University Coordination Council

National Plan for Quality Assessment of Universities

OVERALL REPORT
1996-2000

University Coordination Council

NATIONAL PLAN FOR QUALITY
ASSESSMENT OF UNIVERSITIES

OVERALL REPORT

1996-2000

TABLE OF CONTENTS

GRAPH INDEX

.

TABLES INDEX

—

1 INTRODUCTION

The first *Plan Nacional de Evaluación de la Calidad de las Universidades* (National Plan for Quality Assessment of Universities – PNECU) was established by Royal Decree 1947/1995 of 1st December. This stipulated that the General Secretary of the Council of Universities had to provide the plenary meeting with an annual report on university quality standards. This has been done after each of the four rounds which formed part of the abovementioned plan.

This report, which should in theory only refer to the last round of the PNECU (carried out during 2001 and the first few months of 2002), is in fact a global report aimed at providing a more complete analysis of the five years of the plan.

Now that the first plan has come to a close and the second Plan for Quality in Universities has started (Royal Decree 408/2001 of 20th April), it is clear to see that the main objective of the first plan (to promote institutional assessment of university quality) has been achieved. Fifty-three universities were involved in the plan, four autonomous regions set up their own university quality agencies (Andalusia, Catalonia, Galicia and the Balearic Islands) and the plan included 64% of assessable degrees (the others had either only recently been established or their degree programmes had recently been changed).

This has also led to the establishment of quality control units or departments in almost all universities. One of their main achievements has been to create or rationalise the systems which provide information and statistics within the institution, which has, in turn, helped to reach another objective, that of providing information to aid decision-making. It must be acknowledged, however, that progress still needs to be made before the general public can be provided with information which can be easily understood.

Finally, I would like to express my gratitude to all the people and institutions that have made this document possible, in particular the Technical Committee and the team of analysts that have been directly involved in preparing this document, as detailed in the appendices.

José T. Raga

General Secretary

2 ACTIVITY REPORT

There have been four rounds (1996, 1998, 1999 and 2000) of the *Plan Nacional de Evaluación de la Calidad de las Universidades* (National Plan for Quality Assessment of Universities, hereafter referred to as the PNECU). The aim of this report is to provide information about the activities undertaken and the results obtained since the programme began.

This section is organised in accordance with the three main objectives of the programme, which are:

1. To promote the institutional assessment of university quality.

2. To draw up homogeneous methods of assessing university quality in line with the practices currently used in the European Union.

3. To provide objective information which may be used by the various organisations to aid decision making in their particular area of expertise.

2.1 Institutional Assessment of University Quality

The majority of Spanish universities (Graph 1) have been involved in the assessment process. Only recently-established universities, which were advised to participate at a later date, did not take part.

Graph 1. Universities participating in the PNECU as a percentage of the total number of universities

	1st round	2nd round	3rd round	4th round
⊠ Non-participating Universities	13	11	8	13
☐ Participating Universities	46	51	55	53
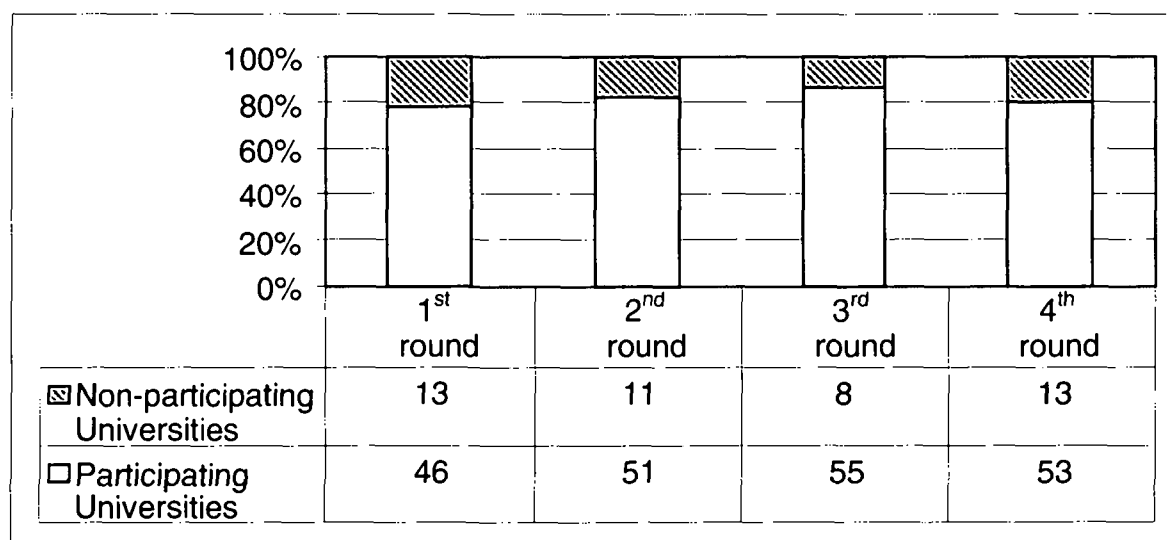
Source: Technical Coordination Committee of the Plan for Quality in Universities.

Progress has been made in developing a quality culture. This can be seen in terms of (a) the strengthening of technical assessment units in Spanish universities, (b) the large number of reports presented which show that universities are to a large extent fulfilling the commitments undertaken in their projects, (c) the fact that degrees often asked for the assessment process continue in order to further aid improvement.

2.1.1 The Participation of Agencies from the Autonomous Regions

The Autonomous Regions of Andalusia and Catalonia reached agreements with the Ministry of Education, Culture and Sport allowing them to organise and carry out the university quality assessment programmes in their regions (assessment, decision-making, funding and follow-up).

The "Agència per a la Qualitat del Sistema Universitari a Catalunya" (Agency for Quality in the Catalan University System) and the "Unidad para la Calidad de las Universidades Andaluzas" (Unit for the Quality of Andalusian Universities) have participated in this report by providing information about the proposed assessment programme, helping to draw conclusions from the reports written by the units and helping to collect and analyse the indicators used in this report. The information provided by agencies from the Autonomous Regions has been included in the corresponding sections of this report.

In addition to the above-mentioned agencies, others are now operating or currently being created, such as the "Axencia para la Calidade do Sistema Universitario de Galicia" (Agency for the Quality of Galicia's University System), the Agencia de Qualitat Universitaria de les Illes Balears (Agency for the Quality of the University System in the Balearic Islands) and the "Agencia para la Calidad del Sistema Universitario de Castilla y León, Comunidad Valenciana o Comunidad de Madrid" (Agencies for the Quality of the University Systems in Castile and Leon, the Valencian Region or the Madrid Region).

2.1.2 Units Assessed

The assessment process used in the PNECU permitted various different units, such as degrees, departments and services, to be assessed. Graph 2 and Graph

3 show the various units assessed in the different rounds. Graph 4 and Graph 5 show the degrees assessed by branch of study and length of degree, respectively.

In total, 939 degrees, along with their corresponding departments and services, were assessed by the PNECU. In addition, 30 departments and 46 service units were independently assessed.

Graph 2. Number of Degrees assessed (with external assessment report) in each round

	1st round	2nd round	3rd round	4th round
Degrees	130	230	293	286
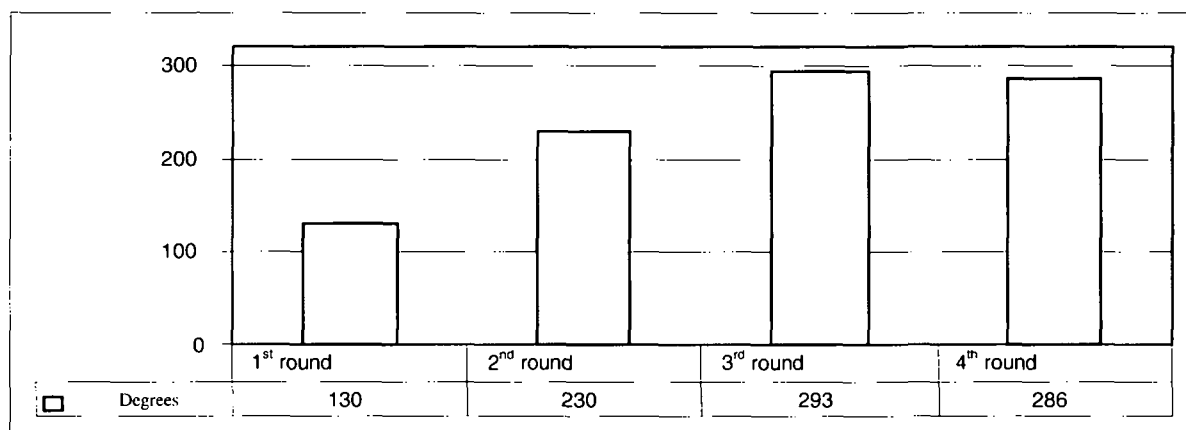
Source: Technical Coordination Committee of the Plan for Quality in Universities.

Graph 3. Number of departments and services assessed

	Departments		Services	
	3rd round	4th round	3rd round	4th round
Units	13	17	27	19
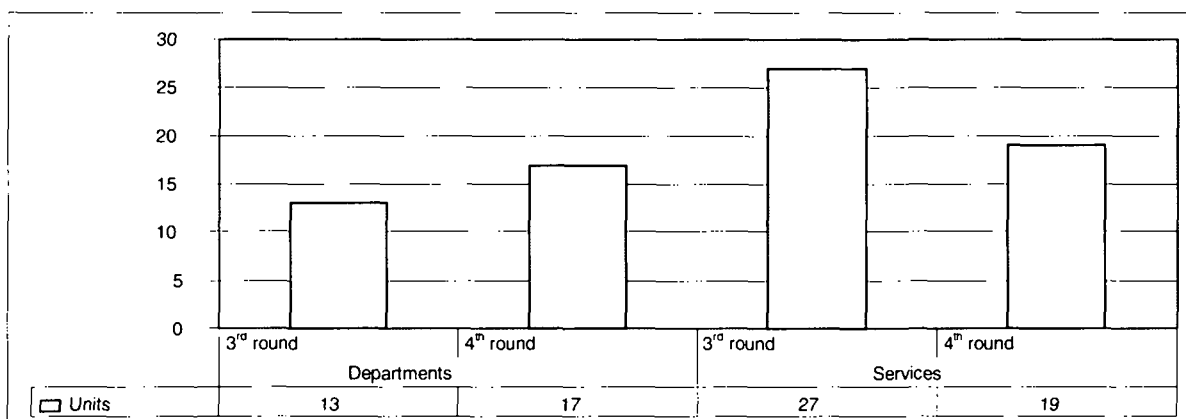
Source: Technical Coordination Committee of the Plan for Quality in Universities. Data is not available on the departments and services assessed in the first two rounds.

Graph 4. Number of degrees assessed by branch of study

	Health Sciences	Experimental and NaturalSciences	Social Sciences and Law	Engineering and Technology	Humanities
1st round	5	29	31	54	9
2nd round	2	28	95	68	22
3rd round	24	28	115	73	53
4th round	31	23	130	62	40
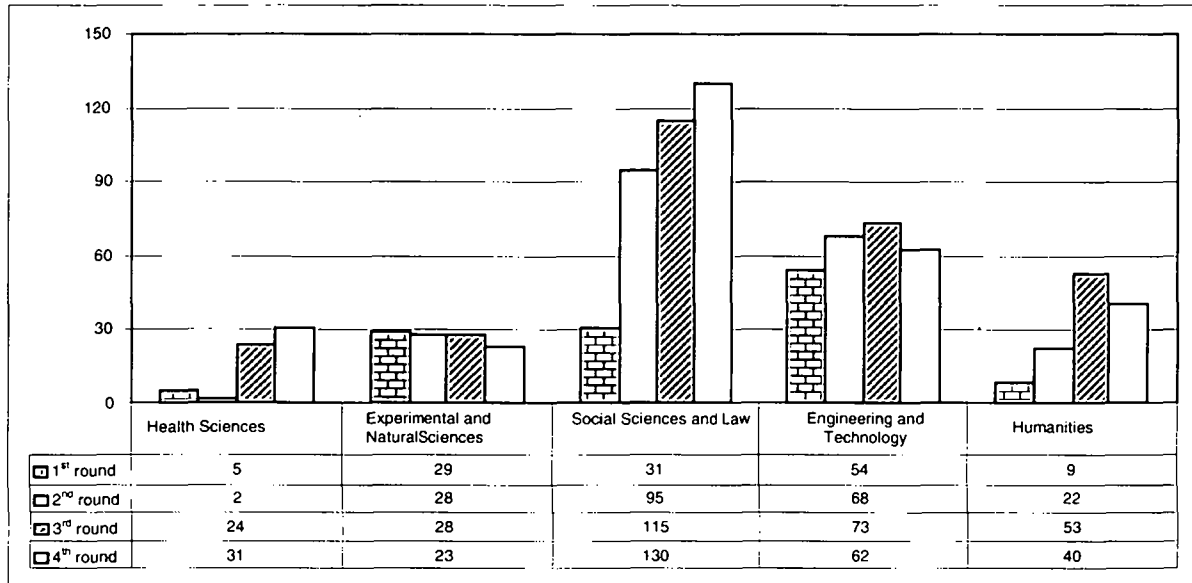
Source: Technical Coordination Committee of the Plan for Quality in Universities.

Graph 5. Number of degrees assessed by length of degree

	Three-year degrees	Four-Five-year plus	Two year postgraduate degrees
1st round	51	69	7
2nd round	92	109	14
3rd round	149	121	23
4th round	149	121	16
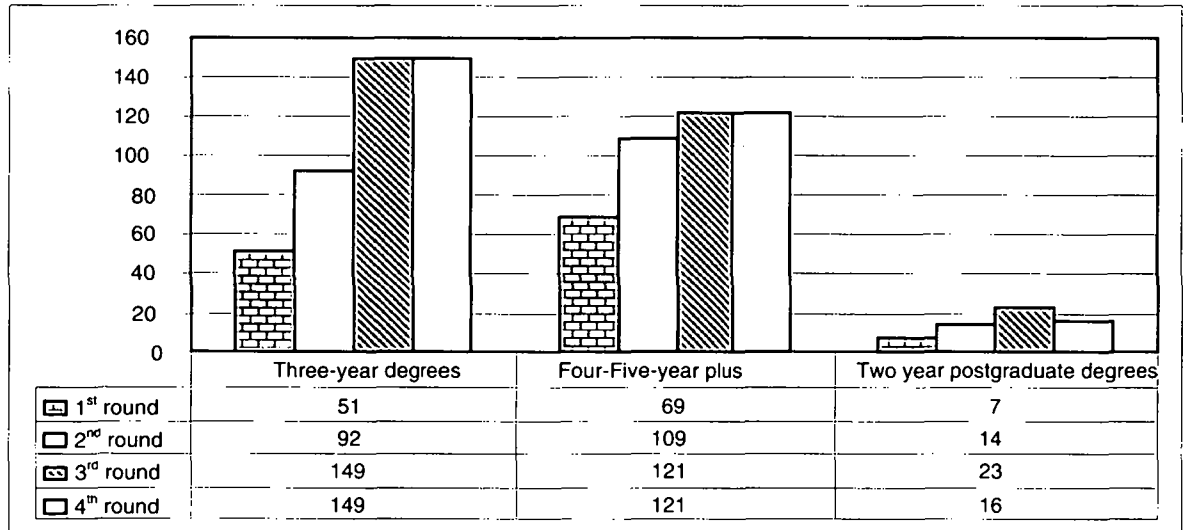
Source: Technical Coordination Committee of the Plan for Quality in Universities.

Throughout the whole programme, approximately 64% of all degrees which fulfilled the requirements (age of institution or degree) were assessed (see Graph 6).

Graph 6. Degrees included in the PNECU as a percentage of all three and four-five year or more degrees offered by Spanish State Universities in 2000/01
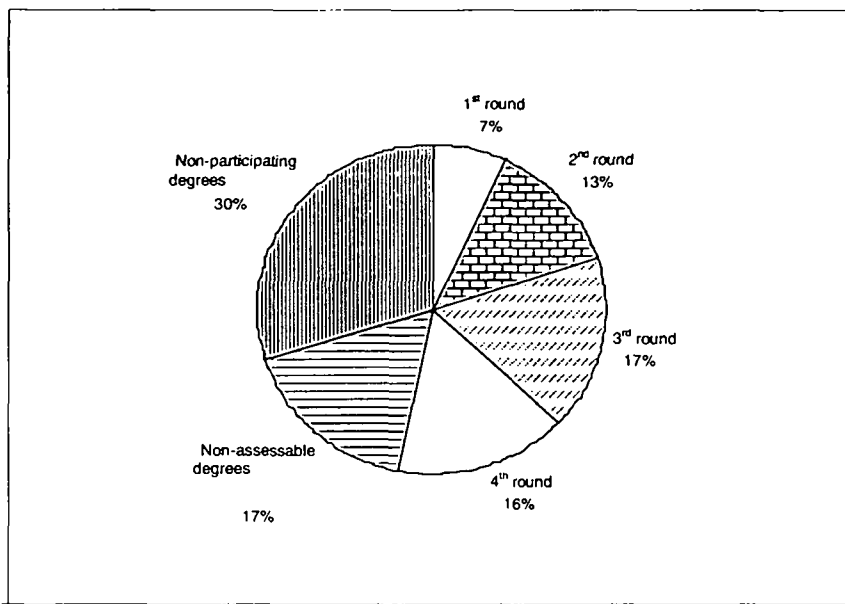
The Ministry of Education, Culture and Sport provided the PNECU with 4,591,732€ (764 million pesetas) to fund the programme. Graph 7 shows how much money was spent on each round. However, the total cost of assessment was greater since there were two other sources of funding. On the one hand, the universities themselves covered most of the expenses and on the other hand, some autonomous regional governments had supplementary funds at their disposal specifically for the PNECU.

Graph 7. Funding of the National Assessment Plan by the Ministry of Education, Culture and Sport
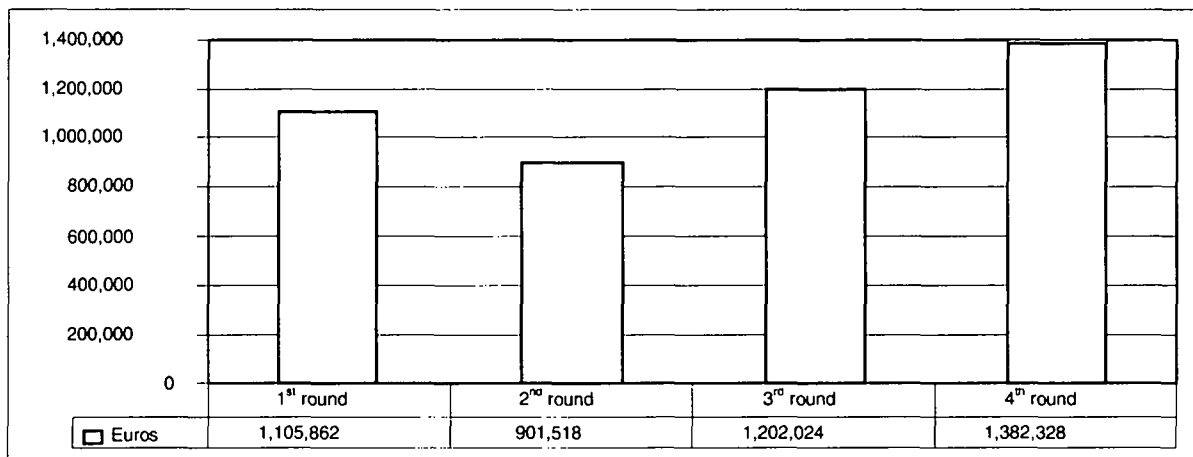
	1st round	2nd round	3rd round	4th round
☐ Euros	1,105,862	901,518	1,202,024	1,382,328

2.2 Quality Assessment Methodology

The methodology used followed current trends in institutional assessment both in Europe and in most countries in which university quality assessment takes place. This methodology basically consists of a mixed system of self-assessment and external assessment, followed by the publication of a final report. The independent nature of the process and the fact that neither the government nor the institutions under assessment had any influence on the results was another important feature inherent in the PNECU.

The PNECU's assessment process started with an initial stage of internal inspection or self-assessment, followed by a second stage of external assessment. Both stages followed common guidelines to carry out their analysis. The process concluded with the writing of a report published by the university specifying the aims and objectives, the current situation, any strengths and weaknesses and any quality improvements required in the light of the results of the assessment process[1].

In general, more emphasis was placed on teaching than on research, and more attention was given to both teaching and research than to services. To a certain extent, this bias is due to the methodology itself, which takes the degree as the basic unit of analysis. This explains the structure of this report, in which greater attention is paid to teaching than to the other two aspects. This is partly justified by the fact that teaching processes in Spanish universities are in greater need of assessment.

The PNECU's assessment process clearly illustrated the difficulties faced by many universities when it came to providing objective analytical data required by the *"Guía de evaluación de las Titulaciones" (Guide to Degree Assessment)*. For that reason, the degrees which commented on the assessment process highlighted the unreliability of the data and the lack of information with which they had to carry out their analysis. This is one of the main improvement areas and it

---

[1] For more detailed information on the assessment methodology, consult the *Informe Anual de la Segunda Convocatoria, 2000 (Annual Report on the Second Round, 2000)* and the *Informe sobre la Metodología de la Tercera Convocatoria (Report on the Methodology of the Third Round)*. These reports are available from the University Coordination Committee web page (http://www.mec.es/consejou).

16

must be dealt with urgently. In addition to being a fundamental decision-making tool, the information requested represents the first step in the process and forms the basis of any diagnosis.

Most of the degree self-assessment reports concurred that the institutional assessment process was useful insofar as it helped to clarify the strategic objectives of the units assessed, to obtain systematic knowledge of their operation and to formulate improvement actions. In this respect, the most highly valued methodological aspect was the fact that the university community was enriched by the experience of carrying out the self-assessment report.

One of the most obvious strengths of the assessment process was the fact that both the external assessment reports and the final degree reports put forward improvement proposals. This aspect has been strengthened by significant technical advances in formulating improvement actions in the successive rounds of the PNECU. These are becoming more and more accurate when it comes to prioritising, establishing deadlines, implementing means of assessment and assigning responsibility. In addition, the degrees suggested formulating specific plans of action based on their improvement proposals.

On the other hand, an obvious weakness of the PNECU's assessment process was its lack of clear methodology and the failure to meet the deadlines for drawing up the Final Reports, which were often presented well outside reasonable time limits. However, there was a clear institutional commitment to quality improvement in the cases in which the final university reports were completed within the time limits set out in the programme.

2.2.1 Phase Completion

Analysis of the extent to which each phase was completed during the different rounds (see Graph 8) shows that the results got progressively worse. Relatively few Final Degree Reports were completed in the fourth round because this final phase took longer than expected. Delays in writing the Final University Reports may also have been due to improvements in the quality of the assessment process, which meant that more time was required to complete the reports.

Graph 8. Phase Completion of the Degrees participating in the PNECU
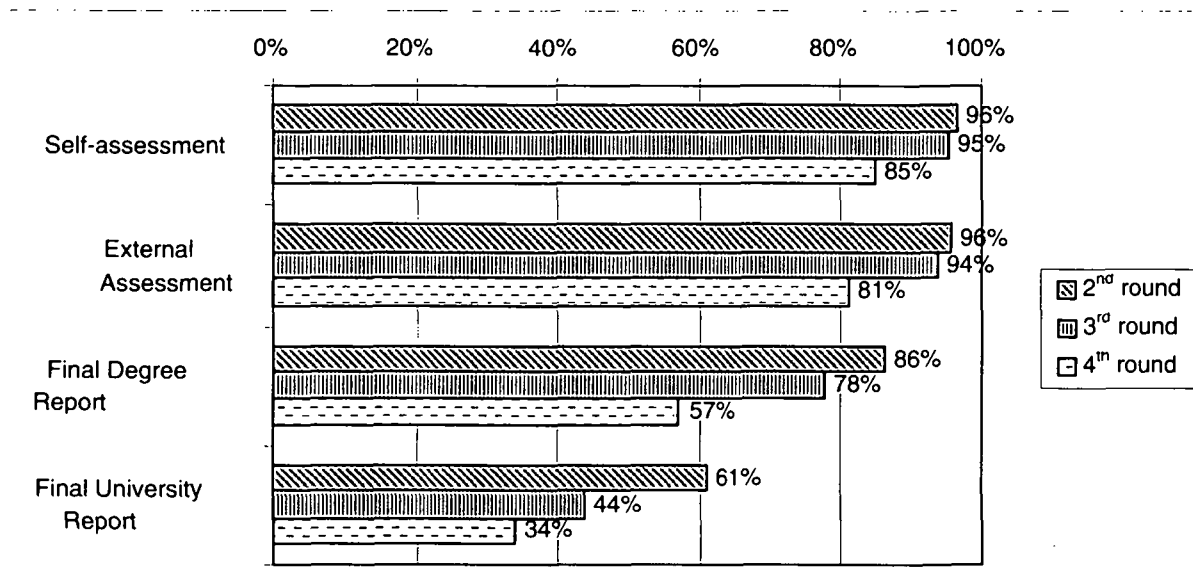
Source: Technical Coordination Committee of the Plan for Quality in Universities.

NB: Due to its irregular nature, data is not available on phase completion during the first round.

2.3 Decision-making information

This objective was met by producing different reports which provide information on the results and the methodology of each round of the programme. This report also intends to provide the general public and those responsible for educational management with information on the results obtained, assessing any strengths and weakness in addition to presenting any improvement proposals put forward by the different units.

This report provides a global vision of the situation of the Spanish university system based on the various assessment reports. It is intended as a point of reference and comparison for those responsible for university policy at all levels and provides the general public with information on the situation and running of the university system. In addition, it gives examples of certain good practices which are successfully being implemented in the various units assessed. In short, this report provides important information to improve the university system at all levels.

In order to prepare this report, both quantitative and qualitative information has been collected from all the self-assessment reports, external assessment reports,

18

final reports from the units assessed and from those final university reports which were available. In addition, a selection of indicators has been analysed (success rate, degree of delay, drop-out rate and first-year drop-out rate) which were proposed in the *"Guía de Evaluación de las Titulaciones" (Guide to Degree Assessment)*. Likewise, the report has taken statistical data into consideration provided by the "Consejo de Coordinación Universitaria" (CCU) (University Coordination Committee).

3 SUPPLY AND DEMAND OF UNIVERSITY EDUCATION

The Spanish university system has developed quickly over the last few years and there have been changes in the size and scope of the system as well as in its organisation and structure. One aspect which has changed is the relationship between the supply and demand of university education, as can be seen from the following figures.

a) Over the four years of the assessment programme, the number of degrees increased by almost 10% (12% in three-year degrees and 9% in four or more year degrees). The total number of places available remained the same; there was a 5% increase in the number of three-year places and a 5% decrease in the number of four-five or more year places. This shows that there has been an increase in the range of degrees on offer (see Graph 9 and following).

Graph 9. Changes in the number of official degrees on offer in the whole Spanish university system (1993-2001)
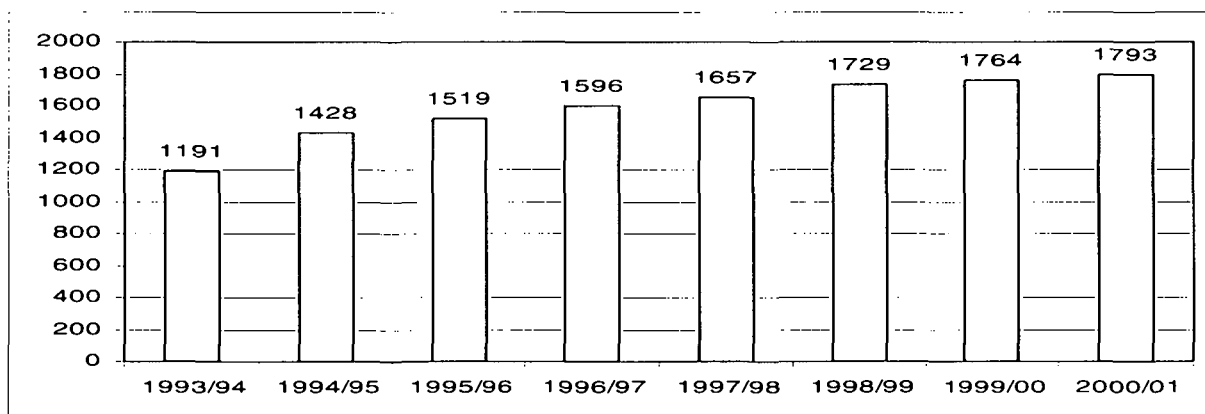
Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 10. Changes in the number of official Health Sciences degrees (1993-2001)
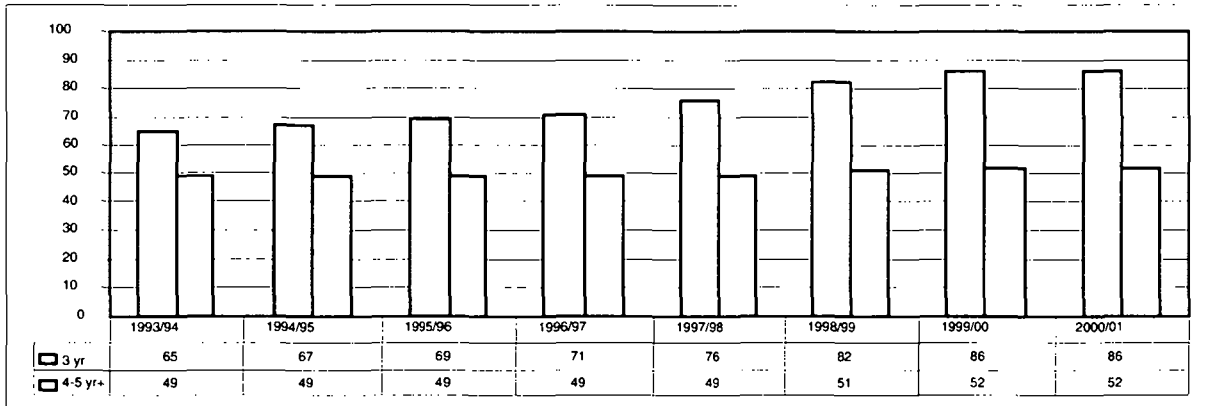
	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
☐ 3 yr	65	67	69	71	76	82	86	86
☐ 4-5 yr+	49	49	49	49	49	51	52	52

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 11. Changes in the number of official Experimental and Natural Sciences degrees (1993-2001)

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
☐ 3 yr	16	17	19	20	21	21	21	21
☐ 4-5 yr+	90	113	122	123	126	132	134	136

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 12. Changes in the number of official Social Sciences and Law degrees (1993-2001)

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
☐ 3 yr	310	391	411	418	431	456	461	466
☐ 4-5 yr+	157	177	182	186	192	199	209	215

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

22

Graph 13. Changes in the number of official Engineering and Technology degrees (1993-2001)

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
3 yr	213	248	279	326	350	368	380	391
4-5yr+	82	95	97	106	111	117	124	126

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees in state universities.

Graph 14. Changes in the number of official Humanities degrees (1993-2001)

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
4-5 yr+	209	271	291	297	301	303	297	300

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 15. Official degrees on offer in the Spanish university system (2000/01)

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

23

b) In this same period, competition between institutions increased somewhat, since more and more different universities offered the same degrees.

c) Entry requirements went down in almost all cases. This was due to the increased variety of degrees on offer and lower population levels (see Table 1 on page 25).

d) There was an increase in the number of degrees in all branches of study, although there was a fall in the total number of places on offer except in Health Sciences (See Graph 16 and following).

Graph 16. Changes in the number of places on offer by branch of study and length of degree (1993-2001)

	Health Sciences – 3 yr	Health Sciences – 4-5 yr+
	Experimental & Natural Sciences – 3 yr	Experimental and Natural Sciences4-5 yr+
	Social Sciences and Law- 3 yr	Social Sciences and Law – 4-5 yr+
	Engineering and Technology – 3 yr	Engineering and Technology – 4-5 yr+
	Humanities – 4-5 yr +	

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 17. Changes in the number of places on offer in Health Sciences (1993-2001)

	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
☐ 3 yr+	5980	6247	6126	6368	6747	7342	7714	7797
☐ 4-5yr	9487	9235	8855	8580	8431	8527	8415	8412

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 18. Changes in the number of places on offer in Experimental and Natural Sciences (1993-2001)

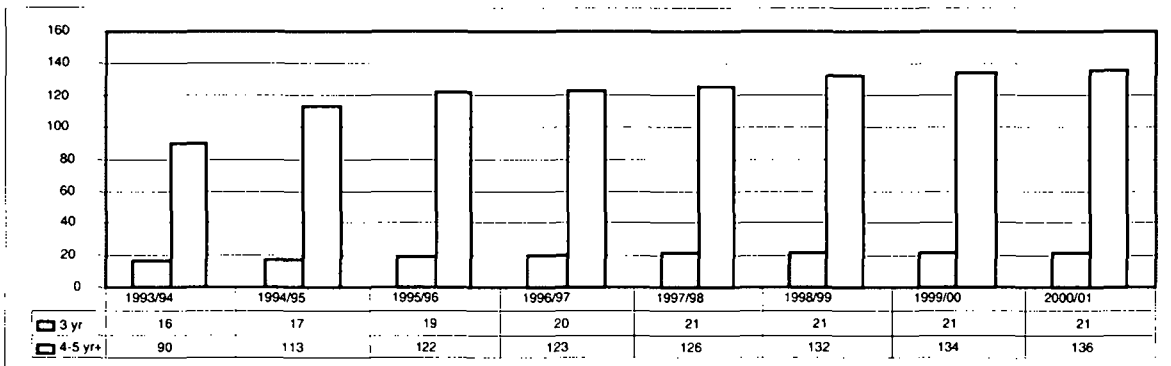|	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
☐ 3 yr	2519	2665	2703	2608	2682	2604	2594	2579
☐ 4-5 yr	19960	21662	23820	23903	23383	23631	22918	22396

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 19. Changes in the number of places on offer in Social Sciences and Law (1993-2001)
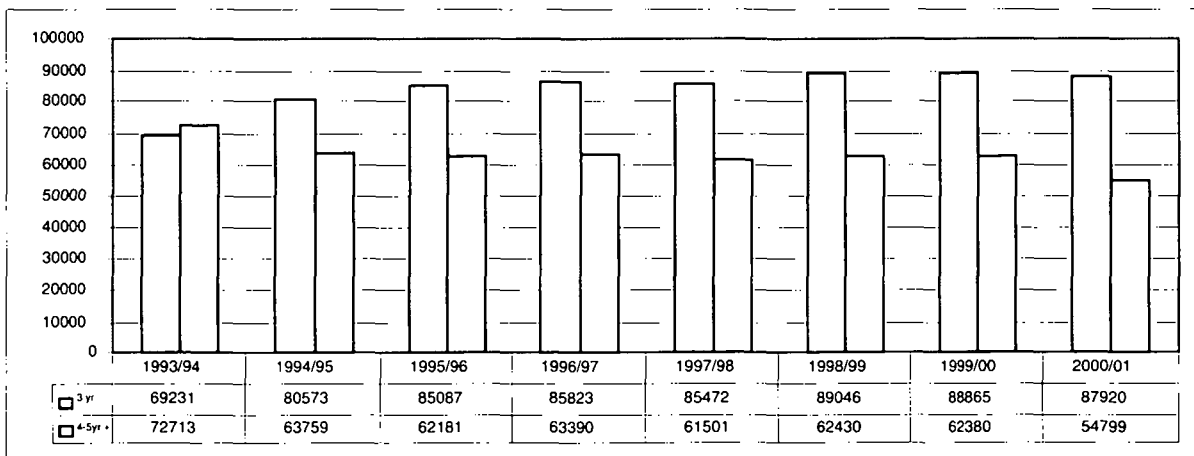
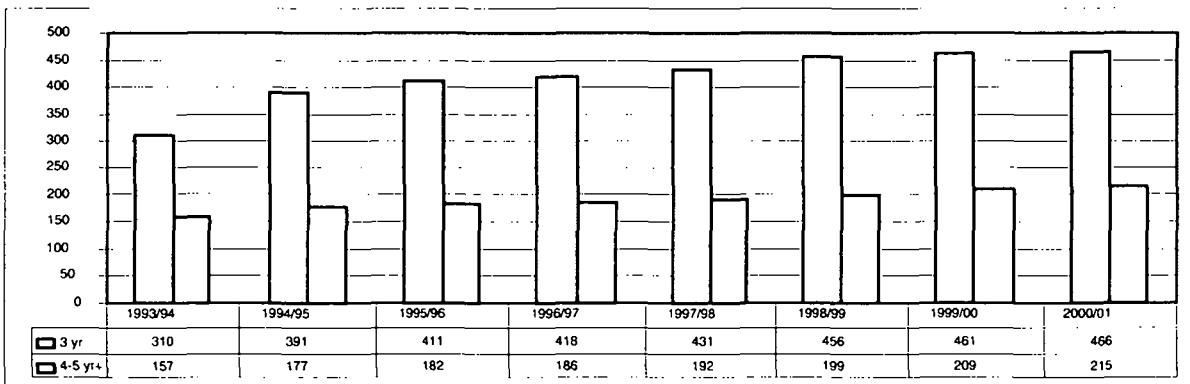|	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
☐ 3 yr	69231	80573	85087	85823	85472	89046	88865	87920
☐ 4-5yr	72713	63759	62181	63390	61501	62430	62380	54799

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

25

Graph 20. Changes in the number of places on offer in Engineering and Technology (1993-2001)
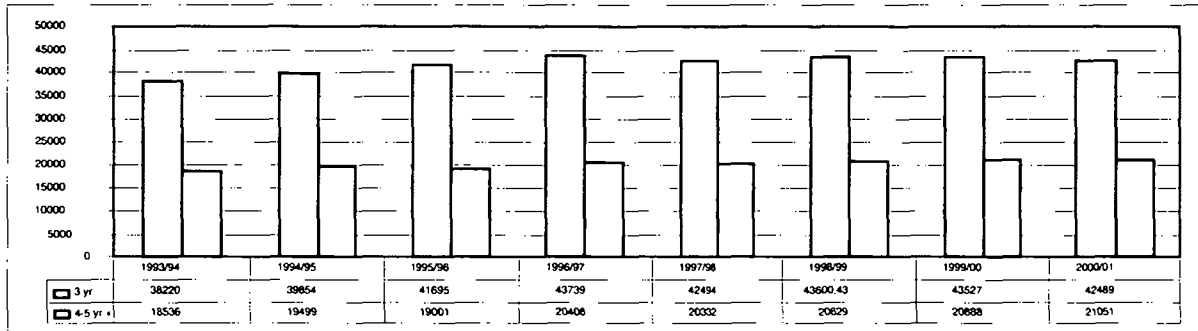
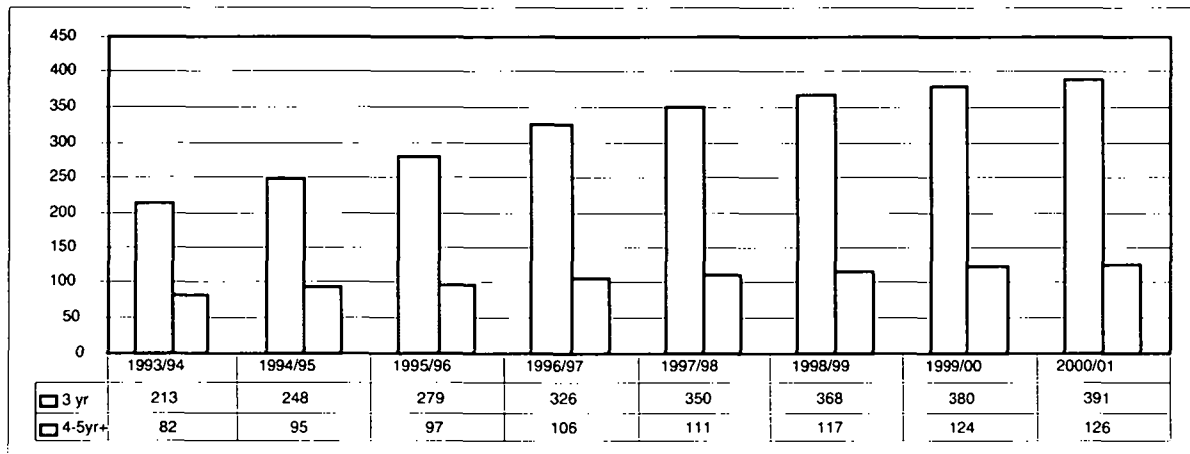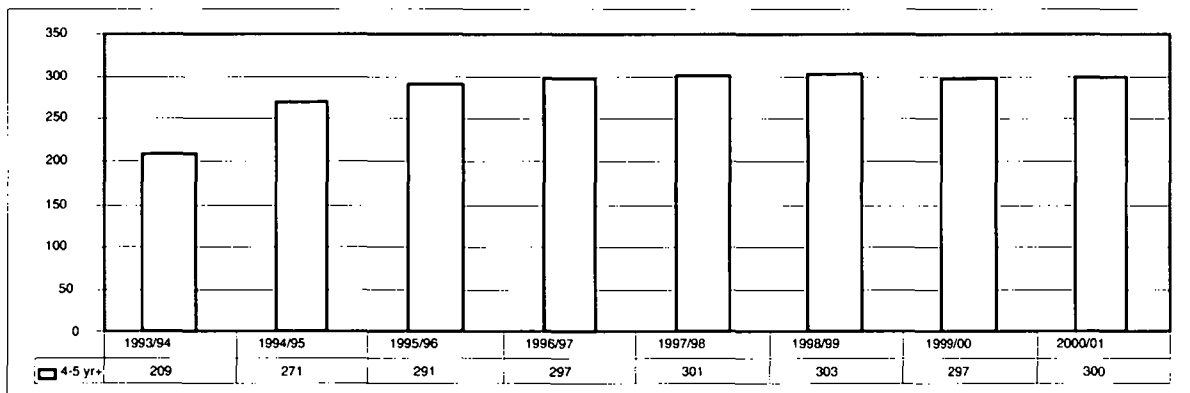|	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
3 yr	38220	39854	41695	43739	42494	43600.43	43527	42489
4-5 yr +	18536	19499	19001	20406	20332	20629	20888	21051

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

Graph 21. Changes in the number of places on offer in Humanities (1993-2001)
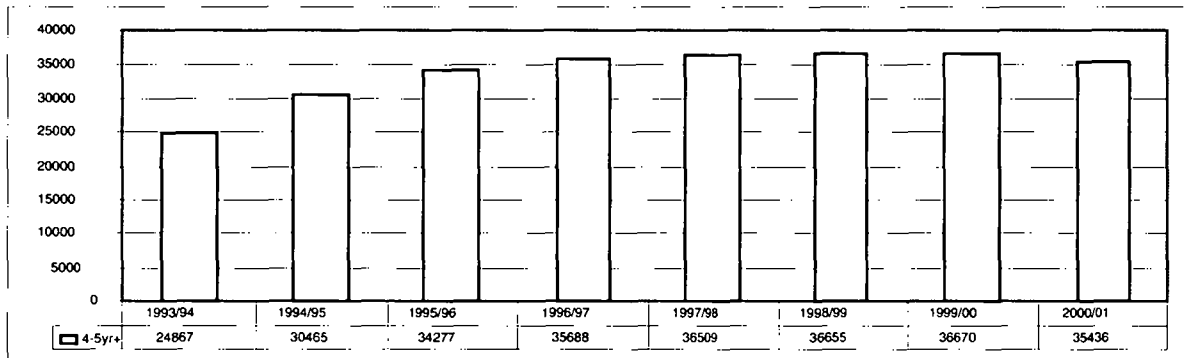
	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
4-5yr+	24867	30465	34277	35688	36509	36655	36670	35436

Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.

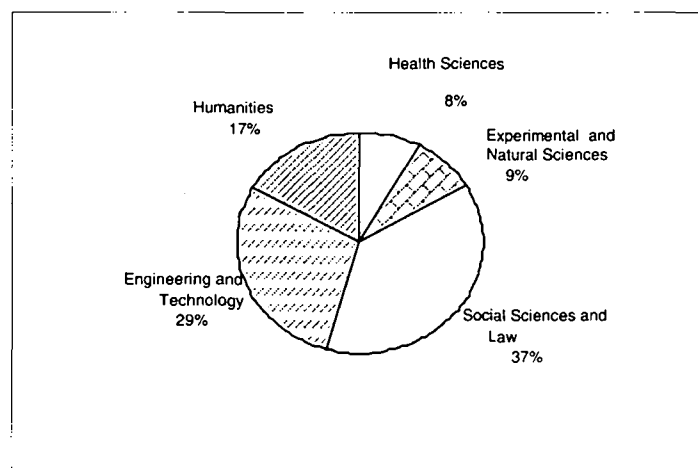## Graph 22. Number of places on offer in all Spanish universities (2000/01)
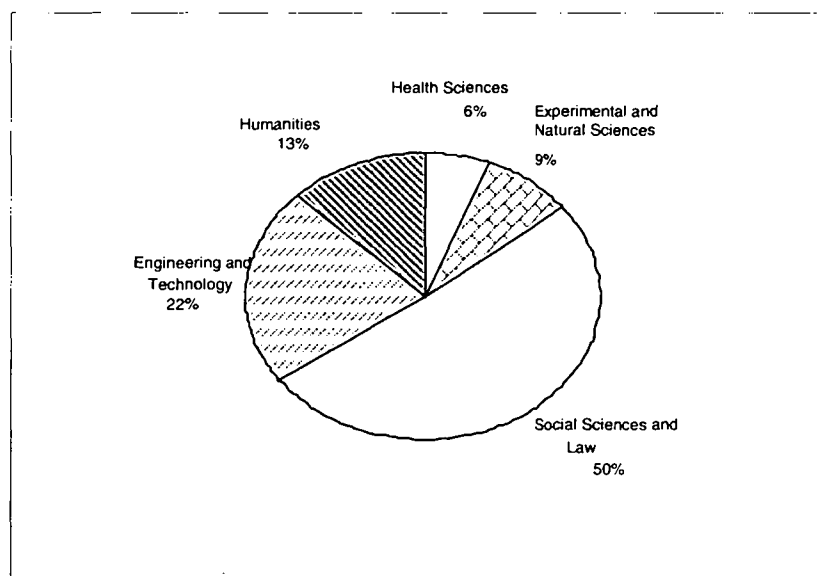
Source: University Coordination Committee. This data only refers to three and four-five or more year degrees carried out in state universities.
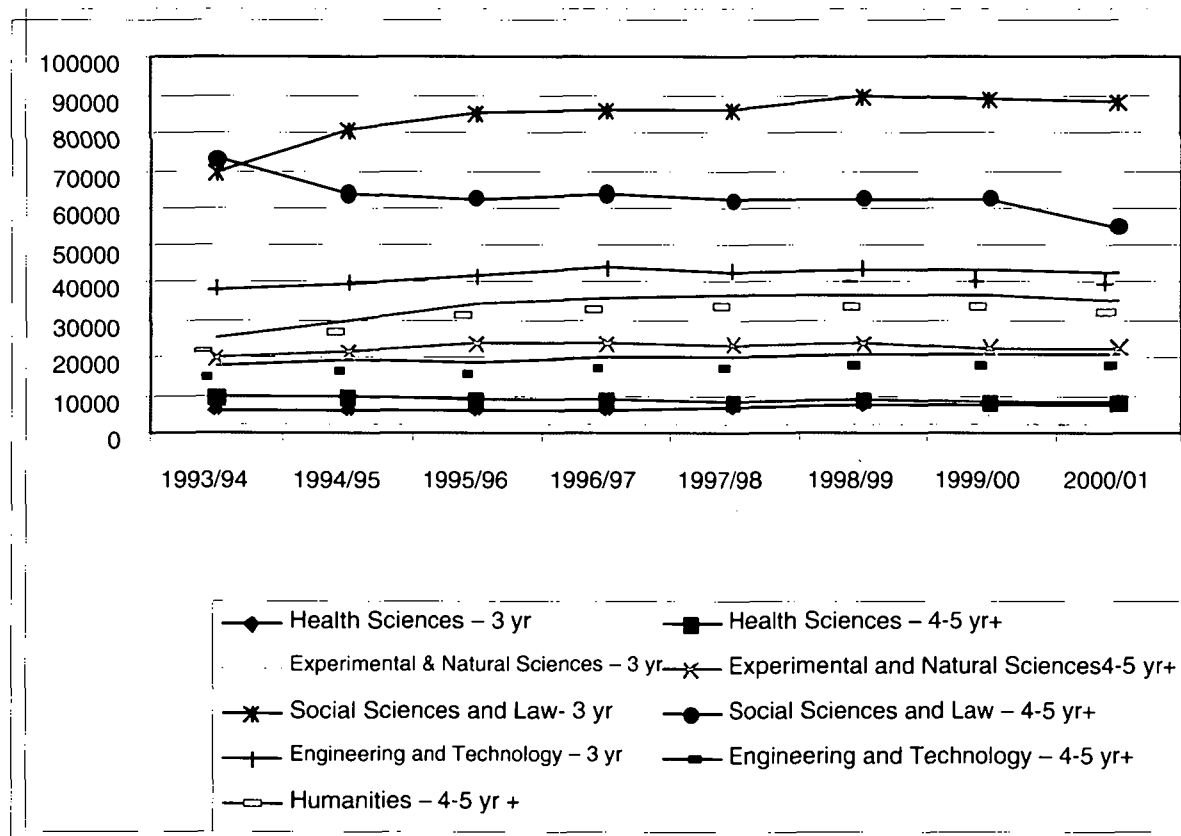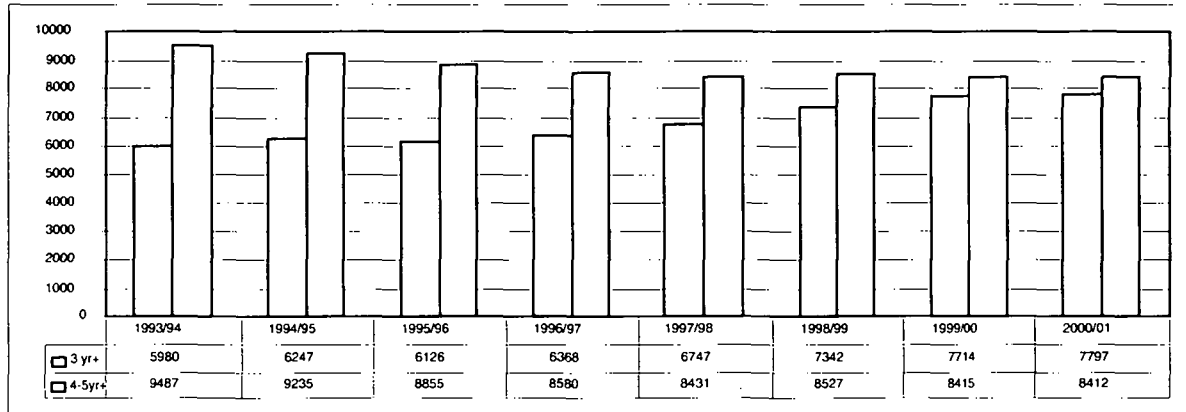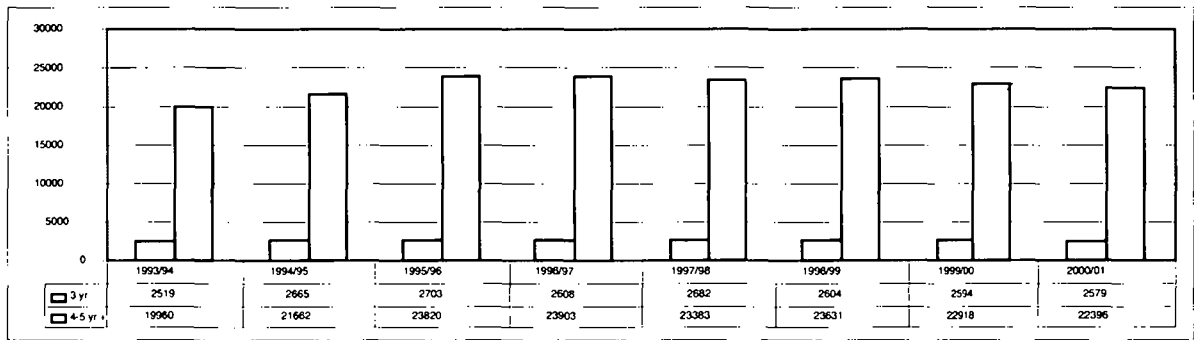
26

In terms of the supply and demand of university places, 45% of the degrees analysed considered the situation to be adequate or satisfactory. No common profile could be made out in this respect and it seems that results were spread equally among all fields of study and different length degrees.

However, 35% of the degrees assessed considered the relationship between supply and demand to be a problem. This was especially clear to see in cases which showed a fall in demand. The reasons given were increased competition (because of the wide variety of degree courses and universities offering them) and the already noticeable reduction in the number of new students due to lower population levels. Analysis of the information shows that demand was only greater than supply in courses related to Health Sciences and four-five or more year Engineering and Technology Degrees (see Graph 23).

Graph 23. Difference between the supply and demand of places, by branch of study and length of degree (1993-2001)
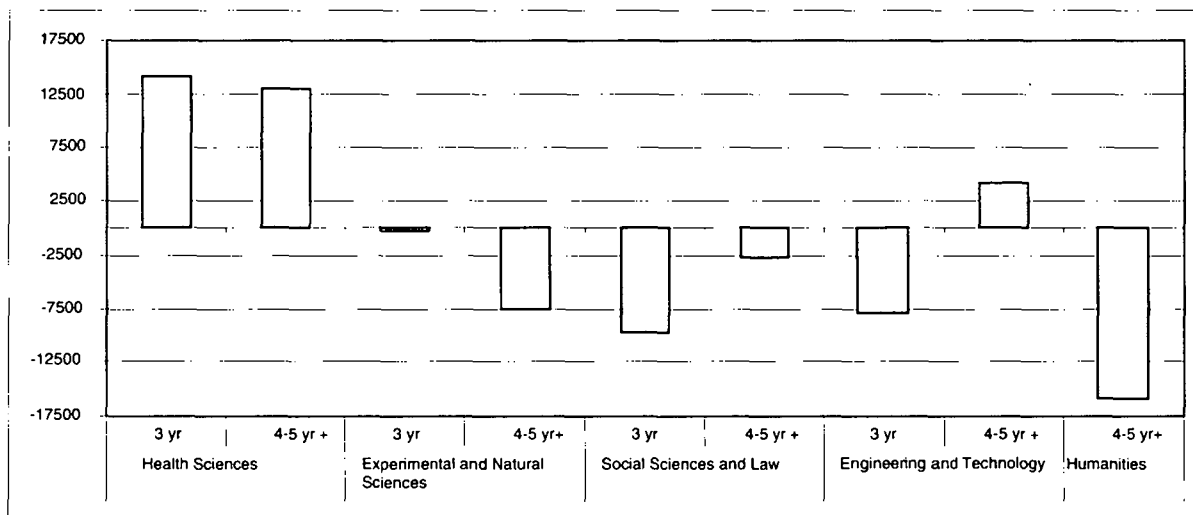
Source: University Coordination Committee.

The graph shows the difference between the demand for degrees (students who apply to take these courses) and the supply (places offered by the universities). Positive values show that demand for places is greater than supply.

Only 29% of the degrees assessed considered students' academic level to be of a high enough standard when they started university. In general, Health Sciences degrees and especially four-five or more year degrees stood out from the rest in this respect, since the percentage which considered students' prior education to be satisfactory increased to 70%. The minimum entry requirements painted a similar picture, as can be seen in Table 1. The information in this table illustrates

27

the fact that Health Sciences courses had some of the highest entry requirements of all branches of study (6.72 out of 10 for three-year courses and 7.00 out of 10 for four-five or more year courses in 2000/01). However, these figures are only a general guide since there are differences of more than 1 point between degrees within these groups. Detailed information on entry requirements can be found each year on the University Coordination Committee's website (www.mec.es/consejou).

On the other hand, 41% of the degrees assessed considered students' prior academic level to be poor. The most clearly defined groups in this respect are three-year degrees in general (46%) and Engineering and Technology degrees in particular (64%). By branch of study, the level of students studying Engineering and Technology degrees was considered to be the weakest, with 56% of the degrees assessed considering their academic level to be poor, along with 54% in the case of Humanities. Over the last four years of the assessment programme, Humanities courses had the lowest entry requirements of all fields of study (never higher than 5.12 out of 10). The degrees assessed suggested that the solution to problems related to the quality of students lies in changing the university entrance system in general and the entry to each degree in particular. This situation was prior to the introduction of the LOU (Ley Orgánica de Universidades - Organic Law on Universities), which has made specific changes to these two points. It will, therefore, take time before the results of this reform can be analysed in subsequent assessment programmes.

Table 1. Changes in minimum entry requirements (1993-2001)

TYPE OF DEGREE	LENGTH	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01
Health Sciences	Three year	6.62	6.68	6.87	6.91	6.83	6.84	6.75	6.72
	Four-Five or more year	6.24	6.66	6.83	6.91	6.90	6.97	6.97	7.00
Experimental and Natural Sciences	Three year	6.01	6.04	6.00	5.92	5.66	5.64	5.45	5.32
	Four-Five or more year	5.66	5.72	5.79	5.81	5.72	5.74	5.61	5.51
Social Sciences and Law	Three year	5.51	5.48	5.47	5.56	5.49	5.49	5.43	5.43
	Four-Five or more year	5.45	5.54	5.62	5.60	5.51	5.48	5.48	5.48
Engineering and Technology	Three year	5.75	5.83	5.83	5.81	5.72	5.63	5.60	5.48
	Four-Five or more year	6.57	6.60	6.57	6.54	6.26	6.34	6.16	6.10
Humanities	Four-Five or more year	5.19	5.18	5.24	5.22	5.22	5.24	5.18	5.12

Source: University Coordination Committee. The information comes from the Spanish state universities themselves.
The indicator in the table is the average entry requirement mark adjusted according to the number of places offered in each degree according to field of study and length of degree. The entry requirement is the minimum mark with which a student is accepted onto a degree.

4 DEGREE PROGRAMME

4.1 Aims and Objectives

In general, degrees in the Spanish university system were seen to lack clearly defined objectives. Only 17% of the degrees assessed acknowledged having clearly defined aims. The absence of objectives was greater in Engineering and Technology Degrees in general (46%) and in three-year degrees in all fields of study. Together with other aspects which shall be dealt with later on, the assessment committees considered that all degrees implementing a new degree programme must clearly set out the course objectives, since this is the basis for solid design and allows assessment of the results.

The Bologna Declaration currently foresees the creation of a single European space for higher education by 2010. This involves changing university degrees to make a common framework of comparable qualifications within the European Union. This compulsory reform may well provide the perfect opportunity to overcome the deficiencies detected so far in terms of objectives and other aspects detailed in the following sections.

The absence of clearly defined objectives does not imply that degrees do not have clearly defined **educational profiles**, i.e. coherent groups of subjects which are offered to students. 86% of the degrees assessed considered this to be one of their strengths. However, other degrees (11%) felt that the educational profile was poorly defined and felt that this profile was not relevant to the requirements of the labour market. In such cases, it was suggested that all parties (students, graduates, employers, professional associations, etc) should be involved in clearly defining the educational profile (or profiles) of the future graduate so that all the possible perspectives may be included in the degree programme.

4.2 Structure

78% of the degrees assessed were not satisfied with their **programme design**. The situation was even worse for three-year courses in Engineering and Technology (88%). The most highly criticised aspects were the length of the

degrees (considered too short) and the design of the degree programme itself. Three-year degrees, especially in Social Sciences and Law (35%) and Health Sciences (32%) were the least satisfied with course length. In terms of degree programme design, one in four of the degrees assessed proposed an increase in the number of years required to finish the degree. Shortcomings included the content, structure, credit distribution, sequencing and excessive number of subjects studied each academic year. It was thus proposed that 74% of **degree programmes be revised**, especially in the field of Humanities (80%). Although degree programmes normally and obviously require constant improvement, these percentages appear to be excessively high and suggest that degree programmes are indeed in need of revision.

Meeting the needs of the labour market and of society was seen to be an essential part of this reform process, highlighted by the lack of analysis of the socio-economic context in which degrees are undertaken. On the one hand, this may be due to the lack of clearly defined objectives, as mentioned earlier. On the other hand, it may be due to a lack of information about the relationship between the supply of graduates and the requirements and demand of the labour market. This information, which is an essential link with the socio-economic environment, should be made available to students, employers and society in general.

In spite of acknowledged advances in degree programme design in terms of the type of credits and their distribution, more than 50% of degrees, especially Health Sciences degrees (66%), were not satisfied with their degree programme design. They pointed to the limited range of optional subjects available, the limited relevance of their content and the excessive fragmentation of the subjects. This applies especially to optional subjects and above all to subjects in Humanities. The range of optional and "free choice" subjects should therefore be increased, as should the practical part of these subjects. There also seems to be a need to plan curricular pathways and create specialties by using the options included in degrees and the new two year postgraduate degrees.

4.3 Syllabi

Syllabi were considered somewhat unsatisfactory due to their excessive length (40% of the degrees assessed), their lack of homogeneity, inadequate sequencing and the lack of coordination between subjects leading to overlapping in content on occasion. It would appear that there is a need to create a body to oversee the coordination of the various subjects within a degree. Three-year courses (46%) were the least satisfied, especially those in the field of Social Sciences and Law (52%). On the other hand, Health Sciences degrees (36%) and Humanities degrees (34%) were the most satisfied with their content.

There were few procedures designed to guarantee the **scientific updating of syllabi** and advances, therefore, need to be made in this respect.

4.4 Practical Training

Progress has been made in improving the practical side of university education, although improvements still need to be made in this respect. 31% of the degrees assessed highlighted various problems with the practical part of their degree programme (unsuitable content, out of step with objectives, lack of practical training, lack of money, lack of agreements etc). This percentage rose to 70% in four-five or more year Health Sciences degrees. There needs to be better content definition, a greater range of practical training on offer, better coordination and a reduction in the number of students per group. In terms of work experience, most degrees were highly satisfied, although it was felt that the range of work experience possibilities should continue to increase.

Some degrees include a **practicum** in their degree programme (in Teacher Training and Law in the field of Social Sciences and Law) in the form of an extended period of work experience. In this case, it was requested that the practicum be valued more highly and followed up more closely. Praise was given to the way in which the practicum was organised and to student information mechanisms ("Guía del practicum" (Practicum Guide), which provides students with all the relevant information on assessment systems, behavioural guidelines, etc.).

5 RESOURCES

5.1 Human Resources

5.1.1 Academic Staff

73% of the degrees analysed felt the **structure of their team of academic staff** to be unsatisfactory, a figure which rose to 78% for Social Sciences and Law degrees. In addition to this, shortcomings with regard to recruiting and hiring teaching staff were also highlighted. 60% of the degrees assessed proposed measures to improve this situation (by adapting the structure of the teaching staff to the needs of the degree and improving the procedures by which teaching staff are hired and promoted). Above all, proposals were put forward by Health Sciences degrees (73%).

A high percentage of degrees assessed, above all three and four-five or more year Health Sciences courses (86% and 56% respectively), considered that the **educational profile** of their academic staff met the requirements of the course.

Motivation levels among academic staff (defined in terms of enthusiasm, level of involvement, satisfaction etc.) were generally good in the degrees assessed. Proposals put forward to increase motivation included providing incentives, improving coordination and forming teaching teams.

With regard to **academic staff training**, 50% of the degrees assessed considered training programmes and the help available to carry them out to be insufficient, above all by four-five or more year Experimental and Natural Sciences degrees (78%). Despite these shortcomings, academic staff were seen to take an interest in training and participated in the training programmes available. Proposals were put forward to create a policy of institutionalised academic staff training to encourage refresher and innovation programmes.

5.1.2 Administrative and Service Staff

Half of the degrees acknowledged that there were insufficient administrative and service staff, although their performance was considered to be satisfactory by

40% of the degrees. In this respect, most improvements were suggested by Health Sciences degrees, and in particular four-five or more year courses (60%). Proposals involved promoting specific training programmes, such as clarifying and specifying the functions of administrative and service staff.

5.2 Infrastructure

5.2.1 Teaching resources

Whatever the current situation may be, most degrees (59%) thought computing resources and audiovisual teaching resources needed to be improved. In certain cases, it was also pointed out that more resources were needed for specific teaching in Humanities and for practical classes in Experimental and Natural Sciences and Engineering and Technology. 23% of degrees put forward proposals to improve the quality of their lecture rooms, 48% their educational resources and 23% their laboratories.

The fact that 36% of Humanities degrees acknowledged that there were not enough laboratories (i.e. they did not exist or simply lack of resources) may indicate that teaching has been brought up to date in scientific and didactical terms. For example, there was seen to be a need to improve language and interpreting laboratories and laboratories specifically designed for music and computing.

5.2.2 Facilities

41% of the degrees assessed clearly stated that they were satisfied with their lecture rooms (in terms of quantity, capacity, teaching resources and environmental conditions). However, 51% claimed that improvements could be made and highlighted certain deficiencies. The most frequently mentioned shortcoming, expressed by 38% of the degrees, was the lack of computing rooms.

It is difficult to give a clear view of the overall situation of university facilities since assessment of buildings, laboratories, etc used for each degree depends on individual situations. Over half the degrees assessed claimed that they were not satisfied with their facilities, yet others stated that they were adequate. In Health

Sciences, 66% considered their facilities to be one of their strong points and this figure rose to 100% for four-five or more year degrees in the same branch of study. In general, it was considered that there were enough modern buildings located near hospitals for teaching both theory and practice. Humanities degrees were the least satisfied with their premises and 68% considered them to be inadequate.

Efforts have been made to overcome these shortcomings by requesting investment to extend existing facilities (26%), to make improvements (24%) or to build new facilities (18%). 16% of degrees agreed to overcome shortcomings by improving their administration.

There were shortcomings in the **additional services** assessed in almost half the degrees (45%). Half of these deficiencies concerned the need to improve the coffee bar / refectory (22%) and the photocopying service (19%), which are the services most directly used by students (and the most common ones in all universities).

5.2.3 Environmental conditions

Safety and hygiene proved to be an important concern for Experimental and Natural Sciences degrees, especially for practical laboratory sessions. Deficiencies were reported in 38% of these degrees. These shortcomings concerned safety measures in buildings, the lack of emergency procedures and the incorrect recycling of dangerous waste materials. However, there appeared to be a positive trend in 26% of four-five or more year Experimental and Natural Sciences degrees which highlighted their safety and hygiene measures as one of their strong points, especially in terms of the correct recycling of waste materials.

A specific shortcoming in terms of working conditions was the **shortage or inadequacy of office space** for teaching staff, as stated by 21% of the degrees. This deficiency was especially evident in Social Sciences and Law degrees (24%) and above all in Humanities (37%).

The reports showed that the academic community feels an ever greater responsibility to overcome the **architectural obstacles** facing handicapped

people. Such obstacles were reported in 14% of degrees and 11% proposed specific measures to overcome them.

5.3 Economic Resources

The budget for teaching was generally considered to be insufficient, although few details were given. This was more evident in Engineering and Technology (31%) and Experimental and Natural Sciences (28%) than in other degrees (18%). It is clear that teaching which involves laboratories requires specific funding.

Budget increases have been planned for 17% of degrees.

The following table groups together state universities, with a base of 100, according to the result of the indicator Current Expense per Student Enrolled from the "*Catálogo de Indicadores del Consejo de Coordinación Universitaria (CCU)*" (Catalogue of Indicators of the University Coordination Committee. The definition may be found at the following website http://www.mec.es/consejou/indicadores/index.html). This indicator is simply the distribution of current expenses (sections 1, 2, 3 and 4 of the university budgets) per student enrolled adjusted according to the cost of the materials needed on the course studied. This does not take into account the internal structure of the degrees, their history, staff, campus structure, size, age etc.

Table 2. Current expense per student enrolled

Alcalá University Autonomous University of Barcelona Autonomous University of Madrid Barcelona University Carlos III University of Madrid Complutense University of Madrid La Laguna University	Lleida University Miguel Hernández University Polytechnic University of Catalonia Pompeu Fabra University University of Navarra Rey Juan Carlos University	>150
University of Alicante University of Cadiz University of Cantabria University of Cordoba University of Girona University of the Balearic Islands Jaume I University University of La Rioja University of Las Palmas	University of the Basque Country Polytechnic University of Cartagena Polytechnic University of Madrid Polytechnic University of Valencia Roviri i Virgili University University of Salamanca University of Valencia Estudi General University of Valladolid University of Zaragoza	126-150
University of La Coruña University of Almeria University of Burgos University of Castilla-La Mancha University of Extremadura of Granada University of Huelva University of Jaen	University of Leon University of Malaga University of Murcia University of Oviedo Pablo de Olavide UniversityUniversity University of Santiago de Compostela University of Seville University of Vigo	100-125

Source: University Coordination Committee.

6 TEACHING PROCESSES

6.1 Students

The general **information** received by students (enrolment, timetables, programmes, centres, qualifications...) was considered to be satisfactory in approximately half of the degrees (47%), above all in three-year Engineering and Technology degrees (62%). Student information offices and the various services offered by the vice-chancellor's office and centres were viewed positively, especially when it came to enrolment, applying for scholarships and research grants, career development, international relations etc. Shortcomings in the information systems were particularly evident in Experimental and Natural Sciences degrees (98%).

Where available, academic guides (dealing with the degree programme, syllabi, methodology, timetables etc.) were viewed positively. Other means of providing information, such as web pages, e-mail, notice boards and university publications were also seen to be available. Shortcomings involved the lack of syllabi available on enrolling or on starting the course and the poor organisation and coordination of promotion and access channels.

Most degrees felt **student information, guidance, attention and assistance services** needed to be improved. In fact, only 14% of three-year Experimental and Natural Sciences degrees viewed them positively and 81% of three-year Social Sciences and Law degrees acknowledged that improvements could be made. Special emphasis was placed on the need to promote student guidance services, above all for new students. In order to improve the attention given to new students, proposals were put forward to encourage open days and provide initial guidance to enable students to integrate easily into university life. Engineering and Technology (85%) and Social Sciences and Law (82%) stood out in this respect, especially three-year degrees (90% and 85% respectively). It was also considered necessary to supplement and improve the information provided to students throughout their studies to enable them to choose their curricular pathway of optional and "free-choice" subjects and obtain information on how to apply for grants. This need was particularly evident in three-year Engineering and

Technology degrees (90%). Other aspects in need of improvement were the lack of coordination between the different services and the fact that students were not aware of the existence of some of these services.

A large number of degrees (43%) acknowledged the fact that **student workloads were too high**, i.e. too many demands were placed on students and that they were asked to do too much work for each subject. It was, therefore, considered necessary to adapt the demands made and the subject content to the aims of the degree and to its credits. In addition, it was recommended that efforts be made to improve students' learning strategies.

The **student-lecturer relationship** was viewed positively by the majority of Health Sciences degrees (52%), above all in four-five or more year degrees (60%). It was also viewed positively by three-year Social Sciences and Law degrees and three-year Experimental and Natural Sciences degrees. 31% of degrees considered that there were deficiencies in the student-lecturer relationship, above all three-year Health Sciences degrees and four-five or more year Humanities courses (44% in both cases). Relatively few degrees (8%) proposed ways to improve and encourage the student-lecturer relationship.

The majority of degrees reported limited student **participation** in **elections**, above all four-five or more year Health Sciences degrees (60%) and three-year courses in Engineering and Technology (48%). One third of the degrees assessed thought improving this situation was important, above all four-five or more year Experimental and Natural Sciences courses and three-year Engineering and Technology courses.

The level of **student participation in university life** was viewed differently by different degree areas. 30% of Experimental and Natural Sciences degrees viewed this aspect positively, whereas it was considered to be poor by four-five or more year Humanities degree courses (37%) and by three-year Engineering and Technology courses (35%). It would seem that students need to be encouraged to take part in university life and it was, therefore, suggested that the student union be promoted, in addition to the figure of a representative who defends students'

rights. Some units suggested increasing students' responsibilities in the department and undertaking extracurricular activities.

6.2 General organisation

The most important problem with regard to the organisation of teaching is the **lack of coordination between departments and teaching staff**, which leads to content overlap in some subjects. 49% of degrees assessed, above all three-year courses, considered this lack of coordination to be a weak point. On the other hand, 39% of Health Sciences degrees felt this was one of their strong points.

There was a certain degree of discontent with the **calendar and the design of academic timetables**. It was suggested that these be optimised, which often implies reorganising the use of space and resources. Social Sciences and Law degrees were least in agreement with their timetable design (33%).

29% of the degrees assessed considered the **total distribution of students in groups** to be satisfactory. Experimental and Natural Sciences and Humanities degrees (40% and 42% respectively) viewed this aspect most favourably. According to length, the four-five or more year degrees viewed the distribution of students most favourably (39%). Proposals to improve the situation were centred almost exclusively on reducing the **number of students per group** in certain subjects or in certain types of subjects (practical sessions, first-year subjects....).

Assessment of the decision-making bodies most closely related to the organisation of teaching, the centres themselves, varied. The operation of existing bodies and commissions was viewed positively, but the lack of definition, fragmentation and overlapping of the different decision-making bodies, be they collegial or individual people, was viewed negatively. 13% of degrees considered the lack of independence of this level of decision making with respect to others within the university itself to be in need of improvement and suggested the need to improve existing regulations in order to achieve this (10% of degrees assessed).

A wide range of methods were used to **assess teaching staff performance**. Among the weaknesses highlighted by degrees were the lack of assessment

procedures, shortcomings in existing assessment procedures and the limited importance given to the assessment of academic staff. Units which viewed this aspect positively claimed that lecturers' professional competence could be judged by means of teaching assessment, although it is not clear what the consequences would be. Proposals therefore highlighted the need to improve teaching staff assessment procedures and establish action guidelines based on the results.

6.3 Tutoring

Tutoring has traditionally been the task of lecturers and involved attending to students' requirements in certain subjects. However, over the last few years universities have undertaken various tutoring programmes including projects designed to improve the attention given to students. 39% of the degrees assessed considered tutoring to be extremely important and viewed it positively, whereas 18% viewed it negatively. The situation was viewed more positively by Social Sciences and Law and Experimental and Natural Sciences degrees. Among the factors which influenced this assessment were lecturers' availability and the advantages derived from giving individual attention to students. The most highly valued aspects included the introduction of tutors to help students choose their curricular pathway, the existence of tutoring programmes and the use of Internet for tutoring and group tutoring. This was particularly clear to see in three-year Social Sciences and Law degrees.

However, 45% of degrees acknowledged that tutorial sessions were rarely attended and that there was no tradition of tutoring among lecturers. Doubts were even expressed over the effectiveness of the traditional system of subject tutoring. Although tutoring projects were acceptable in theory (hours per lecturer, timetable distribution, etc...), students rarely took advantage of them. This problem could perhaps be overcome by increasing the amount of information available to students about their purpose and usefulness, in addition to improving the training given to lecturers to perform this important task as part of their teaching duties. Degrees specifically recommended strengthening and improving tutoring (43%), introducing the figure of the tutor (30%), introducing tutoring programmes (32%), making sure that tutoring sessions do not coincide with classes and improving awareness (15%).

6.4 Teaching methods

33% of the degrees assessed viewed teaching methods positively, basing their assessment on the existence of a wide range of methods, extraordinary experiences, the use of active teaching methods etc. On the other hand, 32% viewed this aspect negatively, mainly due to the excessive use of traditional lecturing. Proposals put forward to improve the situation included adapting teaching methods to meet academic objectives, improving coordination among lecturers and among subjects (once again) and encouraging student participation.

In addition, 40% of degrees put forward proposals to encourage and organise **extracurricular activities** (symposia, conferences, cultural and sporting events etc.) to complement improvements in teaching methods. Degrees in the fields of Humanities and Engineering and Technology stood out in this respect.

The existence of **academic support activities** was viewed positively (above all by three-year Engineering and Technology courses) albeit by few degrees due to the fact that these activities were not very common. Recognition was given to the usefulness of the so-called *"zero course"*, which aimed to fill any initial gaps in students' knowledge in particularly difficult subjects. In this respect, lecturers' willingness to help students was viewed positively. 22% of degrees (a percentage which rose to 43% and 41% in three-year Experimental and Natural Sciences and Engineering and Technology degrees respectively) agreed with encouraging academic support activities, including the need to strengthen the *"zero course"*, help students who have specific academic problems, offer courses on studying techniques and encourage extra education.

Lecture attendance levels were considered to be low by 21% of degrees. A decisive factor in this respect may well be the excessive workload placed on students, as mentioned earlier. Reducing this excessive workload would reduce absenteeism and lead to a greater degree of participation. Another incipient factor may be the existence of students who work and study at the same time, although there was not enough evidence available to prove this. Health Sciences degrees, especially three-year courses, were the most satisfied with lecture attendance levels.

6.5 Assessment

Examination formalities – exam content, publication of exam dates, frequency, publication of results and exam inspection procedures – showed few deficiencies and these could be easily corrected by simple improvements. Even though progress has been made in deciding and informing about the academic calendar in advance, final exams were not considered to be very well planned or well organised, leading to too many exams being held at the same time.

However, this can at times be a highly controversial subject due to the possible consequences of change. 21% of degrees considered it necessary to improve examination systems in the different subjects and gain consensus over the assessment criteria used. This was due to the wide variety of criteria used, the limited importance of practical sessions and the lack of coordination among lecturers.

A small number of degrees have introduced new examination procedures. Examples include procedures which allow for a global assessment of students' performance at the end of the first three years then at the end of the degree, thus going beyond the traditional system of examinations in each subject. These systems allow certain elements which play an important role in students' education, such as work experience, extracurricular activities or the recognition of studies undertaken abroad to be taken into consideration, all within a framework of greater independence which allows the student to shape his or her own curriculum.

6.6 External Relations

Although analysis of this aspect was limited, the degrees which viewed the socio-economic environment positively were four-five or more year Health Sciences degrees (30% of the degrees assessed), two year postgraduate Humanities degrees (25%) and three-year Engineering and Technology degrees (16%). As shall be seen later on, these degrees considered the supply-demand relationship to be more favourable. On the other hand, it was considered unfavourable by degrees in Experimental and Natural Sciences in general (13%).

If the definition of objectives is regarded as an essential link with the socio-economic environment (for students, employers and society in general) and if the supply and demand relationship is considered to be an indicator of this, the total absence of socio-economic environment analysis contrasts with the importance attributed to the objectives and the supply and demand relationship when analysing the objectives of the degree.

Half the degrees assessed, above all Health Sciences, Engineering and Technology and Humanities degrees, enjoyed good relations with business organisations, as well as with Spanish and foreign universities. In cases where relations were not so strong (34%), administrative limitations were usually the reason given as to why closer relations had not been forged.

External relations with the business sector were mainly centred on formalising agreements enabling students to do work experience. This type of relationship was not seen to offer feedback in order to increase degrees' involvement in the socio-economic environment, nor did it promote the image or increase awareness of the course or provide information about businesses' assessment of graduates. The relationship did not give universities an insight into what the demand for their graduates was or to find out what jobs they did, nor did it allow them to seek ways of closing the gap between university teaching and the profiles required by the productive sectors of society to which they lend their services. Overcoming these shortcomings should be a priority considering their importance and the enormous influence they have on improving the efficiency of the university system.

Relations between universities existed at institutional level and between teaching staff from different institutions. However, the good relations in this sector did not appear to have generated a spirit of exchange between degrees of the same name and as a result, opportunities of mutual enrichment have been lost.

Although there has been an enormous increase in the number of student exchanges, for example in the Socrates / Erasmus programmes (see Graph 24), the corresponding changes in the administrative infrastructure planning has not developed at the same rate. 28% of degrees found it difficult to carry out exchange programmes due to various administrative problems (lack of awareness

of programmes, shortage of resources, problems with credit recognition etc.) which prevented them from achieving better results.

Graph 24. Mobility of Spanish students - Socrates/Erasmus (1991-2001)
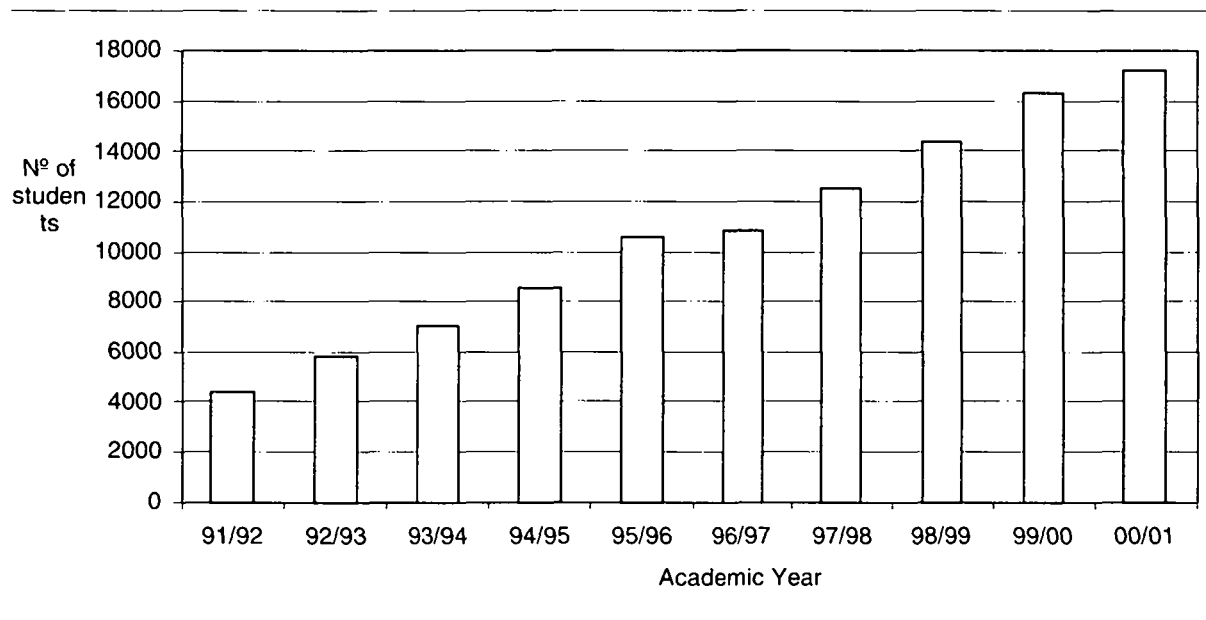
Source: Ministry of Education, Culture and Sport, National Erasmus Agency

However, there was an interest in boosting external relations at all levels, as can be seen from the fact that 60% of the degrees assessed put forward proposals to strengthen ties with companies and institutions in general and 36% to specifically promote exchange programmes and the image of their degree course and graduates.

7 TEACHING RESULTS

It was estimated that 26% of students graduated within the time set out in the degree programme (success rate). The most worrying situation was in Engineering and Technology, whose success rate was 4%, and in Experimental and Natural Sciences, whose rate was 17% (see Table 3). These poor results were due to high drop-out rates and the excessive amount of years required to finish the courses (see the following tables). In this respect, Health Sciences degrees (apart from Veterinary Science) and three-year Social Sciences and Law courses had the best records.

Table 3. Estimated success rate based on a total cohort of new students (1991-1997)

	Length of degree		
	3 years	4-5 years+	Total
Health Sciences	67%	35%	51%
Experimental and Natural Sciences	22%	12%	17%
Social Sciences and Law	38%	24%	31%
Engineering and Technology	3%	6%	4%
Humanities		28%	28%
Total	33%	21%	26%

Source. Prepared using data from the self-assessment reports of units that took part in the PNECU. The figures do not include units from Catalonia because they use a different formula to calculate the indicator. The success rate is the percentage of students from a new cohort who conclude their studies within the time set out in the degree programme as a percentage of the total number of new students.

The overall drop-out rate was 26%. The best results were obtained in three-year Health Sciences degrees and the most worrying results came from Experimental and Natural Sciences and Engineering and Technology.

Table 4. Estimated drop-out rate (1991-1997)

	Length of degree		
	3 years	4-5 years +	Total
Health Sciences	10%	17%	13%
Experimental and Natural Sciences	26%	40%	33%
Social Sciences and Law	22%	25%	24%
Engineering and Technology	35%	33%	34%
Humanities		31%	31%
Total	23%	29%	26%

Source. Prepared using data from the self-assessment reports of units that took part in the PNECU. The figures do not include units from Catalonia because they use a different formula to calculate the drop-out rate. The drop-out rate is the percentage of students from a cohort who did not enrol for two consecutive years as a percentage of the total number of students from that cohort.

First-year drop-outs represented approximately 60% of the total number of drop-outs. The breakdown by branch of study indicated the distribution was the same as in the overall drop-out figures. The fact that most students drop out during their first year suggests the need to seek ways of helping students to adapt to university life or the need for specific support programmes to reduce the effect of the factors that cause students to drop out.

Table 5. Estimated first-year drop-out rate (1991-1997)

	Length of degree		
	3 years	4-5 years +	Total
Health Sciences	6%	4%	5%
Experimental and Natural Sciences	21%	23%	22%
Social Sciences and Law	14%	15%	15%
Engineering and Technology	25%	18%	21%
Humanities		20%	20%
Total	16%	16%	16%

Source. Prepared using data from the self-assessment reports of units that took part in the PNECU. The figures do not include units from Catalonia because they use a different formula to calculate the first-year drop-out rate. The first-year drop-out rate is the percentage of students who leave the degree course in the first year as a percentage of the total number of students from each cohort.

The assessment reports showed that 39% of degrees acknowledged poor performance results in the various subjects that comprise the degree programme (performance is defined as the percentage of students who pass). 16% of degrees fully acknowledged that this situation was due to a combination of students' lack of ability and the low number of students that sat each exam. This situation reached alarming levels in three-year Engineering and Technology and courses in four-five or more year degrees in the field of Experimental and Natural Sciences. The opposite was true for three-year degrees in Health Sciences and Social Sciences and Law. Graduation indicator results (success, delay and drop-out rates (see Table 6 and 7) in 36% of the degrees assessed were considered to be poor.

Table 6. Degrees with good performance indicator results

	Length of degree		
	3 years	4-5 years +	Total
Health Sciences	47%	20%	41%
Experimental and Natural Sciences	29%	25%	28%
Social Sciences and Law	43%	22%	36%
Engineering and Technology	18%	19%	19%
Humanities		34%	34%
Total	35%	25%	31%

Table 7. Degrees with poor performance indicator results

	Length of degree		
	3 years	4-5 years +	Total
Health Sciences	24%	30%	25%
Experimental and Natural Sciences	43%	72%	58%
Social Sciences and Law	28%	34%	29%
Engineering and Technology	63%	38%	56%
Humanities		44%	41%
Total	38%	43%	39%

Source: Prepared using data from the assessment reports

N.B.: The percentages do not add up to 100% due to the fact that some units did not complete this section in their reports

Table 8. Changes in university students' actual degree completion times

AREA	Length of degree	1993/94	1996/97	1999/00
Humanities	4-5 yr+	6.5	6.1	6.0
Experimental and Natural Sciences	3 yr	5.0	4.6	4.5
	4-5 yr+	6.7	6.6	6.5
Health Sciences	3 yr	3.3	3.2	3.3
	4-5-6 yr+	7.1	7.0	6.7
Social Sciences and Law	3 yr	4.4	4.1	4.0
	4-5 yr+	6.5	6.6	6.4
Engineering and Technology	3 yr	6.1	5.6	5.7
	4-5-6 yr+	9.6	9.0	7.8

Source: University Coordination Committee

This data was obtained from samples between 78.32% and 62.39%. In theory, three-year courses last 3 years and four or five year degrees last four or five years, with the exception of certain Health Sciences and Engineering and Technology degree courses which last 6 years.

33% of the degrees assessed were aware of the lack of specific follow-up surveys to monitor students who graduated from their courses. Universities could not provide each degree with information on the level of demand for their graduates,

their employability and the degree to which the education received met the immediate requirements of the labour market. 39% of the degrees proposed plans to carry out such studies.

Despite the lack of such studies, many degrees claimed that there was a high demand for their graduates or that they had good prospects of finding a job (30% of the degrees assessed, above all Engineering and Technology courses (54%) and three-year Experimental and Natural Sciences courses (43%)).

Despite the fact that many degrees maintained good relations with business organisations, no information was available about how these companies assessed the university education received by students. It may be worth taking advantage of these good relations to obtain such information.

8 COURSE PROFILES BY BRANCH OF STUDY

These profiles have been drawn up using the results obtained from the degree assessments with the aim of illustrating characteristic features of the various fields of study, i.e. to show how they differ from the general conclusions set out above in terms of the points analysed (supply and demand, degree programme, resources, teaching processes and teaching results). Different profiles are only presented for three-year and four-five or more year courses within each branch of study.

8.1 Health Sciences

The following degrees were analysed in this branch of study:

Branch	Length	Degrees	Degrees assessed	Existing Degrees	Coverage ratio
Health Sciences	3 years	Diploma in Nursing	22	43	51%
		Diploma in Physiotherapy	10	21	48%
		Diploma in Speech Therapy	2	9	22%
		Diploma in Chiropody	2	6	33%
		Diploma in Occupational Therapy	3	7	43%
	4-5 or more years	Degree in Pharmacy	8	11	73%
		Degree in Medicine	10	27	37%
		Degree in Dentistry	4	5	80%
		Degree in Veterinary Science	1	9	11%
Total: Health Sciences			62	138	45%

Source: PNECU and University Coordination Committee

Degrees Assessed: Degrees assessed (with external assessment report) in the PNECU.

Existing Degrees: Degrees offered in this field by Spanish state universities.

Estimated coverage ratio: Estimates the percentage of degrees assessed as a percentage of the total number of existing degrees. It is an estimated figure due to the fact that it only takes into account degrees offered by centres within the Spanish state university system (as opposed to private universities).

8.1.1 Three-year degrees

The number of courses on offer increased by 13% over the last four academic years of the assessment programme and the number of places available rose by 15%. The entry requirement mark remained the same or went down slightly (see Table 1).

The relationship between demand and supply was extremely high (over 200%, see Table 6). In fact, these courses were at the top of the list in terms of demand. The high quality of teaching could be seen from the high academic standards

(53%), above all in the Diploma in Nursing and the Diploma in Physiotherapy. This was confirmed by the minimum entry mark, which was 6.72 (out of 10) in 2000-2001 (see Table 1). the second highest mark required in all degree courses.

In general, the **degree programme** structure and especially the variety and content of the subjects, was considered to be satisfactory. Another important element was the fact that the degree programme content met the requirements of the labour market. In this respect, the practical training included in the degree was also considered to be satisfactory in terms of the type of training, the way it was organised and carried out and the follow-up. A large percentage of degrees were unsatisfied with the length of the course (32%, one of the highest figures of its group).

Although an extremely high percentage (86%) of courses felt that their academic staff's educational profile fulfilled the educational requirements, it was pointed out that lecturers found it difficult to attend training and refresher courses (44%), mainly because such courses did not exist or because there were very few of them. Proposals were put forward to carry out refresher and innovation programmes for lecturers, mainly aimed at improving their pedagogical training.

In most cases, the buildings and facilities were considered to be a strong point of the courses.

Class attendance levels were high for these courses, although there was seen to be considerable room for improvement in the student-lecturer relationship with respect to other fields of study.

Relations with the business environment were viewed positively, above all relations with companies where students do work experience. In order to improve the training given to students, it was considered necessary to continue promoting this type of relations with business organisations (53%), thereby increasing the number of agreements enabling students to do work experience.

In comparison with other branches of study and other different length degrees, these courses obtained some of the best **results**. The degrees were satisfied with the academic performance of their students, in keeping with the success rate for

all the degrees in this branch of study (51%), a figure which is higher for three-year courses (67%) (see Table 3). In terms of the drop-out rate, these courses once again obtained the best results (10%) with respect to the overall results of their branch of study (19%) and with regard to other branches and different length degrees, since they had the lowest rate (Table 4).

8.1.2 Four-Five or more year degrees

The number of courses on offer also increased over the last four years of the assessment programme, this time by 12%, whereas the number of places available remained the same.

The high quality of teaching could be seen from the high academic level (70%), above all in Dentistry. This was confirmed by the minimum entry mark, the highest in the Spanish university system over the last seven years with an average mark of 7.00 (out of 10) in 2000-2001 (see Table 1). In addition, the students considered themselves to be motivated and highly satisfied with their studies, which may explain the high percentage of vocational students.

In terms of degree programme design, comments were made on the fact that the type of practical training did not fulfil requirements (70%) and that there was insufficient coordination of teaching in general (50%) and of the module content in particular (60%). Despite these criticisms, the degree programme content was considered to be satisfactory. It was, therefore, deemed necessary to improve the definition of the course content, increase supply and reduce the number of students per group. On the other hand, timetable planning, which is also related to teaching organisation, was considered to be good.

The profile of the teaching staff met requirements to a greater extent than in other fields of study (56%). However, the team of **lecturers** was considered to be inadequate (80%), mainly because there were not enough lecturers to fulfil course requirements. Improvement proposals were therefore put forward (73%) to narrow the gap between the teaching staff available and the course requirements. These degree courses were also the ones which suggested most improvements to the administrative and service staff (60%).

Assessment of the facilities stood out in comparison with other fields of study; 100% of the degrees assessed felt their facilities were one of their strengths. In general, the buildings, which were located close to hospitals, were considered to be modern and good enough for practical and theoretical teaching.

In terms of **teaching processes**, although the information and guidance provided to students was considered adequate (60%), it was proposed that these services be supplemented and improved. 60% considered the student-lecturer relationship to be good. Student participation in the department was considered to be very low by 60% of degrees (the highest figure with respect to other branches and different length degrees).

With regard to **external relations**, there was seen to be a need to promote relations with business organisations (40%) in order to increase the number of agreements and improve the conditions of those which already existed, thus making it easier for students to carry out work experience.

Health Sciences degrees obtained the best results of all branches of study in terms of their success rate and drop-out rate, but the results of four-five or more year degrees were slightly lower than those of three-year degrees. The success rate was 35% (see Table 3). The lowest success rate was in Veterinary Science and the highest in Dentistry. The drop-out rate was 29% (see Table 4). The lowest drop-out rate was in Dentistry and Pharmacy and the highest in Medicine.

8.2 Experimental and Natural Sciences

The following degrees were analysed in this branch of study:

Branch	Length	Degrees	Degrees assessed	Existing Degrees	Coverage ratio
Experimental and Natural Sciences	Three years	Diploma in Human Nutrition and Dietetics	0	13	0%
		Diploma in Statistics	7	13	54%
		Diploma in Optics and Optometry	5	8	63%
	Four-Five or more years	Degree in Biology	15	25	60%
		Degree in Environmental Science	7	18	39%
		Degree in Marine Science	1	3	33%
		Degree in Physics	12	21	57%
		Degree in Geology	5	8	63%
		Degree in Mathematics	13	24	54%
		Degree in Chemistry	26	34	76%
Total: Experimental and Natural Sciences			91	154	59%

Source: PNECU and University Coordination Committee

Degrees Assessed: Degrees assessed (with external assessment report) in the PNECU.

Existing Degrees: Degrees offered in this field by Spanish state universities.

Estimated Coverage ratio: Estimates the percentage of degrees assessed out of the total number of existing degrees. It is an estimated figure due to the fact that it only takes into account degrees offered by centres within the Spanish state university system (as opposed to private universities).

All four-five or more year degrees expressed their dissatisfaction with the **low academic level of new students**. The entry requirement mark was 5.32 (out of 10) in three-year degrees and 5.51 in four-five or more year degrees in 2000-2001 (see Table 1). These figures were among the lowest of all fields of study and degrees in general.

In general, the **degree programme structure** was viewed positively, as were the wide range of subjects on offer and the reforms carried out. However, in some degrees, shortcomings were detected in the content of the degree programme design. Most improvement proposals were aimed at changing the degree programme to avoid content overlap in different subjects, adapt it to the needs of the labour market, improve its content, etc.

The type pf **practical training** offered was viewed positively by the three-year degrees.

In general, all the three-year degrees were satisfied with their **course content**. Most of the four-five or more year degrees, especially the degree in Physics, put

forward proposals to reduce the length of their syllabi. However, despite such proposals there was a generally high degree of **syllabus completion**. It was also considered necessary to improve teaching methods.

With regard to their **material resources**, three-year degree courses considered their facilities to be satisfactory, although they expressed their dissatisfaction with the services offered, above all the coffee bar / refectory, lecture rooms and other resources. Four-five or more year degrees highlighted the shortcomings of their facilities and resources in general. As a result, both groups put forward proposals aimed at improving these points.

Three-year degrees showed their dissatisfaction with the **information given to students** and therefore put forward improvement proposals aimed at supplementing and improving this information. In general, four-five or more year degrees viewed this aspect positively, although they also put forward improvement proposals.

In terms of **student guidance**, the four-five or more year degrees viewed this aspect positively, although weaknesses were detected in services aimed at providing professional guidance and information. Proposals were therefore put forward to create a professional guidance and information service.

Although the four-five or more year degrees were generally satisfied with their relations with national and international universities and institutions, both four-five or more year and three-year degrees proposed to continue fostering such relations.

All degrees commented on the fact that there were not enough external relations, mainly with the Socrates / Erasmus programmes. Moreover, the three-year courses felt that promotion of their degree, its image and its graduates was poor. In general, proposals were aimed at improving these relations.

As far as **results** were concerned, 43% of three-year courses and 72% of four-five or more year courses acknowledged that performance indicator results were poor.

All degrees obtained poor graduation indicator results, above all three-year courses (71%). Analysis of success rates confirmed this assessment. The average success rate was 17%, 22% for three-year courses and 12% for four-five or more year courses (see Table 3). With the exception of Engineering and Technology, these success rates were the lowest of all fields of study. By degrees, the highest success rates were obtained in Optics and Optometry, followed by Biology. The lowest results were obtained in Physics.

The average drop-out rate for the whole field of study was 33%, with a higher rate in four-five or more year degrees (40%) than in three-year courses (26%) (see Table 4). As with the success rate, these courses obtained the highest drop-out rates together with courses in Engineering and Technology, closely followed by Humanities. Within the field of Experimental and Natural Sciences, the highest drop-out rates were in Physics and Environmental Science, as opposed to Marine Science, which obtained the best results.

Whereas three-year degrees expressed their satisfaction with **graduate follow-up studies**, the four-five or more year courses called for such studies to be undertaken for their students.

8.3 Social Sciences and Law

The following degrees were analysed in this section:

Branch	Length	Degrees	Degrees assessed	Existing Degrees	Coverage ratio
Social Sciences and Law	Three years	Diploma in Librarian Studies and Documentation	5	11	45%
		Diploma in Business Science	27	53	51%
		Diploma in Social Education	7	19	37%
		Diploma in Public Management and Administration	10	21	48%
		Diploma in Labour Relations	22	38	58%
		Diploma in Social Work	9	20	45%
		Diploma in Tourism	3	19	16%
		Teaching Certificate: Spanish Language	6	14	43%
		Teaching Certificate: Special Needs	12	26	46%
		Teaching Certificate: Physical Education	21	44	48%
		Teaching Certificate: Nursery school	26	53	49%
		Teaching Certificate: Music	23	42	55%
		Teaching Certificate: Primary Education	24	54	44%
		Teaching Certificate: Foreign Language	22	51	43%
	Four-Five or more years	Degree in Business Management and Administration	29	47	62%
		Degree in Physical Education	0	5	0%
		Degree in Political Science, Administration and Sociology	7	17	41%
		Degree in Audiovisual Communication	6	8	75%
		Degree in Law	31	52	60%
		Degree in Economics	22	30	73%
		Degree in Pedagogy	4	15	27%
		Degree in Journalism	10	8	125%
		Degree in Psychology	16	22	73%
		Degree in Advertising and Public Relations	6	8	75%
Total: Social Sciences and Law			348	670	52%

Source: PNECU and University Coordination Committee

Degrees Assessed: Degrees assessed (with external assessment report) in the PNECU.

Existing Degrees: Degrees offered in this field by Spanish state universities.

Estimated Coverage ratio: Estimates the percentage of degrees assessed out of the total number of existing degrees. It is an estimated figure due to the fact that it only takes into account degrees offered by centres within the Spanish state university system (as opposed to private universities).

60

8.3.1 Three-year degrees

The supply and demand relationship was viewed positively, mainly due to high demand for courses in the field of Education.

These degrees were the least satisfied with course length. In some cases, it was suggested that the number of years be increased.

With regard to the **degree programme**, the wide range of optional subjects was considered to be positive and the degree programme was seen to meet the needs of the labour market. However, the course content was considered to be in need of improvement.

82% of the degrees assessed considered the **structure of their academic staff** to be unsatisfactory.

Opinions varied on the **facilities and resources** available, although courses in the field of Education appeared to be the most concerned in this respect.

In terms of **teaching processes**, it was considered necessary to improve their organisation along with programme coordination. 52% of the courses assessed expressed a certain degree of dissatisfaction with their syllabi although the course content and timetable organisation was viewed positively. Weaknesses in the guidance and information provided to students were acknowledged and proposals were put forward to improve these points. There were considered to be too many students per group. Incorporating the practicum into the degree programme was seen to be a positive move and proposals were made to follow this up. Tutoring was viewed positively and proposals were made to improve and promote tutorials. The student-lecturer relationship was seen to be good. It was considered that progress could be made in the field of **external relations**.

The **results** did not vary greatly, although they were assessed more positively in education-based degrees. The success rate confirmed this assessment since these courses obtained an average figure of 52%, reaching 76% in some cases (Diploma in Social Education). The overall three-year success rate was 38% (see Table 3) and the drop-out rate was 22% (see Table 4).

8.3.2 Four-Five or more year degrees

The **supply and demand relationship** was also considered to be satisfactory for four-five or more year degree courses, either because of high or growing demand or because supply met existing demand.

Degree programme reforms were viewed positively, although proposals were put forward for new reforms aimed above all at improving degree programme content (with the exception of Economics degrees, which expressed their satisfaction with the programme content). The proposals were also aimed at reducing the number of subjects and adapting them to meet the requirements of the labour market.

The greatest shortcomings were found to be in the **facilities and resources** available. The additional services (above all the coffee bar and the photocopying service) and lecture rooms (above all computing rooms) were viewed negatively and there was also considered to be a lack of teaching resources. It should be taken into account that this branch of study had the highest number of students.

With regard to **teaching processes**, tutoring was viewed positively although it was felt that improvements could be made, above all in terms of creating a tutor figure, improving timetables and increasing awareness of when tutoring took place. Teaching methodology was considered to be satisfactory, but there were plans to improve it by establishing measures to promote practical training, increase student participation, improve coordination, introduce innovations, and optimise the use of resources. The complementary activities undertaken were also viewed positively and proposals were put forward to increase student participation and the number of activities. External relations and student exchange programmes were seen to be important and it was considered that they should be promoted.

As far as **teaching results** were concerned, assessments varied from one course to another and there were few similarities between the results in terms of groups of courses.

The success rate in this branch was 31% (see Table 3) and the drop-out rate was 24% (see Table 4). The success rate for four-five or more year courses was 24% and the drop-out rate was 25%.

8.4 Engineering and Technology

The following degrees were analysed in this branch of study:

Branch	Length	Degrees	Degrees assessed	Existing Degrees	Coverage ratio
Engineering and Technology	Three years	Technical Architecture	7	14	50%
		Diploma in Naval Machines and Maritime Navigation	9	10	90%
		Diploma in Naval Radio-electronics	1	1	100%
		Technical Engineering in: Aeronautics	0	1	0%
		Technical Engineering in: Agriculture (all specialities)	21	59	36%
		Technical Engineering in: Mining (all specialities)	5	17	29%
		Technical Engineering in: Public Works (all specialities)	8	17	47%
		Technical Engineering in: Telecommunications (all specialities)	7	29	24%
		Technical Engineering in: Industrial Design	5	8	63%
		Technical Engineering in: Computer Science (Management and Systems)	46	68	68%
		Technical Engineering in: Topography	5	9	56%
		Technical Engineering in: Forestry (all specialities)	4	12	33%
		Technical Engineering in: Industrial Engineering (all specialities)	61	118	52%
		Technical Engineering in: Naval Science (all specialities)	3	7	43%
	Four-Five or more years	Architecture	6	12	50%
		Aeronautical Engineering	0	1	0%
		Agricultural Engineering	8	8	100%
		Civil Engineering	6	8	75%
		Mining Engineering	0	3	0%
		Forestry Engineering	1	2	50%
		Telecommunication Engineering	7	16	44%
		Computer Engineering	14	22	64%
		Geological Engineering	0	1	0%
		Industrial Engineering	19	23	83%
		Naval and Oceanic Engineering	0	1	0%
		Naval Engineering	0	1	0%
		Chemical Engineering	13	28	46%
Total: Engineering and Technology			256	487	53%

Source: PNECU and University Coordination Committee

Degrees Assessed: Degrees assessed (with external assessment report) in the PNECU.

Existing Degrees: Degrees offered in this field by Spanish state universities.

Estimated Coverage ratio: Estimates the percentage of degrees assessed out of the total number of existing degrees. It is an estimated figure due to the fact that it only takes into account degrees offered by centres within the Spanish state university system (as opposed to private universities).

Degrees in this branch of study were characterised by certain common features. One such feature, caused by factors beyond the control of the university, was the students' poor academic level on starting university (56%). Students' levels were even worse in three-year degrees, as confirmed by the minimum entry mark, which has gone down in recent years and which was 5.48 for three-year courses and 6.10 for four-five or more year courses in 2000-2001 (see Table 1). On the other hand, certain degrees in this field had the highest minimum entry requirements of all, either due to the high level of demand (for example I.T.-related courses) or due to the limited number of places on offer (for instance aeronautical engineering).

One of the internal features was the fact that the **aims and objectives** of the courses were poorly defined, a shortcoming acknowledged by a large number of degrees (46%). For those responsible, this is without doubt a cause for concern and proposals were put forward by almost the same number of degrees (44%) to define the aims and objectives and make sure that students were aware of them.

With regard to the **teaching programme**, the degree programme design was considered to be inadequate (67%), mainly due to the subject content and the number of subjects, which was seen to be excessive. It was, therefore, thought necessary to reform the degree programme in order to correct these points. On the other hand, the practical side of these degrees was viewed positively in terms of the way credits were distributed between theory and practical areas, the number and type of practical activities and the way they were carried out. This was not the case with student workloads, which were considered to be excessively high by 53% of the degrees (above all three-year courses (59%) as opposed to 38% of four-five or more year courses). Proposals were put forward to review this aspect with a view to adapting the demands placed on students and reducing the amount of work given to them. 55% of the degrees assessed considered that improvements could be made to the organisation, sequencing and length of the courses. It was considered that organisation of the final-year project (enrolment and development) was in need of improvement. Lecturers viewed tutoring positively.

In terms of **human resources**, a considerable proportion of degrees (47%) expressed concerns over the structure of their teaching staff and highlighted the difficulties faced by lecturers to improve and update their training (56%). This was due to the lack of programmes and the lack of help available for teaching training. It was, therefore, considered necessary to encourage participation in refresher and innovation programmes. On the other hand, 74% of the degrees assessed considered that there were insufficient **administrative and service staff**, even though a large percentage (42%) viewed the provision of these services positively. Improvements were proposed by 52% of the degrees.

In terms of **material resources** (facilities and equipment), half the degrees assessed considered it necessary to improve and extend teaching facilities (lecture rooms and laboratories) and to a lesser extent, some of the specific facilities, mainly the photocopying service, sports facilities and coffee bar. Similarly, 51% of the degrees considered it necessary to increase teaching resources.

Efforts to help students integrate easily into university life were considered to be satisfactory by 59% of the degrees which provide suitable information and guidance services to their students. 85% of these expressed the need to improve such services. Concern was expressed over the lack of student participation in elections (44%) and the lack of student presence in representative bodies (31%). In both cases, the situation was more acute in three-year courses than in four-five or more year courses (48% and 35% respectively).

With regard to **teaching processes**, there was deemed to be a lack of coordination in general (50%) and between departments in particular. Teaching was difficult at times because of the excessive number of students per group. It was felt that this number should be reduced in both theoretical and practical classes.

While **tutoring** was viewed positively, 46% of the degrees pointed to its limited use. However, degrees seemed to be aware of the importance of this aspect of teaching and 48% put forward improvement proposals to promote tutoring in their courses.

33% of degrees expressed the need to improve **teaching methods** by developing participative teaching strategies as opposed to traditional lecturing. It was also considered necessary to promote existing complementary activities to increase the effectiveness and efficiency of the public service aspect of higher education. 30% of the degrees reported low lecture attendance levels. The existence of academic support activities was viewed positively and 40% expressed a great deal of concern over attending to students with specific academic difficulties.

As far as external relations were concerned, it was felt that there needed to be more agreements with business organisations, mainly to promote and improve the work experience students undertake in such organisations. It was also considered necessary to promote exchange programmes with other universities, thus increasing the mobility of students and lecturers and making degrees better known.

A large number of the degrees assessed (56%) acknowledged poor performance indicator results in the various subjects included in their degree programmes. 59% also acknowledged poor graduation indicator results. This was more pronounced in three-year courses[2] (64%) than in four-five or more year courses (40%). Degrees in Engineering and Technology obtained the lowest success rates, with only 4% of students graduating within the time set out in the degree programme (see Table 3). A breakdown of the figures shows a success rate of 3% for three-year courses and 6% for four-five or more year courses. The courses with the highest success rates were four-five or more year Chemical Engineering courses and Technical Engineering in Forestry (specialising in Forest Exploitation) among three-year courses. In addition, Engineering and Technology courses had the highest drop-out rate of the whole Spanish university system (34%, see Table 3). There was very little difference in the figures for all courses (35% for three-year courses and 33% for four-five or more year courses). On the other, demand for graduates was high (54%) and graduate employment levels were good.

---

[2] A more detailed PNECU study of this point can be seen in *Evaluación Transversal del Rendimiento Académico de las Ingenierías Técnicas (Transversal Assessment of Academic Performance in Technical Engineering)* (www.mec.es/consejou/calidad).

8.5 Humanities

This section includes the following degrees:

Branch	Length	Degree	Degrees Assessed	Existing Degrees	Coverage ratio
Humanities	Four-Five or more years	Degree in Fine Arts	5	11	45%
		Degree in German	2	8	25%
		Degree in Arabic	4	8	50%
		Degree in Catalan	6	8	75%
		Degree in Classical Languages	3	18	17%
		Degree in Slavic Languages	1	3	33%
		Degree in French	5	20	25%
		Degree in Galician Philology	1	4	25%
		Degree in Hebrew	1	4	25%
		Degree in Spanish	11	35	31%
		Degree in English	12	34	35%
		Degree in Italian	2	5	40%
		Degree in Portuguese	2	4	50%
		Degree in Romance Languages	2	5	40%
		Degree in Philosophy	5	18	28%
		Degree in Geography	12	26	46%
		Degree in History	14	15	93%
		Degree in Art History	8	23	35%
		Degree in Humanities	10	24	42%
		Degree in Translation and Interpreting	10	11	91%
Total: Humanities			116	284	41%

Source: PNECU and University Coordination Committee

Degrees Assessed: Degrees assessed (with external assessment report) in the PNECU.

Existing Degrees: Degrees offered in this field by Spanish state universities.

Estimated Coverage ratio: Estimates the percentage of degrees assessed out of the total number of existing degrees. It is an estimated figure due to the fact that it only takes into account degrees offered by centres within the Spanish state university system (as opposed to private universities).

These degrees were characterised by the fact that there had been an increase in the **range of courses on offer**, even though the number of places available had fallen. This was done by increasing the variety of courses on offer, above all by breaking up the subjects formerly studied in a Degree in Arts (philology, geography and history) and by creating new two year postgraduate courses. Advantage has been taken of this process to reduce excessive student numbers in these courses. The reduction in the number of places has coincided with a gradual fall in **demand** (the most pronounced of all branches of study, see Graph 23). Thus, the academic level of students starting these subjects was considered

to be low, confirmed by the minimum entry requirement mark which was between 5.19 and 5.12 (out of 10) from 1993 to 2001 (once again the lowest of all fields of study).

80% of the degrees felt that the **degree programmes** were in urgent need of revision. Reducing the course length to four years was viewed particularly negatively, as was the excessive number of subjects and their fragmentation because of their limited number of credits. The limited range of optional subjects available was another shortcoming.

In terms of **resources**, Humanities courses expressed the greatest levels of dissatisfaction (68%) with their lecture rooms, facilities, services and resources.

The growing demand for specific resources for new teaching methods, which can be seen above all in the demand for language laboratories or laboratories for specific activities (interpreting, archaeology, phonetics etc.) and for computing-aided teaching resources, was evidence of the introduction of new teaching methods which has brought up to date the traditional methods used in Humanities. However, traditional methods were generally considered to be appropriate and effective ways of teaching.

As far as **teaching processes** are concerned, on the one hand the assessment committees highlighted the lack of coordination between the bodies responsible for organising teaching. On the other hand, the content of the syllabi was considered to be sound, as was the existence of complementary activities in the field of Humanities. Proposals were put forward to promote and organise such activities for languages.

76 % of the degrees proposed to supplement, improve and promote the **information and guidance given to students**. Limited student participation in the department and the student-lecturer relationship (37% and 44% respectively) were examples of shortcomings which could be improved.

The overall **distribution of students in groups** was seen to be positive (42%). This was a sign that a balance had been reached between the overcrowding highlighted in the shortcomings of the facilities and the effectiveness of the

traditional methodology used in Humanities allowing large groups of students to be taught. The demand for more extracurricular activities was another indicator of the balance between teaching methods which are effective for teaching large groups and the need for more personalised attention to students' educational requirements.

Existing **external relations**, which were considered to be wide-ranging and which were viewed positively (above all the Socrates / Erasmus programmes) were seen to be limited by the lack of suitable infrastructure required to organise them. It was suggested that relations with other institutions be strengthened and that collaboration agreements be made. Proposals were also put forward to promote courses and to boost external relations with regard to programmes.

Results were viewed positively for languages and there was no difference between the various courses. However, results were generally worse in History and Geography. The success rate was 28% (see Table 3). The highest results were obtained in Fine Arts and the lowest in Philosophy. These courses had a drop-out rate of around 31% (see Table 4). In addition, no graduate follow-up studies had been conducted in this branch of study.

8.6 Two year postgraduate courses

When analysing the information contained in this section, it should be borne in mind that the percentage of students taking these courses was only 2% of the total number of students (see Graph 25).

Graph 25. Percentage of students enrolled (out of the total number of students) by length of degree
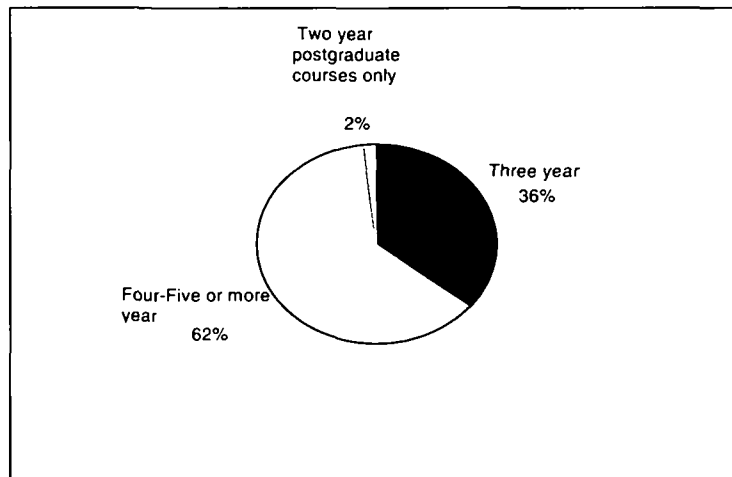
Source: PNECU and University Coordination Committee

The **supply and demand relationship** was viewed positively, especially in Humanities courses (88% of the degrees).

It was considered necessary to reform the **degree programmes** and **practical training** since 50% of the degrees considered they were unsuitable.

In terms of **facilities and resources**, proposals were put forward to improve the lecture rooms, laboratories, teaching resources, additional services and facilities. 22% of the degrees proposed increases to their budget, perhaps in order to correct their budget deficits given the fact that these courses have only recently been introduced.

With regard to the **teaching process**, tutoring was viewed positively although it was acknowledged that it could be improved and promoted. 80% of Experimental and Natural Sciences courses and 64% of Social Sciences and Law courses considered that sufficient **information was provided to students,** although it was deemed necessary to supplement and improve this information, above all by
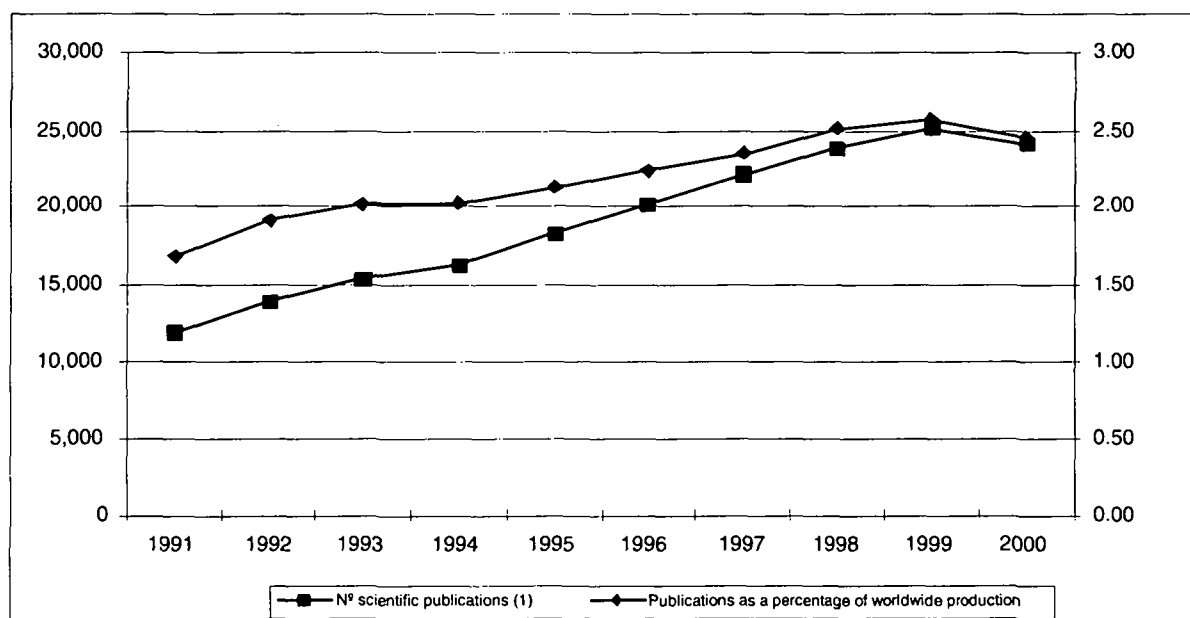
Experimental and Natural Sciences (80%). Social Sciences and Law degrees (55%) put forward improvement proposals to increase **student participation**. The **student-lecturer relationship** was viewed positively, mainly by Humanities courses, whereas Engineering and Technology courses considered that there was room for improvement in this area.

External relations and **exchange programmes** were considered to be important and proposals were, therefore, put forward to foster and strengthen relations with institutions, companies, universities and exchange programmes.

9 RESEARCH

Both the research activity carried out in recent years and the results of this research were viewed positively, especially in Experimental and Natural Sciences and Humanities. The outstanding features of this research activity were considered to be the way in which it has developed, its level of success, productivity and the scientific quality of the research, borne out by publication in prestigious publishing houses and magazines, often of international standing. With regard to publications, participation in congresses and, to a lesser extent, theses (this point will be commented on in greater depth in the section on Doctorate studies), results were considered to be satisfactory, although proposals were put forward to encourage publications in prestigious international journals. In addition to suggesting the need to increase the number of publications, Social Sciences and Law and Humanities considered it necessary to set objective criteria to assess the quality of research. Few assessments were made of patents and any assessments that were made commented on the fact that there were very few or none at all.

Graph 26. Changes in scientific production measured by number of publications and Spanish contribution to worldwide production.

Source: National Statistics Institute (Instituto Nacional de Estadística (INE)), obtained from the SCI Search (CINDOC).

In Experimental and Natural Sciences, the most highly rated **external relations** involved scientific collaboration with other research groups, including international groups. In Engineering and Technology, relations with companies were the most highly rated (collaboration in applied research projects and services contracted by companies). However, it was still considered necessary to strengthen these relations, once again in the field of Engineering and Technology and Experimental and Natural Sciences, with a view to drawing up collaboration agreements and increasing private sector funding of university research.

Table 9. Internal spending on R + D by sector and source of funding (2000)

Sector	Total	Public Administration	Higher Education	Companies and private non-profit-making institutions	Foreign Countries
Source of Funding					
Total	**5,718,988**	**2,210,032**	**269,566**	**2,960,424**	**278,966**
Public Administration	904,776	756,351	2,125	61,058	85,243
Higher Education	1,693,882	1,221,307	261,126	133,628	77,820
Companies	3,068,994	221,935	6,151	2,727,280	113,628
Private non-profit-making institutions	51,336	10,439	164	38,458	2,275

Source: National Statistics Institute

With regard to human resources available for research, assessments varied although they were predominantly negative. Experimental and Natural Sciences degrees were the most critical and also put forward the greatest number of improvement proposals. The team of teaching and research staff was viewed positively in terms of the large percentage of doctors, the age pyramid and their permanence. However, there were seen to be staff-related problems, mainly in terms of limited growth, the high proportion of lecturers with temporary contracts and the lack of doctors, above all in Engineering and Technology and Social Sciences and Law. It was suggested that these shortcomings could be overcome by promoting and stabilising the staff base by providing a greater number of permanent positions for both assistants and lecturers (tenured lecturers and professors). On selecting staff for these positions, not only teaching requirements should be taken into account, but also research activity. There was also

considered to be a need for specific staff training programmes and working visits to prestigious research centres.

With respect to human resources, it was considered that improvements were required in the **research support staff**, which includes administrative staff as well as qualified technicians (mainly laboratory technicians). This was especially true for Health Sciences, Experimental and Natural Sciences and Engineering and Technology courses, above all because their research specifically required qualified support technicians. It was considered that more administrative staff would free lecturers from having to do bureaucratic tasks related to research (drawing up budgets, writing reports, administration, follow-up etc.) which represented an excessive administrative workload.

In addition, it was considered necessary to incorporate research trainees into the departments and introduce research projects in order to guarantee continuity and the renewal of research groups. Proposals were put forward to increase the number of trainee grants or improve salary levels with a view to encouraging young people to embark on careers in research.
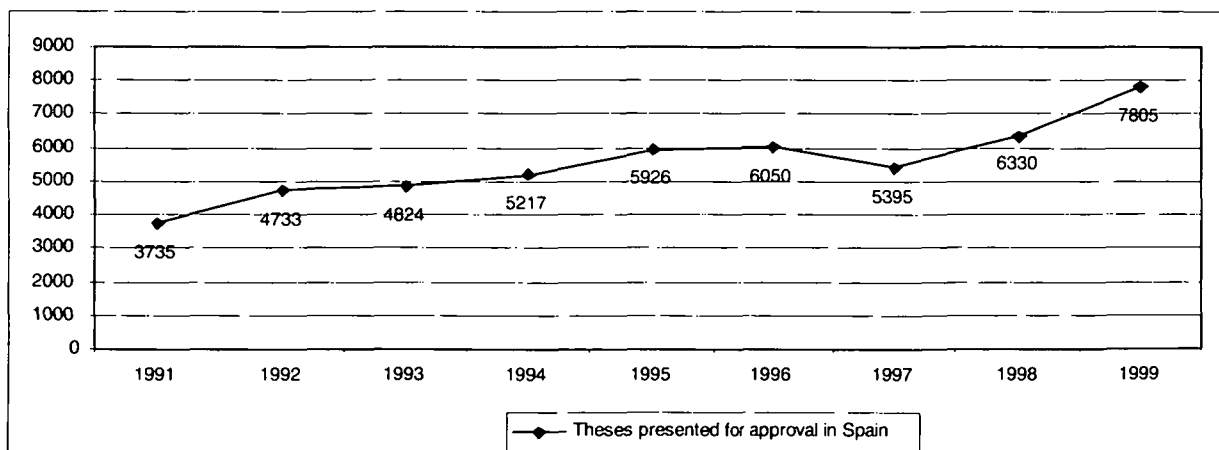
Opinions differed with regard to the **economic resources** provided to fund research activities. Although differences were not so great among the various branches of study, in Experimental and Natural Sciences and Engineering and Technology resources were generally considered to be sufficient whereas the opposite was true for Health Sciences. Proposals mainly involved encouraging participation in public R+D programmes from Spain and from other European countries.

Assessment of **material resources and infrastructure** varied greatly. For instance, a large number of units from Experimental and Natural Sciences and Health Sciences considered their scientific equipment to be adequate and competitive, whereas others considered it to be inadequate, especially with regard to large, expensive equipment and deficiencies in laboratory equipment. Proposals were put forward not only to provide equipment, but also to renew it and keep it up to date. With regard to infrastructure, the most frequently heard

complaint involved the lack of physical space. It was, therefore, deemed necessary to extend the specific areas used for research.

The existence of **doctorate programmes** was viewed positively, especially in the field of Humanities, as was departments' high level of involvement in this type of teaching and the high level of demand for these courses. Courses from Experimental and Natural Sciences were more critical, above all of the design of these doctorate programmes. In general, it was considered that both their design and their organisation were in need of substantial improvement. In terms of design, the need to improve planning and course content was emphasised, and organisation-wise, proposals concentrated on promoting and increasing awareness of the doctorate programmes, improving their administration (for instance by strengthening the figure of the coordinator) and producing a guide to postgraduate studies providing students with detailed information. It was also felt that improvements could be made in terms of recognising teaching staff's dedication to these study programmes and promoting external relations to set up inter-departmental and even inter-university doctorate programmes. Improvements were also seen to be possible with regard to the writing of theses. Although there was a gradual increase in the number of theses presented for approval in Spanish universities (as can be seen in Graph 27), it was considered that doctoral students should be encouraged to write their theses. Other measures which were mentioned included improving quality and recognising the work which goes into directing these programmes.

Graph 27. Number of theses presented for approval (1991-1999)

Opinions differed with regard to **lines of research and research groups**. In many cases, these were viewed positively, especially in Experimental and Natural Sciences. Their main strong points were considered to be their strength, stability and diversity, although the latter was also seen to be a problem. On the other hand, the greatest number of shortcomings were found in the field of Humanities, above all due to problems involving the teaching and continuity of the groups and the individualistic nature of the research. Improvement proposals ranged from creating teaching teams and groups or opening new lines of research to strengthening the existing ones.

Assessment of the level of **internal support given to research by the university** took into account aspects such as the existence of institutional research planning, the availability and efficiency of research support services and departmental funding. Despite the ever-increasing number of initiatives aimed at aiding research (such as providing travel or study grants, scientific equipment or research projects), it was clear to see that universities did not have clearly defined research planning or research policies. Improvement proposals included measures to support emerging research groups (a proposal made above all by Humanities) or to increase funding to allow researchers to attend conferences and international meetings. It was considered that research support services could be improved, mainly in terms of administration services (simplifying procedures and making it easier to receive payments and pay out money). It was also considered that improvements could be made in terms of providing information on sources of funding and public research programmes, as well as improving the running of the OTRI (Oficina de Transferencia de Resultados de Investigación – Office for the Transfer of Research Results). Comments on establishing or increasing departmental budgets mainly referred to the purchase of bibliographic material or replacing and maintaining scientific equipment.

In general, the teaching – research relationship was considered to be unsatisfactory, above all in the field of Experimental and Natural Sciences. The main problems were too much teaching (especially in Social Sciences and Law), the gulf between teaching work and research work (difficulty in transferring research results to teaching activities) and giving priority to research (which has a negative effect on teaching). On the other hand, in cases in which research was

deemed to have a positive influence on teaching, courses highlighted the quality, up-to-date teaching content, mutual feedback and increased resources as a result of increased research. The most commonly proposed measure was to reduce the number of teaching hours (for example in accordance with research activity), in addition to improving the teaching - research relationship.

It was considered that improvements needed to be made in the **promotion of research activities**. Experimental and Natural Sciences and Engineering and Technology were most critical in this respect, as opposed to Health Sciences. Promotion was deemed necessary both internally (to find out what sort of research was being undertaken by other groups in the same university) as well as externally (to promote research and increase awareness of the university's scientific potential). Proposals were, therefore, put forward to produce a publication detailing research activities (yearly report or journal), search for new means of external promotion (in web pages and in the media), establish a system to provide information about research activity and results (to promote and follow up research), and hold internal conferences and symposia to present and debate research results and thus encourage interdisciplinary projects.

Internal communication and collaboration between university departments and, within the same department, between groups or areas of knowledge, were considered to be unsatisfactory, above all in Social Sciences and Law, Experimental and Natural Sciences and Engineering and Technology. Both aspects were in need of improvement in order to undertake major interdisciplinary research programmes (infrastructure, European projects) which could not otherwise be undertaken by a small group of researchers. It was, therefore, considered to be of vital importance to establish communication channels (internal seminars) and a coordination procedure both between and within departments.

A clear shortcoming in the area of research was the lack of clearly defined **objectives** and the lack of **guidelines** at departmental level. All fields of study, in particular Engineering and Technology and Humanities, agreed on this point and on the need to establish such objectives and guidelines. It was, therefore, considered essential to define priority objectives in order to guide departments' research activity and to establish guidelines for the creation and structuring of

lines of research and research groups in order to make it easier for lecturers to join them. This work could be done by a research committee or similar body, to reach a consensus within each department without reducing lecturers' chances of defining their own research profile.

10 SERVICES

Policy and strategy was viewed positively by 20% of services assessed, mainly because of the fact that they existed at all, but also because of the fact that at least there were clearly defined objectives. Proposals most frequently put forward involved defining objectives (18%) and drawing up a strategic plan (11%).

In general, the **staff** were considered to be an outstanding feature of almost all services. Among the positive aspects were the level of dedication and attitude of the staff (25%), the good work atmosphere (25%), fluent internal communication (23%) and the good level of staff training (22%). However, there were often found to be shortcomings, for instance the lack of specific training (40%), staff shortages (39%), staff administration or staff planning problems, and finally the limited recognition given to this type of work. As a result, improvement proposals mainly requested more staff (39%) and greater recognition for the work carried out (32%).

With regard to **partnerships and resources**, the most highly valued aspects (34%) were service materials (a percentage which rose to 63% in the case of general services) and facilities (27%). Other positive aspects were seen to be the computing equipment (23%) and good information sharing (22%).

All services considered leadership to be very important, highlighting the approachability of the managers (16%). Improvement areas involved the lack of relations with other units (29%).

Service processes were considered to be an important part of administration. 25% of services considered that services ran smoothly and 18% viewed the degree of automation of service processes to be good. On the other hand, 36% of the services assessed considered that improvements could be made to their way of working (above all Central Services with 62%). The lack of a process manual was another weakness (24%). All the services suggested improving service processes and the means used to assess them. In accordance with the weaknesses pointed out, other improvement proposals involved preparing service documentation (24%) and changing their hours of opening (17%).

With reference to the assessment of **results as seen by users of the service and user satisfaction**, ironically the most significant aspect was seen to be the lack of information available to assess these results. As in other assessment sections (for example graduate satisfaction), it could be that not enough information was available to know how users assessed the service provided. This may be why the assessment committees paid little attention to this point.

Similarly, only very limited assessment was carried out of the section on **results as seen by service staff**. Once again, this was most likely due to the lack of information, beyond day-to-day contact, required to assess the satisfaction levels of service staff. This was not even included in the weak points or in the improvement proposals. Despite this, 18% of services considered that their staff were satisfied.

With regard to **results involving society**, the only outstanding aspect was the need to improve external relations, as expressed by 11% of services.

23% of the services assessed considered at least one of the **key results** to be positive, although there was no particularly outstanding result, most likely due to the wide variety of services assessed, even among services of the same kind. The most commonly expressed weakness (20%) was the lack of indicators to assess this aspect. In line with this analysis, it was considered necessary to establish indicators in order to allow the key results to be measured.

As can be seen from the comments above, the lack of information and indicators meant that these assessments were mainly subjective evaluations. The most important conclusion was the need for information to allow decisions to be taken, to allow services and their results to be assessed and to focus improvement proposals on them. This was, without doubt, the most necessary improvement.

11 FINAL CONCLUSIONS

The PNECU has increased the university community's awareness of quality and quality assessment. This increased awareness has resulted in the direct creation of administrative support bodies, but a quality culture has not yet developed among university staff in general. Such a quality culture must be introduced from top to bottom, however, a bottom-up approach is required if it is to develop effectively. For this to produce visible improvements, the university needs to operate and be organised according to processes, in which objectives, customers, products and services are the common denominator. It should be remembered that any change in the culture of an organisation is a long-term process.

The PNECU has made a considerable impact if we consider the number of institutions and people involved. However, emphasis must be placed on linking assessment results to the proposed improvement actions and on promoting such links, considered to be one of the weaknesses of the process. This aspect must be worked on by the universities themselves and by those responsible for higher education policy. The positive attitude created could easily turn into one of rejection if work is not carried out along these lines.

The creation, participation and coordination of Autonomous Agencies in the whole process has been one of the most prominent features of the PNECU. This has helped to bring assessment closer to the decision-making process, which is largely the responsibility of the Autonomous Regions. As a result, firstly the PCU (Plan de Calidad de las Universidades – Plan for Quality in Universities) and then the LOU (Ley Orgánica de Universidades – Organic Law on Universities) have been decisive in encouraging the existence of these agencies all over Spain by conferring new and important responsibilities on them. Coordinating all these new units will be one of the main challenges of assessment processes over the coming years.

As a result of the PNECU, almost all Spanish universities have the infrastructure required for quality assessment (technical units, vice-chancellor's offices etc.). This allows them to deal with the challenges posed by the creation of a single European space for higher education foreseen in the Bologna Declaration and

the accreditation of academic programmes foreseen in the LOU. In addition, it will allow them to face any other challenges regarding institutional quality, adaptation and improvement policies.

The fact that this is the first time many universities have implemented all these activities has meant that assessment procedures depend to a certain extent on the institutional policies of the moment (changes in government, the scarcity of resources, situation of the Autonomous Agencies). Now that this first introductory phase is over, assessment procedures should be stabilised so that they are not so affected by circumstantial situations affecting the day-to-day running of the institutions. In this respect, the fact that the first phase is now over leaves universities in an encouraging position from which they should be able to confront the changes of the coming years.

One of the main problems faced by the units assessed was the lack of information and the unreliability of the data required for assessment. Throughout the PNECU, there have been general improvements in this type of information and an increase in its use in the internal administration of the institutions. However, more work needs to be done along these lines and agreements need to be reached between all administrative departments in order to improve the flow of information required (in institutions as well as in public administration departments) for internal decision-making and above all, to provide increasingly relevant information to the general public.

Course degree programmes, some of which had only recently been introduced, were analysed under the PNECU. Assessment and appraisal has provided highly relevant information which has been the basis for making degree programme changes. However, there is still a need to change the degree programmes of a wide range of courses based on professional needs and demands and the immediate environment of the degree. These are vital for the organisation, coordination and development of students' practical training. Information from studies on the job prospects of university graduates is extremely important in this respect, although carrying out such studies still represents a major challenge for some institutions.

Thought and consideration have been given to the aims and objectives of academic programmes thanks to the inclusion of a section on these points in the *"Guía de Evaluación de las Titulaciones" (Guide to Academic Programme Assessment)*. This is an important aspect and advances have already been made. Initial assessment showed that this aspect was rarely taken into account, but nowadays degrees clearly understand the need to set out their aims and objectives.

Assessment has helped to bring courses into closer contact with their socio-economic environment because of two factors. Firstly, the inclusion of a section on this subject in the *"Guía de Evaluación de las Titulaciones" (Guide to Academic Programme Assessment)* has lead to reflection on the socio-economic environment. Secondly, professionals have been made members of external assessment committees, an aspect which has always been viewed positively.

There is still a need to increase the resources available for research in order to maintain the increase in research activity and quality witnessed over recent years. Increased resources should lead to an increase in human resources by considering the creation of a "professional researcher", by increasing the allocation of economic resources, improving infrastructure and technical and administrative support in accordance with quality parameters based on objective indicators.

Despite the fact that the assessment of services has had the smallest impact due to its scope, it has been important because of what it implies in terms of knowledge and behaviour in line with the EFQM excellence model, so closely followed in the business world and in public administration. However, it is important that efforts be maintained in order to adapt the new assessment models to the specific needs of university administration.

The methodology used in the PNECU was sound, but improvements must be made in terms of writing reports and training all the participants in order to increase the credibility of the process. In addition, efforts must be made to adjust the new Plan for Quality in Universities (PCU) to the accreditation and certification demands of the new Organic Law on Universities (LOU) so as not to duplicate similar processes and to take full advantage of the experience already gained in this area.

12 APPENDICES

12.1 Members of the Technical Committee

The final report was approved by the members of the Technical Committee listed below (Order of the Ministry of Education, Culture and Sports, 12 September 2001, BOE-Official Gazette of the Spanish Government, 26 September 2001):

Chairman

Ilmo. Sr. D. José Raga Gil, Secretary General of the University Coordination Council.

Deputy Chairman

Ilmo. Sr. D. Pedro Chacón Fuertes, Director General of Universities for the Ministry of Education.

Secretary

Ilmo. Sr. D. Eduardo Coba Arango, Vice-Secretary of Studies, University Coordination Council.

Committee Members

Sr. D. Lluis Ballester Brage, Director of the Agency for the Quality of the University System in Balearic Island.

Sr. D. Manuel Barbancho Medina, Director of the Unit for the Quality of Andalusian Universities.

Sr. D. Tomás Escudero Escorza, Professor at the University of Zaragoza.

Sr. D. Manuel Galán Vallejo, Professor at the University of Cadiz.

Sr. D. José Luis García Garrido, Professor at the National Distance Education University (UNED)

Sr. D. Pedro García Moreno, Management Director of the University of La Rioja.

Sr. D. Santiago Lorente Arenas, Professor at the Polytechnic University of Madrid.

Sr. D. Francisco Marcellán Español, Professor at the Carlos III University, Madrid.

Sr. D. Mario de Miguel Díaz, Professor at the University of Oviedo.

Sr. D. José-Ginés Mora Ruiz, Professor at the University of Valencia (Estudi General).

Sr. D. Eugenio Muñoz Camacho, Director of the Agency for the Quality of the University System in Galicia.

Sra. Dña. Gemma Rauret Dalmau, Director of the Agency for the Quality of the University System in Catalunya.

Sr. D. Javier Vidal García, Professor at the University of León.

12.2 Report Team

Coordinator

Dr. Javier Vidal García, University of León.

Researchers

Dña. Meritxell Chaves Sánchez, University of Barcelona

Dr. Francisco Javier Grande Quejigo, University of Extremadura

D. Enrique Herrero, University of Seville

Dña. Sonia Martín Cerro, University of Salamanca

D. Santiago Roca Martín, Polytechnic University of Catalonia.

Dr. Juan Ruiz Carrascosa, University of Jaén

Analysts

Dña. Liria Callejo González, University of León

Dña. Mónica González Fernández, University of León

Dña. Sara Junquera Merino, University of León

Encoders

Dña. Gloria María Díez Flórez

Dña. Maria Cruz de la Torre Castaño