total
	N=17	N=26	N=30	N=73
Eminency of Faculty	28.59	28.08	24.83	26.86
Quality of Students and Graduates	21.53	18.85	22.33	20.90
Availability of Supportive Services	13.65	15.50	19.33	16.64
Enough Money From Private and Public Sectors	9.24	12.08	8.80	10.07
Quality and Quantity of Research	15.41	17.50	14.98	15.98
Student-Faculty Ratio	8.34	7.04	7.90	7.70
Additional Criteria	3.24	.95	1.83	1.85
Total	100.00	100.00	100.00	100.00

respectively. Thus, it appears that the lower the rank in academic position, the higher the weight assigned to this criterion by faculty members in the assessment of program quality.

Finally, "Enough Money From Private and Public Sectors," "Student-Faculty Ratio," and "Additional Criteria" received 10.07, 7.70, and 1.85 percent, respectively.

Table XV reported mean percentage weights accorded criteria for assessment of program quality by faculty members of UC. A study of this table showed that "Eminency of Faculty" was considered the most important criterion in the determination of program quality in UC, with an overall weight of 30.72 percent. There was agreement among the different ranks regarding the item. No important variations were found.

"Quality of Students and Graduates" received a weight of 22.23 percent. The different ranks of respondents of this criterion were in disagreement in the assessment of program quality. For example, full professors accorded the item a weight of 21.67 percent, while associate professors and aggregate professors assigned 25.50 and 19.38 percent, respectively. The criterion of "Availability of Supportive Services" had the weight of 16.77 percent, reflecting slight differences among the ranks. Smaller variations among ranks were found in "Enough Money From Private and Public Sectors," 8.91 percent; "Quality and Quantity of Research," 12.96

TABLE XV

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING PROGRAM QUALITY BY FACULTY AT EACH RANK IN UNIVERSIDAD DE CARABOBO

Criteria of Program Quality	Full Professor	Associate Professor	Aggregate Professor	Total
	N=6	N=8	N=8	N=22
Eminency of Faculty	31.67	30.13	30.63	30.72
Quality of Students and Graduates	21.67	25.50	19.38	22.23
Availability of Supportive Services	18.83	17.63	14.38	16.77
Enough Money From Private and Public Sectors	8.83	8.75	9.13	8.91
Quality and Quantity of Research	13.33	11.86	13.73	12.96
Student-Faculty Ratio	5.67	5.13	8.75	6.59
Additional Criteria	00.00	1.00	4.00	1.82
Total	100.00	100.00	100.00	100.00

percent; "Student-Faculty Ratio," 6.59 percent; and "Additional Criteria," 1.82 percent.

Table XVI represented data in mean percentage weight on the criteria accorded program quality by rank at UCLA. An examination of that table showed that "Eminency of Faculty" was considered by respondents from the different ranks to be the most important criterion in the assessment of program quality. The second most important criterion in the determination of program quality was "Quality and Quantity of Research," with a weight of 19.81 percent. There were differences among respondents by academic rank. For example, full professors assigned the criterion a weight of 14.50 percent, associate professors 15.67 percent, and aggregate professors 25.00 percent. Apparently the lower the academic rank, the higher the weight that faculty members assigned to this criterion in the determination of program quality.

The third important criterion in this institution was "Quality of Students and Graduates," which received a weight of 17.95 percent. This criterion also was characterized by a lack of agreement among the different academic ranks. Full professors, associate professors, and aggregate professors assigned weights of 22.00, 20.00, and 13.89 percent, respectively. According to these data one may assume that the higher the academic rank, the higher the weight that faculty members assigned to this criterion in the judgment of program quality in this university.

TABLE XVI

MEAN PERCENTAGE WEIGHTS ACCORDED CRITERIA FOR JUDGING PROGRAM QUALITY BY FACULTY AT EACH RANK IN UNIVERSIDAD CENTRO OCCIDENTAL LISANDRO ALVARADO

Criteria of Program Quality	Full Professor	Associate Professor	Aggregate Professor	Total
	N=6	N=6	N=9	N=21
Eminency of Faculty	27.00	25.83	25.56	26.05
Quality of Students and Graduates	22.00	20.00	13.89	17.95
Availability of Supportive Services	17.00	14.83	17.22	16.47
Enough Money from Private and Public Sectors	11.67	10.00	10.00	10.48
Quality and Quantity of Research	14.50	15.67	25.00	19.81
Student-Faculty Ratio	5.00	7.00	8.33	6.54
Additional Criteria	2.83	6.67	00.00	2.70
Total	100.00	100.00	100.00	100.00

"Student-Faculty Ratio" received a weight of 6.54 percent. However, it is important to assess the disagreement of the different academic ranks on this criterion: full professors 5.00 percent, associate professors 7.00 percent, and aggregate professors 8.33 percent, which suggests that the higher the academic rank, the lesser the importance the faculty gave this criterion. Other criteria received the following mean responses: "Availability of Supportive Services," 16.47 percent; "Enough Money from Private and Public Sectors," 10.48 percent; and "Additional Criteria," 2.70 percent.

Question III: What minimal criteria are considered by faculty members as essential to insure quality within graduate education in Venezuela?

Question III was represented by Part III, Indicators of Quality. This section contained 44 items (see questionnaire in Appendix A) distributed in 6 main groups of criteria. These groups are: (1) Students, (2) Faculty, (3) Resources, (4) Finances, (5) Content, and (6) Other Indicators.

The respondents to this question were concerned with indicating the minimal criteria to insure an adequate level of quality in graduate education. Faculty members were requested to circle one of the numbers following each of the items. The numbers were stated as follows: 4 for very important, 3 for important, 2 for somewhat important, and 1 for not important.

The responses were reported in the form of means accorded each criterion and summarized for each university and the total group. The results are presented in Table XVII.

After a review of Table XVII, it was decided that indicators with a mean of close to 3.5 or more were considered by faculty members as the most important in order to insure a minimal quality in graduate college in Venezuela. Table XVIII presented name, mean, and rank for every indicator.

Analysis of the Hypotheses

Hypothesis I: There will be no significant difference in the criteria utilized in determining quality within graduate education in Venezuela among the faculty of Universidad Central de Venezuela, Universidad de Carabobo, and Universidad Centro Occidental Lisandro Alvarado.

A Kruskal-Wallis One-Way Analysis of Variance was computed to determine if significant differences existed among the three universities with regard to 14 criteria (7 criteria related to faculty quality and 7 related to program quality), utilized in determining quality within graduate education in Venezuela.

An examination of Table XIX revealed that there were significant differences in 3 of the 7 criteria related to faculty quality and significant differences in 2 of the 7 criteria related to program quality at the .05 level of confidence. On the criterion of "Academic Level," there were

TABLE XVII

MEANS OF FACULTY RESPONDENTS' PERCEPTIONS OF IMPORTANCE OF CRITERIA IN INSURING QUALITY IN GRADUATE EDUCATION IN VENEZUELA

Indicators of Quality	Universities' Mean			Total Mean
	UCV[1]	UC[2]	UCLA[3]	
	N=73	N=22	N=21	
Students				
Entrance Examination	2.81	3.14	2.67	2.84
Undergraduate Grades	2.88	2.96	2.71	2.86
Commitment; Motivation	3.63	3.68	3.48	3.61
Academic Abilities	3.06	3.14	3.33	3.12
Professional Accomplishment of Graduates	2.63	2.46	2.76	2.62
Involvement in the Program	3.52	3.59	3.81	3.58
Degree Requirements	2.88	2.77	3.00	2.88
Internships, Assistantships, and Other Opportunities for Relevant Student Experiences	2.73	2.77	3.05	2.80
Faculty				
Degree	3.60	3.72	3.71	3.65
Research	3.63	3.27	3.86	3.60
Publications	3.22	3.09	3.29	3.21
Academic Experience	3.26	3.36	3.38	3.30
Academic Training	3.29	3.46	3.43	3.35
Teaching Effectiveness	3.32	3.46	3.24	3.33
High Morale	3.12	3.54	3.43	3.26

TABLE XVII (Continued)

Indicators of Quality	Universities' Mean UCV[1]	UC[2]	UCLA[3]	Total Mean
Welfare	2.93	2.73	2.95	2.90
Involvement in the Program	3.45	3.14	3.86	3.50
Resources				
Library Volumes	3.34	3.45	3.67	3.42
Library Quality	3.73	3.68	3.81	3.73
Quality and Quantity of Specialized Journals	3.77	3.77	3.81	3.78
Laboratories	3.47	3.46	3.76	3.51
Computers	3.08	3.09	3.00	3.07
Physical Facilities	3.15	3.18	3.14	3.16
Leaderships and Decision-Making	3.14	3.36	3.00	3.16
Staff and Workers Who Support Research and Teaching Activities	2.74	3.05	2.86	2.82
Finances				
Student-Faculty Ratio	3.10	3.32	3.14	3.15
Amount of Funding From the Government	3.19	3.09	3.43	3.22
Amount of Funding From the Private Sector	2.88	2.91	2.91	2.89
Financial Aid for Students	3.30	3.00	3.57	3.29
Content				
Curriculum Content	3.57	3.72	3.81	3.65
Instructional Methods	3.38	3.46	3.29	3.38

TABLE XVII (Continued)

Indicators of Quality	Universities' Mean UCV[1]	UC[2]	UCLA[3]	Total Mean
Enrichment With Visting Lectures, Colloquia, etc.	3.53	3.41	3.48	3.50
Clarity and Feasibility of the Objectives	3.45	3.36	3.71	3.48
Program Coherence	3.45	3.50	3.62	3.49
Justification of the Program	3.18	3.23	3.33	3.22
Program Evaluation	3.36	3.27	3.57	3.38
Regimen of the Study (Semester, Trimester, Special Periods, etc.)	2.40	2.68	2.86	2.53
Other Indicators				
Types of Research	3.08	3.14	3.38	3.15
Relationship Between Research and Productive Sector	3.08	3.32	3.38	3.18
History of the Graduate Program (Years of Experience in the Program)	2.93	2.64	2.76	2.60
Geographic Location	2.63	2.32	2.76	2.60
Quality of the Institution, Department or School	3.40	3.55	3.33	3.41
Graduate-Undergraduate Relationship	3.26	3.41	3.47	3.33
Relationship to National and International Institutions	3.36	3.23	3.52	3.36

[1]Universidad Central de Venezuela
[2]Universidad de Carabobo
[3]Universidad Centro Occidental Lisandro Alvarado

TABLE XVIII

MEANS AND RANKS OF THE HIGHEST INDICATORS OF INSURING MINIMAL QUALITY IN GRADUATE EDUCATION IN VENEZUELA

Indicators of Quality	Mean	Rank
Students		
Commitment, Motivation	3.61	5
Involvement in the Program	3.58	7
Faculty		
Degree	3.65	3
Research	3.60	6
Involvement in the Program	3.50	9
Resources		
Library Quality	3.73	2
Quality and Quantity of Specialized Journals	3.78	1
Laboratories	3.51	8
Content		
Curriculum Content	3.65	3
Enrichment With Visiting Lectures, Colloquia, etc.	3.50	9
Clarity and Feasibility of the Objectives	3.48	12
Program Coherence	3.49	11

TABLE XIX

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TO DETERMINE SIGNIFICANT DIFFERENCES AMONG FACULTY BY UNIVERSITY IN RELATION TO PERCEPTIONS OF QUALITY OF GRADUATE EDUCATION IN VENEZUELA

Criteria of Quality	Universities' Score Rank UCV[1]	UC[2]	UCLA[3]	H	P
	N=73	N=22	N=21		
Faculty Quality					
Academic Level	52.30	75.98	61.74	8.890	0.012*
Research Activities	57.49	45.64	75.48	9.018	0.011*
Teaching Effectiveness	61.62	64.57	41.29	7.164	0.028*
Publications	58.23	53.73	64.43	1.179	0.555
Professional Services Contributions	63.30	51.77	48.86	4.562	0.102
Academic Achievement and Recognition	62.02	54.77	50.17	2.615	0.270
Additional Criteria	57.46	54.68	66.12	3.606	0.165
Program Quality					
Eminency of Faculty	55.75	71.64	54.29	4.389	0.111
Quality of Students and Graduates	60.88	65.45	42.95	6.306	0.043*
Availability of Supportive Services	58.79	58.93	57.05	0.053	0.974
Enough Money From Private and Public Sectors	59.06	54.89	60.33	0.363	0.834

TABLE XIX (Continued)

Criteria of Quality	Universities' Score Rank			H	P
	UCV[1]	UC[2]	UCLA[3]		
Quality and Quantity of Research	57.88	46.86	72.86	6.719	0.035*
Student-Faculty Ratio	60.25	54.20	56.93	0.643	0.725
Additional Criteria	57.90	60.07	58.95	0.199	0.905

[1]Universidad Central de Venezuela
[2]Universidad de Carabobo
[3]Universidad Centro Occidental Lisandro Alvarado
*Significant at the .05 level.

significant differences between UCV and UC. There were significant differences between UC and UCLA on "Research Activities," "Teaching Effectiveness," "Quality of Students and Graduates," and "Quality and Quantity of Research."

Due to the fact that the Kruskal-Wallis Test revealed a significant difference on 5 of the criteria of the 14 tested, the researcher rejected the null hypothesis in the 5 criteria named and failed to reject the null hypothesis in the rest of the criteria.

Hypothesis II: There will be no significant differences in the criteria utilized in determining quality within graduate education in Venezuela among the faculty by rank of faculty appointment.

A Kruskal-Wallis One-Way Analysis of Variance was computed to determine if significant differences existed among the faculty members by rank of faculty appointment with regard to 14 criteria (7 criteria related to faculty quality and 7 related to program quality) utilized in determining quality within graduate education in Venezuela.

The responses from the faculty members to question one (which asked them to indicate present academic rank) revealed the following distribution by rank: full professor, 29 faculty members; associate professor, 40 faculty members, and aggregate professor, 47 faculty members.

An examination of Table XX revealed that there were significant differences in 2 of the 7 criteria related to faculty quality. There were no significant differences on the

TABLE XX

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TO DETERMINE SIGNIFICANT DIFFERENCES AMONG FACULTY BY RANK OF FACULTY APPOINTMENT IN RELATION TO PERCEPTIONS OF QUALITY OF GRADUATE EDUCATION IN VENEZUELA

Criteria of Quality	Mean Score Full Professor	Associate Professor	Aggregate Professor	H	P
	N=29	N=40	N=47		
Faculty Quality					
Academic Level	63.84	54.54	58.57	1.329	0.515
Research Activities	53.10	60.24	60.35	1.040	0.595
Teaching Effectiveness	69.76	48.88	59.74	6.895	0.032*
Publications	56.31	61.19	57.56	0.444	0.801
Professional Services Contributions	45.95	60.96	64.15	6.217	0.045*
Academic Achievement and Recognition	51.07	60.36	61.50	2.120	0.346
Additional Criteria	55.69	62.35	56.96	2.080	0.353
Program Quality					
Eminency of Faculty	65.14	60.54	52.67	2.828	0.243
Quality of Students and Graduates	59.21	59.11	57.54	0.070	0.966
Availability of Supportive Services	51.95	54.89	65.62	4.043	0.132
Enough Money From Private and Public Sectors	57.60	64.55	53.90	2.367	0.306
Quality and Quantity of Research	54.57	57.72	61.59	0.842	0.656
Student-Faculty Ratio	57.17	54.61	62.63	1.376	0.503
Additional Criteria	58.24	58.55	58.62	0.006	0.997

*Significant at the .05 level.

criterion related to program quality at the .05 level of confidence. The significant criteria related to faculty quality included "Teaching Effectiveness" and "Professional Service Contributions." There were significant differences between full and associate professors on the first criterion, and between full professors and aggregate professors on the second.

Because the Kruskal-Wallis Test revealed a significant difference on 2 of the 14 criteria tested, the researcher rejected the null hypothesis in the 2 criteria named and accepted the null hypothesis in the rest of the criteria.

Hypothesis III: There will be no significant difference among the publication rate of faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

A Kruskal-Wallis One-Way Analysis of Variance was computed to determine if significant differences existed among the respondents on the number of publications by faculty member with regard to the criteria utilized in determining quality within graduate education in Venezuela.

Three groups were identified among the respondents to question four which asked faculty members to indicate the number of publications completed in the last five years. The groups were: Group I, 48 faculty members who completed between 0 and 5 publications in the last 5 years; Group II, 37 faculty members who completed between 6 and 10 publications in the same period; and Group III, 31 faculty members

who completed 11 or more publications in the same time period.

Comparisons were made among the three groups and no significant differences were identified among them with regard to the criteria utilized in determining quality within graduate education in Venezuela (see Table XXI). Therefore, the hypothesis that there will be no significant differences between the publication rate of faculty members and their perceptions of criteria of quality within graduate education in Venezuela could not be rejected.

Hypothesis IV: There will be no significant differences among the number of national meetings of professional societies attended by faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

A Kruskal-Wallis One-Way Analysis of Variance was computed to determine if significant differences existed among the number of national meetings of professional societies attended by faculty members with regard to the criteria utilized in determining quality within graduate education in Venezuela.

Three groups were identified among the respondents to question five which asked faculty members to indicate the number of meetings of professional societies attended in the last five years. The groups were: Group I, 46 faculty members who attended between 0 and 3 meetings in the last 5 years; Group II, 43 faculty members who attended between 4

TABLE XXI

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TO DETERMINE SIGNIFICANT DIFFERENCES AMONG FACULTY PUBLICATIONS RATE IN RELATION TO PERCEPTIONS OF QUALITY OF GRADUATE EDUCATION IN VENEZUELA

Criteria of Quality	Mean Rank by Group Publications 0-5	6-10	11 or more	H	P
	N=48	N=37	N=31		
Faculty Quality					
Academic Level	54.52	61.41	61.19	1.183	0.553
Research Activities	64.23	50.81	58.81	3.477	0.176
Teaching Effectiveness	56.65	61.84	57.39	0.569	0.752
Publications	64.59	52.00	56.82	3.252	0.197
Professional Services Contributions	59.40	63.89	50.68	2.966	0.227
Academic Achievement and Recognition	55.58	64.23	56.18	1.754	0.416
Additional Criteria	58.49	63.05	53.08	3.738	0.154
Program Quality					
Eminency of Faculty	53.13	60.26	64.73	2.513	0.285
Quality of Students and Graduates	62.89	52.05	59.40	2.392	0.302
Availability of Supportive Services	56.58	63.59	55.39	1.401	0.496
Enough Money From Private and Public Sectors	59.15	58.55	57.44	0.053	0.974
Quality and Quantity of Research	59.48	58.01	57.56	0.075	0.963
Student-Faculty Ratio	59.23	56.07	60.27	0.323	0.851
Additional Criteria	58.58	62.49	53.61	3.107	0.212

and 6 meetings in the same period; and Group III, 27 faculty members who attended 7 or more meetings in the same period.

Comparisons were made among the three groups with regard to the criteria utilized in determining quality within graduate education in Venezuela, and no significant differences were identified among the groups (see Table XXII). Therefore, the null hypothesis was accepted by the researcher.

Hypothesis V: There will be no significant differences among the level of degree of faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

A Kruskal-Wallis One-Way Analysis of Variance was computed to determine if significant differences existed among the level of academic degree of faculty members with regard to the criteria utilized in determining quality within graduate education in Venezuela.

Three different levels of academic degrees were determined from the 116 responses to question two, which asked faculty members to indicate the highest degree that they had earned. The three different levels of academic degree with their respective number of answers were: (1) Bachelor's, 7 faculty members; (2) Master's, 55 faculty members; (3) Doctorate, 54 faculty members.

Comparisons were made among the levels of academic degree with regard to the criteria utilized in determining quality within graduate education in Venezuela. An analysis

TABLE XXII

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TO DETERMINE SIGNIFICANT DIFFERENCES AMONG FACULTY ATTENDING NATIONAL MEETINGS OF PROFESSIONAL SOCIETIES IN RELATION TO PERCEPTIONS OF QUALITY OF GRADUATE EDUCATION IN VENEZUELA

Criteria of Quality	Mean Rank by Groups Number of Meetings 0-3	4-6	7 or more	H	P
	N=46	N=43	N=27		
Faculty Quality					
Academic Level	61.67	57.30	55.00	0.781	0.677
Research Activities	60.90	56.28	57.94	0.449	0.677
Teaching Effectiveness	60.49	58.84	54.57	0.558	0.757
Publications	51.83	61.59	64.94	3.393	0.183
Professional Services Contributions	58.04	57.86	60.30	0.113	0.945
Academic Achievement and Recognition	53.23	57.88	68.46	3.895	0.143
Additional Criteria	57.00	60.47	57.93	0.620	0.733
Program Quality					
Eminency of Faculty	54.82	60.78	61.15	0.965	0.617
Quality of Students and Graduates	57.00	57.45	62.72	0.608	0.738
Availability of Supportive Services	63.00	54.47	57.26	1.631	0.442
Enough Money From Private and Public Sectors	62.34	55.66	56.48	1.082	0.582

TABLE XXII (Continued)

Criteria of Quality	Mean Rank by Groups Number of Meetings 0-3	4-6	7 or more	H	P
Quantity and Quality of Research	53.63	63.16	59.37	1.874	0.392
Student-Faculty Ratio	63.83	51.62	60.39	3.248	0.197
Additional Criteria	58.64	59.62	56.63	0.328	0.849

of Table XXIII revealed that there was a significant difference in the criterion "Availability of Supportive Services" between the levels of Bachelor's and Master's.

Because the Kruskal-Wallis Test revealed a significant difference on one criterion of the 14 tested concerning the perceptions of quality in graduate education, the researcher rejected the null hypothesis for that criterion and failed to reject the null hypothesis for the rest of the criteria.

Hypothesis VI: There will be no significant difference in perceptions of criteria of quality within graduate education in Venezuela between groups of faculty graduating from national universities and those graduating from foreign universities.

A Mann-Whitney U Test was computed to determine if significant differences existed between faculty graduating from national universities and faculty graduating from foreign universities with regard to the criteria utilized in determining quality within graduate education in Venezuela.

Two groups were identified with 116 responses to the second part of question two, which asked faculty members to indicate the place and the awarding institution from which they received their degree. The two groups were: national universities, with 42 faculty members responding, and foreign universities with 74 faculty members responding.

Comparisons were made between the two groups with regard to the criteria utilized in determining quality within graduate education in Venezuela. Significant differences were

TABLE XXIII

KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TO DETERMINE SIGNIFICANT DIFFERENCES AMONG FACULTY BY LEVEL OF DEGREE IN RELATION TO PERCEPTIONS OF QUALITY OF GRADUATE EDUCATION IN VENEZUELA

Criteria of Quality	Mean Ranks			H	P
	Bachelor	Master	Doctorate		
	N=7	N=55	N=54		
Faculty Quality					
Academic Level	46.36	62.45	56.05	2.023	0.364
Research Activities	42.86	61.11	57.87	1.947	0.378
Teaching Effectiveness	57.79	57.06	60.06	0.229	0.892
Publications	65.57	58.23	57.86	0.356	0.837
Professional Services Contributions	64.00	60.21	56.05	0.687	0.709
Academic Achievement and Recognition	42.00	60.66	58.44	2.120	0.346
Additional Criteria	67.57	55.72	60.16	2.562	0.278
Program Quality					
Eminency of Faculty	71.00	55.71	59.72	1.491	0.475
Quality of Students and Graduates	67.93	53.30	62.57	2.893	0.235
Availability of Supportive Services	44.50	67.37	51.28	8.304	0.016*
Enough Money From Private and Public Sectors	52.86	56.01	61.77	1.089	0.580
Quality and Quantity of Research	48.71	62.65	55.54	1.918	0.383
Student-Faculty Ratio	63.36	60.72	55.61	0.837	0.658
Additional Criteria	57.29	54.21	63.03	4.981	0.083

*Significant at the .05 level.

found in relation to the criteria "Research Activities" and "Teaching Effectiveness" (see Table XXIV). No significant differences in the rest of the criteria were found. Therefore, the null hypothesis was rejected in regard to the criteria "Research Activities" and "Teaching Effectiveness," but it could not be rejected in regard to the rest of the criteria of quality.

Summary

This chapter presented the results of the study dealing with perceptions of faculty quality in graduate education in Venezuela. The chapter contained a presentation an examination of the data in accordance with the research questions and the hypotheses stated.

TABLE XXIV

MANN-WHITNEY U TEST TO DETERMINE SIGNIFICANT DIFFERENCES BETWEEN FACULTY GROUPS GRADUATING FROM NATIONAL AND FOREIGN UNIVERSITIES IN RELATION TO PERCEPTIONS OF QUALITY OF GRADUATE EDUCATION IN VENEZUELA

Criteria of Quality	Faculty Members Mean		U	P
	National	Foreign		
	N=42	N=74		
Faculty Quality				
Academic Level	57.55	59.04	1514.0	0.8154
Research Activities	46.83	65.12	1064.0	0.0040*
Teaching Effectiveness	69.26	52.39	1102.0	0.0079*
Publications	55.01	60.48	1407.5	0.3837
Professional Services Contributions	53.35	61.43	1337.5	0.1893
Academic Achievement and Recognition	56.48	59.65	1469.5	0.6072
Additional Criteria	59.15	58.13	1526.5	0.8020
Program Quality				
Eminency of Faculty	62.54	56.21	1384.5	0.3180
Quality of Students and Graduates	64.04	55.36	1321.5	0.1635
Availibility of Supportive Services	52.19	62.08	1289.0	0.1099
Enough Money From Private and Public Sectors	55.07	60.45	1410.0	0.3901
Quantity and Quality of Research	61.02	57.07	1448.0	0.5354
Student-Faculty Ratio	60.67	57.27	1463.0	0.5890
Additional Criteria	53.88	61.12	1360.0	0.0699

*Significant at the .05 level.

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The problem with which this research was concerned was to investigate the perceptions of faculty regarding the criteria to be used in determining the quality of graduate education in Venezuela. Specifically, the following questions were addressed:

1. What criteria are considered important by faculty members in the determination of quality of graduate faculty in Venezuela?
2. What criteria are considered important by faculty members in the assessment of the quality of graduate programs in Venezuela?
3. What minimal criteria are considered by faculty members as essential to insure quality within graduate education in Venezuela?

In addition to the three questions, six hypotheses were tested:

H.1. There will be no significant differences in the criteria utilized in determining quality within graduate education in Venezuela among the faculty of Universidad Central de Venezuela, Universidad

de Carabobo, and Universidad Centro Occidental Lisandro Alvarado.

H.2. There will be no significant differences in the criteria utilized in determining quality within graduate education in Venezuela among the faculty by rank of faculty appointment.

H.3. There will be no significant differences among the publication rate of faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

H.4. There will be no significant differences among the number of national meetings of professional societies attended by faculty members and their perceptions of criteria of qualtity within graduate education in Venezuela.

H.5. There will be no significant differences among the level of degree of faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

H.6. There will be no significant differences in perceptions of criteria of quality within graduate education in Venezuela between faculty graduating from national universities and those graduating from foreign universities.

The population used in this study was made up of faculty members at three Venezuelan universities: Universidad Central de Venezuela with a sub-population of 500 faculty

members, Universidad de Carabobo with a sub-population of 80 faculty members, and Universidad Centro Occidental Lisandro Alvarado with a sub-population of 80 faculty members. A sample of 30 percent of faculty members were selected from each university.

A three-part instrument was developed based on a questionnaire developed by Paul D. Sims. Modifications were made to the instrument in order to adapt it to the special conditions of Venezuelan graduate education.

The first part of the instrument was essentially devoted to "academic and biographic data," the second part was dedicated to faculty perceptions of qualitative criteria of the graduate colleges. The respondents were asked to indicate and weight by use of percentages those items which they believed were the determinants of quality in the faculty and programs of their respective graduate colleges. The third part was designed to ask faculty members to rate minimal criteria in order to insure quality within graduate education. Forty-four items associated with the quality of graduate education were developed.

The questionnaire and cover letter, explaining the purpose of the study, were distributed to the sample of 198 faculty members during the first three weeks of February and during the third week of April, 1981 in the three universities named above.

Most of the respondents were contacted individually by this researcher, and at the conclusion of the data collection

period information from 116 usable questionnaires had been gathered. The analysis of the data included: descriptive analysis, Kruskal-Wallis One-Way Analysis of Variance, and Mann-Whitney U Test.

Findings

The responses to Question I revealed that the three most important criteria by which faculty quality in Venezuelan graduate education could be assessed with their respective percentages were: "Academic Level," 27.29 percent; "Research Activities," 24.38 percent; and "Teaching Effectiveness," 21.38 percent. The less important criteria included the following: "Publications," "Professional Services Contributions," and "Academic Achievement and Recognition," which received 13.44, 6.59, and 4.97 percent, respectively. In addition, an open-ended section of the instrument, "Additional Criteria," received 1.95 percent from the respondents. Among the additional suggestions for the assessment of faculty quality were "Training of the Faculty" and "Human Understanding of People and Society."

The explanation of these findings can be summarized as follows: The assessment of faculty members in relation to "Academic Level" appears to reveal that they are seeking a better academic level of teachers in graduate education likely because of the enrollment explosion without coordination, which brought about an heterogeneity of quality. The emphasis on "Research Activities" suggests that faculty

members are confronted with increasing demands for research, which is considered a main characteristic of quality in graduate education.

On the other hand, "Publications," Professional Services and Contributions," and Academic Achievement and Recognition" may have been viewed as less important because graduate education in Venezuela has been characterized by a lack of specialized journal publications, a lack of linkage between graduate education and the private and public enterprises, and a lack of reward, motivation and recognition of faculty achievement in this segment of education. Therefore, faculty members considered these aspects as less important in the overall evaluation of faculty quality in graduate education in Venezuela.

In general, faculty in lower ranks assigned greater importance to research, whereas full professors attached greater importance to academic level and teaching effectiveness.

Responses to the second question showed that "Eminency of Faculty," which received 27.45 percent, was assessed by faculty members to be the most important criterion in the determination of program quality in Venezuela. This reinforces the importance of high quality faculty as suggested in responses to the first question. In addition, "Quality of Students and Graduates," "Availability of Supportive Services," "Quality and Quantity of Research," Enough Money From Private and Public Sectors," and "Student-Faculty Ratio,"

with percentages of 20.62, 16.64, 16.01, 9.92, and 7.36, respectively, were considered in order of importance in the determination of quality in graduate programs.

Finally, "Additional Criteria," an open-ended section of the instrument, received 2.00 percent from the respondents who added two more indicators for assessing program quality. They were: "Faculty Involvement With the Program" and "Objectives of the Program Related to the Production Sectors of the Community."

In general, the findings related to program quality suggested the same trend as the findings in faculty quality with the exception that the criterion "Quality of Students and Graduates," was perceived as more important than research in the responses regarding program quality. While "Quality of Students and Graduates" ranked second among the criteria of program quality, "Quality and Quantity of Research" also received a relatively high priority. Thus, faculty members considered "Eminency of Faculty" and "Quality and Quantity of Research" as influential criteria in the assessment of program quality. In addition, they gave a high rating to "Availability of Supportive Services," which has been considered a very weak area in graduate education.

On the other hand, they assigned less weight to the criteria of "Faculty-Student Ratio" and "Enough Money From Private and Public Sectors." A possible explanation of the low ranking of "Faculty-Student Ratio" is that it is estimated there is one faculty member for every five students with an

overall estimation of 1,200 faculty members and 6,000 students in graduate education in Venezuela. In the case of "Enough Money From Private and Public Sectors," it appears that graduate education has not yet faced significant financial problems.

In relation to question three, it was found that 12 items received average scores of close to 3.5 or greater, thus indicating that faculty members considered these items as important minimal criteria in order to insure quality in graduate education in Venezuela.

Faculty members found "Commitment and Motivation" and "Involvement in the Program" as the most important minimal criteria within the factor Students. The faculty members pointed out "Level of Degree," "Research," and "Involvement of the Faculty" as main features from the factor Faculty. In addition, they indicated "Quality and Quantity of Specialized Journals," "Library Quality," and "Laboratories" as important items from the factor Resources. Finally, they selected "Curriculum Content," Enrichment With Visiting Lectures, Colloquia, etc.," " Clarity and Feasibility of the Objectives," and "Program Coherence" as the most outstanding characteristics of the factor Content.

On the other hand, faculty members from the three universities found 11 criteria that were considered to be less important in order to insure minimal criteria of quality in graduate education in Venezuela. These criteria were: "Entrance Examination," "Undergraduate Grades," "Professional

Accomplishment of Graduate," "Degree Requirements," and "Internships, Assistantships, and Other Opportunities for Relevant Student Experience" from the factor Students; "Welfare" from the factor Faculty; "Staff and Workers Who Support Research and Teaching Activities" from the factor Resources; "Amount of Funding From the Private Sector" from the factor Finances; "Regimen of Study" from the factor Content; and "History of the Graduate College" and "Geographic Location" from Other Indicators.

It is important to observe that most of the indicators related to the factor Students were considered by faculty members as less important in insuring quality in graduate education. However, they pointed out most of the indicators related to the factor Faculty as essential in order to guarantee quality. This unexpected finding will need further research in the future.

The findings in relation to the hypotheses were as follows.

The test of Hypothesis I indicated significant differences between Universidad Central de Venezuela and Universidad de Carabobo in relation to "Academic Level." Similarly, there were significant differences between Universidad de Carabobo and Universidad Centro Occidental Lisandro Alvarado in regard to "Research Activities," "Teaching Effectiveness," "Quality of Students and Graduates," and "Quality and Quantity of Research."

In the first case, faculty members from Universidad de Carabobo gave more emphasis to "Academic Level" than their counterparts from Universidad Central de Venezuela. In the second case, respondents from Universidad de Carabobo attached greater importance to "Teaching Effectiveness" and "Quality of Students and Graduates" than did respondents from Universidad Centro Occidental Lisandro Alvarado. They reflected lower weightings on the criteria of "Research Activities" and "Quality and Quantity of Research" than did respondents from Universidad Centro Occidental Lisandro Alvarado.

It appears that faculty members from Universidad de Carabobo reflected a need to be more adequately prepared academically than their counterparts of Universidad Central de Venezuela. In addition, there is evidence that faculty from Universidad Centro Occidental Lisandro Alvarado placed more emphasis on research when assessing graduate education quality than did faculty from Universidad de Carabobo. Again, in assessing graduate education quality, UC gave more importance to "Teaching Effectiveness" than did UCLA. A partial explanation of these differences may be the special programs carried out in UCLA in the School of Agronomy, which is oriented toward research, while Universidad de Carabobo maintains a traditional focus in graduate education programs.

The test of Hypothesis II revealed significant differences between full professors and associate professors in relation to "Teaching Effectiveness." Also, significant

differences were found between academic rank of full professor and aggregate professor in relation to the criterion "Professional Services Contribution."

Respondents classified as full professor tended to rate higher the criterion "Teaching Effectiveness" than those classified as associate professor. However, they assigned lower percentages to the criterion "Professional Service Contributions" than aggregate professors.

Faculty members in the top academic rank have been more oriented toward teaching effectiveness than those in the lower academic rank. This can be explained by the historical tradition of higher education in Venezuela, which has placed more importance on teaching effectiveness. The second difference can be explained by the existing trend among new faculty members in graduate education who are committed to aspects such as: participation in professional meetings, advice to public and private institutions, more relationships with community sectors of production, and memberships in academic societies.

The test of Hypothesis III revealed no significant differences among the publication rate of faculty members and their perceptions of criteria of quality within graduate education in Venezuela.

The test of Hypothesis IV revealed no significant differences between the number of national meetings of professional societies attended by faculty members and their

perceptions of criteria of quality within graduate education in Venezuela.

The test of Hypothesis V revealed significant differences between the academic levels of Bachelor's and Master's degree of faculty members in regard to the criterion "Availability of Supportive Services."

Faculty members who hold Master's degrees rated higher "Availability of Supportive Services" than those holding Bachelor's degrees. It is supposed that new faculty members who held a Master's degree were more inclined to believe in aspects such as: libraries, research facilities, computers, physical facilities, etc. in the overall assessment of quality in graduate education in Venezuela.

The test of Hypothesis VI found significant differences between faculty members graduating from national universities and faculty members graduating from foreign universities in regard to the criteria of "Research Activities" and "Teaching Effectiveness."

Faculty members from national universities assigned higher percentages to the criterion "Teaching Effectiveness" than those graduating from foreign universities. However, they allotted less emphasis in the assessment of quality to the criterion "Research Activities" than their counterparts graduating from foreign universities.

The rationale of this finding can be attributed to the differences between the historical roots of Venezuelan education, represented by faculty members graduating from national

universities, which emphasize professional training and general education, and the systems of graduate education in developed countries, especially that of the United States, represented by faculty members graduating from foreign universities with more emphasis on research.

Conclusions

It seems appropriate to conclude from the findings of the present study that:

1. Faculty considered faculty quality as the major concern in achieving excellence in graduate education. Thus, "Academic Level" and "Eminency of Faculty" were judged as the outstanding characteristics of faculty and program quality, respectively. In addition, it is important to point out that "Research Activities" and "Quality of Students and Graduates" were also assessed as important criteria in determining quality.
2. The traditional focus on teaching is well known, but a rising understanding of and commitment to research was evident among younger faculty. This may be due, at least in part, to the influence of faculty who have studied in other countries. Also, it may be due to the growing number of individuals pursuing graduate programs.
3. "Quality and Quantity of Specialized Journals," "Library Quality," "Commitment and Motivation of

Students;" "Level of Degree," and "Research" by the faculty; and "Curriculum Content" were selected as the most important indicators to insure a minimal level of quality in graduate education in Venezuela. Furthermore, the full involvement of the faculty and students was considered important in maintaining adequate quality in graduate education.

4. There was evidence that faculty members considered "Entrance Examination" and "Undergraduate Grades" as less important indicators in order to insure quality in graduate education. However, they considered "Quality of Students and Graduates" as the second most important criteria in the assessment of program quality in graduate education. From these findings, it is possible to conclude that neither "Entrance Examination" nor "Undergraduate Grades" appears to be highly important criteria in the assessment of student quality in graduate education in Venezuela.
5. A high level of agreement was found among the ranks of faculty members of the three universities regarding the criteria of programs and faculty quality. Nevertheless, some differences were identified among them. These differences can be attributed to a new philosophy in the development of graduate education and the concern by faculty members for a

contemporary approach to this segment of education in Venezuela.

6. Strong belief exists on the part of faculty members graduating from national universities in relation to the importance of teaching effectiveness in the overall assessment of quality of graduate education. On the other hand, faculty members graduating from foreign universities have a high perception of the importance of research in the determination of quality in this sector of the Venezuelan educational system.
7. There exists some empirical support to conclude that faculty from UCLA are more oriented toward research than their counterparts from UC. Furthermore, faculty members from UC are more oriented to teaching. UCV faculty members maintained an equilibrium in the three main criteria ("Academic Level," "Research," and "Teaching") in the determination of quality of graduate education in Venezuela.
8. Considering the importance that graduate faculty members assigned to the criteria of "Academic Level" and "Eminency of Faculty" and taking into account that more than 50 percent of the faculty respondents do not have a doctoral degree, it can be concluded that graduate faculty members perceived that the academic orientation of faculty in the three universities named needed to be improved.

Recommendations

After considering the conclusions of this study, the following recommendations are proposed:

1. Since this study was confined to three universities in Venezuelan graduate education, it would be essential to replicate the study using a broader national sample. However, it may be necessary, due to the magnitude of the effort that an institution assume this responsibility in order to overcome the problems of an individual researcher.
2. The quality of graduate education in Venezuela needs to be provided with more information about the factors and indicators which are influencing it. Because of that, further research should be done to help university administrators make better and wiser decisions in this segment of higher education.
3. While this study provided an assessment of graduate education from the viewpoint of the faculty, it is understood that the responses reflected a faculty bias. It is recommended that additional research be conducted taking into account perceptions of administrators and students in order to have a broader understanding of graduate education in Venezuela.
4. Due to the differences in cross-cultural environments, if this or a similar study is to be replicated in other national settings, operational

definitions should be established for the criteria identified in the assessment of quality in graduate education.

5. The unexpected findings in regard to the limited importance of entrance examination and undergraduate grades in the assessment of quality of students needs further research. Why did faculty members consider these factors as less important in the assessment of quality of students in Venezuelan graduate education? What other criteria might be utilized in assessing quality of students?
6. Serious analysis and evaluation of quality should be undertaken in the graduate programs of every university, taking into account the overall criteria of quality pointed out by faculty members in this study as significant in the determination of graduate program quality.
7. Administrators of graduate programs need to be aware of how to improve the quality of these programs due to the fact that higher education, especially at the graduate level, will face in the decades ahead increasing governmental concern about financial accountability, as well as increasing public concern about the outcomes or benefits of it.
8. It is recommended that an educational task force be created in order to establish some minimal criteria

to preserve and enhance the quality of graduate education in light of the findings of this study.

9. Programs, workshops, and seminars should be provided to improve the quality of faculty members who teach and do research at the graduate level.

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APPENDIXES

APPENDIX A

QUESTIONNAIRE

SURVEY OF GRADUATE EDUCATION IN THREE VENEZUELAN UNIVERSITIES

PART I - ACADEMIC AND BIOGRAPHIC DATA

ALL RESPONDENTS: Please complete each item in this part.

1. Present academic rank:

   A. Full professor _____

   B. Associate professor _____

   C. Aggregate professor _____

   D. Other _____

2. Please indicate the highest degree you have earned (Ed.D., Ph.D., Master's Bachelor's etc.), the place and the awarding institution.

   _____ Highest Degree _____ Institution and Place

3. Please indicate the name of your department or faculty and the name of your institution.

   _____ Department or Faculty _____ Institution

4. How many books (authored or edited), monographs, and articles have you published since January 1, 1977? (Indicate numbers for each.)

   _____ Books _____ Monographs _____ Articles

5. How many national meetings of professional societies have you attended since January 1, 1977? _____

PART II - ELEMENTS OF QUALITY

Section A

The following are criteria by which the quality of faculty in graduate education may be judged. Please indicate the importance you would attach to each factor by weighting each as a percent of total. If there are other factors you would consider, please list them in the spaces provided and indicate their weights. Make sure your percentages add up to 100%.

1. Academic Level (Bachelor's Master's Doctorate). . . . . _____
2. Research Activities . . . . . _____
3. Teaching Effectiveness. . . . . _____
4. Publications. . . . . _____
5. Professional Service Contributions (Consulting, membership in academic societies, etc.). . . . . _____
6. Special Academic Achievement and Recognition . . . . . _____

ADDITIONAL CRITERIA (Specify)

7. _____
8. _____

Section B

The following are criteria by which the quality of programs in graduate education may be judged. Please indicate the importance you would attach to each factor by weighting each as a percent of total. If there are other factors you would consider, please list them in the spaces provided and indicate their weights. Make sure your percentages add up to 100%.

1. Eminency of Faculty . . . . . _____
2. Quality of Students and Graduates . . . . _____
3. Availability of Supportive Services (libraries, research facilities, computers, etc.). . . . . _____
4. Enough Money From Private and Public Sectors. . . . . _____
5. Quality and Quantity of Research. . . . . _____
6. Student-Faculty Ratio . . . . . _____

ADDITIONAL CRITERIA (Specify)

7. _____
8. _____

PART III - INDICATORS OF QUALITY

Circle the number that corresponds most closely with your assessment of the importance of these factors in insuring an adequate level of quality in graduate education in Venezuela.

	FACTORS	Very Important	Important	Somewhat Important	Not Important
I.	STUDENTS				
1.	Entrance examination	4	3	2	1
2.	Undergraduate grades	4	3	2	1
3.	Commitment, motivation	4	3	2	1
4.	Academic abilities	4	3	2	1
5.	Professional accomplishment of graduates	4	3	2	1
6.	Involvement in the program	4	3	2	1
7.	Degree requirements	4	3	2	1
8.	Internships, assistantships, and other opportunities for relevant student experience	4	3	2	1
II.	FACULTY				
1.	Degree	4	3	2	1
2.	Research	4	3	2	1
3.	Publications	4	3	2	1
4.	Academic experience	4	3	2	1
5.	Academic training	4	3	2	1
6.	Teaching effectiveness	4	3	2	1
7.	High morale	4	3	2	1
8.	Welfare	4	3	2	1
9.	Involvement in the program	4	3	2	1

		FACTORS	Very Important	Important	Somewhat Important	Not Important
III.		RESOURCES				
	1.	Library volumes	4	3	2	1
	2.	Library quality	4	3	2	1
	3.	Quality and quantity of specialized journals	4	3	2	1
	4.	Laboratories	4	3	2	1
	5.	Computers	4	3	2	1
	6.	Physical facilities	4	3	2	1
	7.	Leaderships and decision-making	4	3	2	1
	8.	Staff and workers who support research and teaching activities	4	3	2	1
		FINANCES				
IV.	1.	Student-faculty ratio	4	3	2	1
	2.	Amount of funding from the government	4	3	2	1
	3.	Amount of funding from the private sector	4	3	2	1
	4.	Financial aid for students	4	3	2	1
V.		CONTENT				
	1.	Curriculum content	4	3	2	1
	2.	Instructional methods	4	3	2	1
	3.	Enrichment with visiting lectures, colloquia, etc.	4	3	2	1
	4.	Clarity and feasibility of the objectives	4	3	2	1
	5.	Program coherence	4	3	2	1
	6.	Justification of the program	4	3	2	1
	7.	Program evaluation	4	3	2	1

FACTORS	Very Important	Important	Somewhat Important	Not Important
CONTENT (Continued)				
8. Regimen of study (semester, trimester, special periods, etc.	4	3	2	1
VI. OTHER INDICATORS				
1. Types of research (basic, applied, and technological)	4	3	2	1
2. Relationship between research and productive sector	4	3	2	1
3. History of the graduate college (years of experience in the program)	4	3	2	1
4. Geographic location	4	3	2	1
5. Quality of the institution, department, or school	4	3	2	1
6. Graduate-undergraduate relationship	4	3	2	1
7. Relationship to national and international institutions	4	3	2	1

APPENDIX B

LETTER REQUESTING PERMISSION TO USE AND MODIFY THE SIMS INSTRUMENT

October 17, 1981

Dr. Paul D. Sims
Albany Junior College
Albany, Georgia

Dear Dr. Sims:

I am a candidate for the Doctor of Education degree at Oklahoma State University. One of the requirements for the degree is to complete a research project. I am doing a research of Assessing Indicators in the Quality of the Components of the Graduate Education: The Case of Venezuela.

During the review of literature your research entitled "Assessment of the Quality of Graduate Departments of Educational Administration" was found. The questionnaire you developed should be reliable and valid for my study.

I would appreciate it very much if you would grant permission to use parts of your instrument in my study.

Sincerely,

Jose Tovar
Student of Higher
Education Administration
Oklahoma State University

JT/s

APPENDIX C

LETTER FROM THE COORDINATOR OF THE GRADUATE COLLEGE OF UNIVERSIDAD CENTRAL DE VENEZUELA TO EVERY FACULTY MEMBER REQUESTING THEM TO COOPERATE WITH THE RESEARCH

UNIVERSIDAD CENTRAL DE VENEZUELA

VICERRECTORADO ACADEMICO

COORDINACION CENTRAL DE ESTUDIOS PARA GRADUADOS

C A R A C A S

Caracas,
2 de febrero de 1982

El profesor JOSE TOVAR, estudiante doctoral de Oklahoma State University, está desarrollando su tesis de grado relacionada con criterios cualitativos a nivel de Postgrado en Venezuela. El ha seleccionado nuestra Institución como una de las muestras, para su estudio el cual se espera que clarifique criterios y normas de calidad de dicho sector.

Mucho agradecería la colaboración que pueda prestarse en la aplicación del instrumento del citado profesor, cuyos resultados serán también de provecho para una investigación que desarrolla el CONICIT y personal de esta Coordinación.

Sin más a que hacer referencia, quedo de usted.

Atentamente,

VICTOR MORLES S.
Coordinador Central de
Estudios para Graduados

c.c.VMS/zo.

APPENDIX D

LETTER FROM THE DIRECTOR OF THE GRADUATE COLLEGE OF UNIVERSIDAD DE CARABOBO TO EVERY FACULTY MEMBER REQUESTING THEM TO COOPERATE WITH THE RESEARCH

Valencia, febrero 8, 1982

El profesor JOSE TOVAR, estudiante doctoral de Oklahoma State University, está desarrollando su tesis de grado relacionada con criterios cualitativos a nivel de Postgrado en Venezuela. El ha seleccionado nuestra Institución como una de las muestras, para su estudio el cual se espera que clarifique criterios y normas de calidad de dicho sector.

Mucho agradecería la colaboración que pueda prestarse en la aplicación del instrumento del citado profesor, cuyos resultados serán también de provecho para una investigación que desarrolla el CONICIT y personal de Postgrado de la Universidad Central de Venezuela.

Sin más a que hacer referencia, quedo de Ud.,

Muy Atentamente,

Dr. Carlos Winkelmann
Director del Area de
Estudios de Postgrado

amkb

VITA 2

José Abraham Tovar

Candidate for the Degree of

Doctor of Education

Thesis: FACULTY PERCEPTIONS OF QUALITATIVE CRITERIA IN GRADUATE EDUCATION IN VENEZUELA

Major Field: Higher Education

Biographical:

Personal Data: Born in Valencia, Venezuela, March 16, 1939, the son of Luis and Eustacia Tovar.

Education: Graduated from Fermin Toro High School, Valencia, Venzuela, in 1959; received the Administrador Comercial degree from Universidad Central de Venezuela, Caracas, Venezuela, in July, 1967; received the degree of Master of Science at Oklahoma State University, in July, 1980, with a major in Educational Administration; completed requirements for the Doctor of Education degree at Oklahoma State University in December, 1982.

Professional Experience: Teacher of high school level at the United Nations Institute from 1963 to 1966, principal of the same institution 1966-1969, Caracas, Venezuela; Professor in the Instituto Universitario Experimental Pedagógico of Barquisimeto from 1969 to 1972, Barquisimeto, Venezuela; Accountant Advisor of Toalco C.A., and Quimica Mundial 1967 to 1975; Professor in the Instituto Pedagógico de Caracas from 1972 to 1977, Caracas, Venezuela; Coordinator for the Business Administration Area in the Instituto Universitario Pedagógico de Caracas in the city of Caracas, Venezuela, 1973 to 1977.

Professional Organizations: Member of the Colegio of Administradores Comerciales del Distrito Federal y del Estado Miranda, Caracas, Venezuela; Member of

the Asociación de Profesores del Instituto Universitario Pedagógico de Caracas; Member of the International Faculty Lecture Bureau.