

UNIVERSIDADE NOVA DE LISBOA

EVALUATION REPORT

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1. Introduction

The institutional evaluation of the Universidade Nova de Lisbon (hereafter termed 'the university' or 'NOVA') is part of a larger process of reform of the Portuguese higher education system. This process has included a 'Country Report' by the Organisation for Economic Cooperation and Development (OECD) in 2006, a review of Quality Assurance of Higher Education by the European Association for Quality Assurance in Higher Education (ENQA) in 2006, a new law for Higher Education enacted in 2007 and the restructuring of academic study programmes into a three-cycle system as part of the ongoing implementation of the Bologna process.

In order to assure the quality of its higher education institutions, the Portuguese authorities wanted institutional evaluations of both public and private higher education institutions (universities and polytechnics) to be conducted in the period 2006-2010. It was agreed that these institutional evaluations would be conducted by the Institutional Evaluation Programme (IEP) of the European University Association (EUA). Portuguese academics have played a significant role in the creation of the IEP and indeed Professor Alberto Amaral from Porto is one of the founding fathers of the programme. Several Portuguese universities have already been evaluated through the IEP process prior to the current omnibus programme of evaluations. NOVA underwent such an evaluation in 1998.

The main objective of the IEP is to study the strategic and quality management of a university and especially its capacity for change by examining a university's decision-making processes and its organisational structures.

Following the formal request from the Rector of NOVA, the Steering Committee of the EUA Institutional Evaluation Programme appointed the following team for the evaluation of the university:

- Jarmo Visakorpi, former Rector, University of Tampere, Finland as chair;
- Robin Farquhar, former President, Carleton University and former President of the University of Winnipeg, Canada;
- Gulsun Saglam, former Rector, Istanbul Technical University, Turkey; and
- Padraig Walsh, Chief Executive, Irish Universities Quality Board, Ireland, as secretary.

2. Self-Evaluation Process

The self-evaluation process in the university was led by a Self-Evaluation Group (SEG), in which the central administration and all academic units were represented as well as all internal stakeholders: academic staff, support staff and students. A SWOT analysis was conducted by the General Council prior to the self-evaluation and this body also produced the first new statutes for the university. The results of this exercise were sent to the Council of Deans and to the SEG. The latter group reviewed the SWOT analysis and produced a modified SWOT, which was delivered as a part of the Self-Evaluation Report (SER) which was then made available to the IEP evaluation team.

The members of the SEG, when interviewed by the evaluation team, indicated that the selfevaluation process itself was very satisfactory because of the opportunity it presented to discuss quality issues in the university. For many members of the group, it was the first time when they could meet colleagues from other parts of the institution and provided an opportunity to feel that they were working in a university rather than in an academic unit only. One negative finding of the SER was that it did not prove possible to integrate all academic units with the same degree of motivation into this discussion.

The evaluation team very much appreciated the result of this process because it is a major objective of the IEP that the process itself promotes the development of a common understanding of the quality culture of a university.

The evaluation team received the Self-Evaluation Report (SER) together with a comprehensive series of annexes in good time before the preliminary visit. The evaluation team appreciated the report which was well-written and contained elements of critical thinking about the university.

Following the established IEP process, the evaluation team conducted two site visits, a preliminary visit on 1-3 February 2009 and a main visit from 17-20 May 2009. The team met the Rector, the team of Vice- and Pro-Rectors; the Steering Committee who organised the self-evaluation of the university; representatives from the General Council, the Council of Deans, academic staff and students from many of the academic units (Faculties and Institutes) and representatives of external stakeholders from business and the municipalities of the Lisbon area. The team also had special meetings with a number of administrative staff, student union representatives and with doctoral students.

During these visits, the evaluation team had many fruitful discussions, which were conducted in a very open manner. The university was well prepared for the review visits, with the background to the team's presence and tasks well explained. The evaluation process was obviously well known within the university. The contents of the SER were less familiar to the university community, however, as it was not distributed throughout the university (on the intranet) until the preliminary visit of the evaluation team in February.

3. Acknowledgements

The evaluation team would like to thank the staff of the university and especially Rector Antonio Rendas, who is obviously strongly committed to the development of a quality culture within the university and to all the members of staff, students and external stakeholders of the university for their discussions during the preliminary and main review visits.

The evaluation team would especially like to thank Pro-Rector Luis Silveira for his great efficiency in liaising with the review team and for organising and modifying the programmes for both visits according to the wishes and expectations of the evaluation team.

4. Evaluation Process

The methodology of the EUA Institutional Evaluation Programme is guided by four central strategic questions.

- What is the university trying to do?
- How is the university trying to do it?
- How does the university know that it works?
- How does the university change in order to improve?

The EUA team used these questions as its framework when conducting the evaluation of NOVA.

5. Institutional context

The Universidade Nova de Lisboa ('NOVA') was founded in August 1973, becoming the newest of the capital city's three public universities. It was created during the second wave of the expansion and diversification of Portuguese higher education, as a response not only to an ever-increasing demand for higher education in Portugal in general and in the city and surrounding areas of Lisbon, in particular but also to cope with a serious educational backwardness by expanding and modernising the system.

At the time of its founding, there were two important initial plans for this new university, NOVA:

- Firstly, the intention was to establish a university with an interdisciplinary and integrated organisational structure and

- Secondly, there was an aim to concentrate the university in a single, spacious campus such as existed in Caparica.

However, neither of these goals was realised. The concept of this new kind of internal structure of a university is common today, as continental European higher education structures are moving largely in the direction of the Anglo-American model, but obviously this idea was premature in the 1970's, when the Portuguese authorities favoured a more traditional, continental European, faculty-based model.

Also, the single-campus model could not be realised for practical reasons and it is important to stress that many strongly performing universities in the world operate today on the basis of a multicampus structure.

Notwithstanding, the evaluation team strongly supports NOVA's plans for reducing the number of operational sites and the desire to centralise activities mainly in two campuses; Caparica and Campolide.

6. Mission, Vision and Strategic Plan

The first question in the IEP evaluation methodology is presented as "What is the university trying to do?" The mission and vision statements and strategic goals of the university should normally provide the answer to this question.

NOVA's mission statement is written in full in two separate chapters of the 2008 university statutes: identity and mission. They could easily be written under the single heading: mission.

NOVA's mission statement is traditional including as it does the wish to conduct scientific research "at international level" and to develop "excellence in teaching" and its capacity for creating innovative synergies for teaching and scientific research.

In the SER and in several discussions (especially with the Rector), the evaluation team were informed that the university does not have, as yet, a general strategic plan but is in the process of preparing one. However, when reading the SER and in discussions during both visits, the evaluation team feels that the university has already developed several strategic goals (e.g. the 7 principles of the Rector) and is also developing the strategies for implementing these goals.

The evaluation team suggests that the university urgently produce and publish this general strategy and believes that the university is ready to do this. The work should be commenced at the level of the academic unit. These academic unit plans should then be collated and an overarching university strategic plan constructed. It is then the responsibility of NOVA's new General Council to discuss and approve this plan and finally the academic units should adapt their own plans according to the university-level strategic plan. Thus, the university's strategy will not merely be a collection of strategies of the academic units but will become the main document from which the units derive their strategies.

7. Main External Constraints

As part of this review, the evaluation team must consider the main external constraints under which the university operates and the status of institutional autonomy, which is an important issue for many other countries of the European Higher Education Area.

Autonomy

In Portugal, a new university law was enacted in 2007 providing for increased university autonomy over its own affairs. The translation of such laws into tangible changes takes many years. However, some changes are already evident.

According to Article 12 of the new law, "higher education institutions are organised freely" but the internal governance and management of the so-called "autonomous organisational units" such as schools and faculties is strictly prescribed in law and the university cannot, in any sense, operate "freely".

This will be discussed later in the report.

The new law will increase university autonomy in the management of human resources through the capacity to regularly evaluate the merits of its academic staff. The universities are awaiting a further new law for the evaluation of staff performance. This is an important issue because the development of human resources is crucial for universities.

Funding

It is important to note that funding is a major external constraint for the development of most universities. It is well known that European universities are insufficiently funded, in comparison to say, for instance, North American universities. Portuguese universities are obviously also under funded when comparing the total public expenditure on higher education as a percentage of GNP of about 1% , which is clearly below the EU target of 2%.

The IEP methodology, given its time constraints, does not allow for the evaluation of the appropriateness or adequacy of university funding but it possible to ascertain that the total budget for NOVA has increased from €125 million in 2003 to €134 million in 2007 at a time when governmental funding for running costs was static, which translates into a decreasing government contribution from 60% to 50% of total budget over this period. At the same time the funding responsibilities of the university have increased through, for example, salary increases and increasing contributions for the pension fund. The total funding for investment has decreased from 6% to 2% over this period. About 18 % of the NOVA budget comes from research funds, both national and EU, which is rather a good percentage and this has increased from 6% to 18% in the past few years.

Altogether, about 60-70% of the overall budget of the university comes from the sum of the state budget and tuition fees. (The two sources are counted together here because of the variation intuition fees in the different parts of Europe). This is comparable to many European universities today although in technical universities it is usually lower, closer to 50%. It is obvious that in

terms of the more general diversification of university funding streams that is taking place, NOVA is performing rather well.

In relation to treating university funding problems, there are two main methods:

1. Diversification of the funding streams
2. Changes in internal operations such as increasing efficiency and/or decreasing expenditure

As previously stated, diversification has been taking place in NOVA. However, considering that NOVA has a rather large engineering faculty and a business school and good relations with the industry of the region, there may still be possibilities for further increasing non-public revenues. In order to increase the level of fund raising, the university will certainly need more activities. For example, a special development office responsible for external communications and the image of NOVA could be established. This office could have contact persons in each academic unit.

Funding by private sponsors through the endowment of academic chairs is not, as yet, an established culture in Portugal. While recognising that NOVA is relatively young and its alumni are not yet dispersed widely in the society, an alumni organisation should be established. It is certainly time now to build on this and this necessitates a coordinator from the university side. A well known person should be appointed as chair of the alumni board and the rector should also play a role in creating and promoting this activity. Some academic units have already established contacts with their alumni but NOVA certainly needs a general association for its alumni because society, industry and business will wish to identify with the university rather than its different faculties. The overall 'brand' and a sense of belonging have to be created in the first place as 'NOVA', which is, in itself, a good name for a brand.

During funding crises, it is also important to make strategic decisions to prioritise essential functions and eliminate peripheral activities particularly if they are not profitable. Often these kinds of cuts are very painful. The university must consider its suite of educational programmes and decide if they are all still appropriate and productive particularly with regard to similar programmes in neighbouring universities. This entails evaluation of the efficiency of all of the university's actions.

8. Governance and Management

According to the Glasgow declaration of EUA (2005), if universities are to be made stronger, they must be “committed to improving their governing structures and leadership competence so as to increase their efficiency and innovative capacity”. The evaluation team therefore has examined how governance, management and services are organised and how they support the university in achieving its objectives.

Central Governance

The university is going through a period of major change, which mainly concerns the central governance, whereby the new General Council has replaced the traditional Senate. The General Council now includes new members, who are external to the university, following current trends in Europe, although only one-third of all members of the university General Council are external whereas the general trend is to have a majority of lay members. In any case, the Chairman of the Council has to be an external member and the internal members are required to be representative of rather than representing their academic units. The student membership of the Council is important and welcome and follows on from the Bologna principles but the evaluation team views it as unfortunate that no provision has been made for representation of non-teaching staff on the Council and there is reportedly no opportunity for the involvement of post-doctoral appointees in institutional governance.

This kind of arrangement is designed so as best to guarantee that the General Council decides on objective strategies for the university as a whole. This board is also important regarding quality assurance because as a partially external and non-representative organisation it should be able to act freely and approve different quality assurance procedures and their results. The real outcome of this new kind of central governance will only be seen over the coming years and decades.

In addition, the university is free to appoint other councils or boards as it so wishes but legally these boards can only be advisory in nature. In the place of the abolished academic senate, NOVA has appointed a Council of Deans as a coordinating body for the constituent academic units. The evaluation team was pleased to learn that this body exercises very important and powerful functions.

Management and Leadership

Besides these governing bodies, the rector, with the assistance of vice-rectors and pro-rectors, has preserved his traditional position as the main management instrument of the university although the traditional election of the rector by his colleagues has changed to a system of appointment/election by the members of the General Council. This is a change consistent with ongoing reforms in European higher education. This kind of change is designed to strengthen the strategic capacity and managerial leadership of the rector.

The evaluation team found that the personal leadership of the current rector in NOVA is well recognised throughout the university. The Rector's team evidently supports this leadership and thus it is a very necessary body.

Governance and Management at the Academic Unit level

The new law prescribes the organisation of governance at the local level, which is composed of the units, which are termed organic or academic units. The new law made it possible to significantly amend the governance of these

academic units. Each unit must have a scientific council and a pedagogical council and in addition may have a faculty council, executive council and management council. Each academic unit is also required to prepare its own statutes independently. The academic units of NOVA have decided to sustain the full committee governance system at the level of the academic unit with obligatory scientific and pedagogical councils.

The size of the councils has however, been reduced so that these bodies can operate more effectively than before. Thus the large assembly of representatives, which used to include all the professors in the academic unit has been replaced by a faculty council composed of representatives of academic staff and external members, one of whom chairs this council. This strong participation of external members at academic unit-level (by paralleling the structure of the General Council of the university) is a very unusual decision-making solution compared to other European countries and is clearly indicative of the autonomous status of these academic units in NOVA. In this regard, the evaluation team supports the Rector's proposals to bring together external members of the General Council and all Faculty Councils for periodic (perhaps annual) exchanges of information and discussion of university-wide issues; it would be worthwhile for the Council of Rectors in Portugal to arrange for the General Council chairs to convene nationally each year.

There are currently 9 academic units in NOVA, which is not a particularly large number even for a medium-size university (with 16,000 or so students). The number is low because some of the traditional faculties one would expect to see in another university are merged in NOVA, examples being the joining of sciences with technology and humanities with social sciences. On the other hand, the number of academic units in the field of life sciences is comparatively large.

This creates a question as to whether the university needs so many basic units in the life sciences/medicine field or whether it would be possible for the Institute of Hygiene and Tropical Medicine (IHMT) and the National School of Public Health (ENSP) to co-operate together with the Faculty of Medical

Sciences (FCM) to overcome the current lack of co-operation and to develop a critical mass in research in these medical areas.

The governance and management at departmental level is not mentioned in the national law and more surprisingly is not mentioned in the university-level statutes but is specified only in the statutes of the academic units. It is certainly prudent that in different units different approaches to departmental structures have been adopted so that, for example, in the Faculty of Science and Technology (FCT), a large scale departmental system is operating because the number of fields covered by this faculty is very large while on the other hand, the Faculty of Economic (FE) operates (without departments) as a single unit business and economics school.

The evaluation team believes that these represent appropriate structural solutions because administration at two levels, central and unit level, is optimum in a small or medium-size university although it is clear that in a large faculty like FCT, three levels are probably required. The university's intention to decrease the number of departments in the Faculty of Medical Sciences (FCM) is also welcome and this intervention follows the general trend in European medical schools.

Although the evaluation team feels that the administrative structure at faculty level is very large (and certainly creates a requirement for many meetings and much preparatory work for the support staff in all units), the leaders and teachers that the team met appear to be satisfied with the present system as no complaints or major suggestions for changes were presented during the visits. The evaluation team understands that this depends very much on the prevailing culture and the independent nature of the academic units in NOVA as indicated by the presence of an external chair, for example, on a committee such as a faculty council.

Relations between Central and Local Governance

The relationship between central administration and academic units in governance and management is certainly one of the major issues which should be discussed in this report. As mentioned previously, the governance of NOVA has been characterised by a high-degree of decentralisation with significant powers of decision-making retained by the academic units and a corresponding weakness in the system of central governance, evidenced, for example, in the strategic planning process and the rather weakly-developed central management services. This situation was previously described in the report arising from the IEP (then CRE) evaluation in 1998, when the university was likened to “a federation of different organic units”.

There are some obvious historical and geographical reasons for this high degree of decentralisation. Moreover, the new universities law permits this level of decentralisation by saying that the basic organic units are autonomous, having their own bodies and staff and carefully describing the composition of the internal governing bodies. However, it is also clearly stated in the law that although the organic units are governed by their own statutes, these are executed under the terms of the law and the statutes of the institution, i.e. the university.

New University Statutes (2008)

The NOVA statutes mainly describe the composition and competences of central government and only briefly describe the academic units in the expectation that each academic unit will produce its own comprehensive statutes. The NOVA statutes¹ briefly state that the university is “made up of the academic units..., all with public legal status and administrative and financial autonomy”.

¹ In the copy annexed to the SER, “CHAPTER V” on p.15 should presumably have read “CHAPTER VI”)

Statutes of Academic Units (2008)

The evaluation team had an opportunity to review the statutes of FCT and FE. Both statutes (using somewhat different wording) describe that these units are fully independent entities, being a legal person of public law (in the case of FE) and a public corporate entity (in the case of FCT) with administrative, patrimonial and financial autonomy as well as academic autonomy, namely in scientific, pedagogical and cultural matters, in terms of the NOVA's statutes. According to the university law, however, it is quite clear that it is the university that is the legal person and not the academic units.

A reading of the national law conveys the impression that the intention in relation to autonomy of the organic units is that of academic autonomy, which every unit should have and which is also a global principle in academic institutions. The financial and managerial autonomy is derived from the university statutes, whereby the university is the legal entity receiving the resources from the state thereby possessing the ultimate responsibility for these.

The evaluation team believes that the concept of autonomy of the academic units has been over interpreted in NOVA and that this might prevent more fruitful cooperation between the central administration of the university and its organic units and impede the strategic development of the institution as a whole.

However, the evaluation team believe that the Rector has made commendable progress in achieving a greater degree of centralisation and integration of certain functions at the university level as required by the new law while remaining sensitive to the tradition of autonomy long-prized by NOVA's organic units. This is evidenced most notably in the establishment of a Council of Deans, which brings these key managers together alongside the rectoral team for university-wide deliberations that are considered to be advisory in nature and thus are non-threatening to the perceived autonomy of the academic units.

This development has been enabled by the strong sense of mutual trust and respect that the evaluation team perceived between the rector and the deans currently holding office, and the evaluation team has identified other operational areas in which advantage of this situation should be taken in similar ways by convening, for example, groups such as vice-deans for pedagogy, research strategy managers, quality assurance officers etc. Such arrangements are possible in the current climate of mutual trust and respect that exists at NOVA. However, some additional clarification of the degree of centralisation and decentralisation in authority and responsibility seems desirable to the evaluation team.

There are several practical reasons (alongside the legal ones) why the evaluation team is suggesting some changes in the operations between the rectorate and the academic units, which could lead to a fortification of the power and responsibilities of the central administration (rectorate).

The reasons are outlined below:

- *The brand name of the institution:* In a globalised world, the recognition of educational functions and research of an academic institution is usually based on the name of the university (such as Harvard, Oxford etc.) and not on the individual names of its component units. The name of the university and the image which is associated with the name, creates the brand for all outputs of the institution. Therefore, a good brand is very important for all academic units and they should do their utmost to advance this common brand. Of course, there is also the brand name of the unit but this must be secondary to the common brand.

- *Strategic management of the university:* The strategic planning and management of a university requires a common ideology, mission and vision for the institution. The individual strategies of the organic units should be derived from the general, overarching strategy of the university. This is the basic ideology and method for creating a good university.
- *Advancement of interdisciplinarity:* It has been very seriously outlined in the current mission statement of NOVA that research should be advanced towards interdisciplinary areas and in general, inter-institutional participation is suggested. Although some of the academic units are already rather interdisciplinary (FCT, for instance), more central organisation is required to expedite these trends. The establishment of the Council of Deans is an example of one such trend already in place.
- *Joint services for academic staff and students:* Although services operate in practice at the academic unit level and even in smaller units like departments, many academic services are nowadays so complicated and require special competences that these special services cannot be delivered effectively by the presence of multiple local offices at the unit level. They should be developed in a single office for the whole university and only then distributed to the practical level. Such competences are needed in fields such as internationalisation, Bologna affairs, the development of new learning methods, research support issues, the development of entrepreneurship and innovation transfer, fund raising etc.
- *Funding:* Finances always pose serious threats for a university even in more favourable economic times and therefore the spending of resources on overlapping and duplicated operations in different parts of the university does not represent prudent financial management. A rationalisation of operations would be needed even in more prosperous time but particularly given the current state of the world economy.

Consequently, the evaluation team believes that full advantage should be taken of the mutual trust and respect that currently exists between the central and unit levels of management to centralise some more university-wide functions and services especially those that are clearly strategic in nature. The evaluation team not only believes in the need for this, but perceives a willingness and readiness in the university for these changes to take place.

Devolved Decision-making

There are, however, many commendable features in the present system of decision-making and management in NOVA, e.g. in the financial management at unit level.

There is a general trend in Western European universities to operate according to the principle of subsidiarity in local or campus governance, in which decisions are made at the lowest appropriate level of responsibility. This devolved decision-making has been an essential part of the so-called ‘management by result’ system and is an excellent way to develop internal accountability. It has been working particularly well in the system of budgetary management.

The managerial autonomy of academic units in NOVA already fulfils the features of this kind of devolved decision making and there is no reason to change practices where they are organised under the university umbrella following the general strategy and university statutes, as previously mentioned.

9. Financial Management

Universities receive their budgetary support from the state as a block grant and then allocate it to the rectorate and certain other centralised functions and to the academic units. The academic units have autonomy in using their budget, thus financial operations are clearly devolved as mentioned earlier, which gives responsibility for their use to the units. The academic units control the spending under the supervision of the rector and report to the Ministry.

From external revenues, users pay overheads of 20% to the units but no overhead is allocated to the central administration.

According to the SER, there is presently very little money top-sliced from the university budget available for the Rector to allocate in terms of, for example, strategic interventions and initiatives, prizes for excellent achievements at the university level, strategic grants at the university level etc.

The evaluation team believes that in the development of the university strategy there must be some special resources allocated for use by the Rector. This is one of the main tools for institutional steering and introduces an element of competition between units and staff members inside the university.

These strategic funds have to be allocated from the global budget of the university and as overheads from the non-governmental revenues. They should be allocated by the Rector in a manner which is consistent with the agreed university strategic plan and should also be transparent. Similar strategic resources could be collected also at the academic unit level and then used for strategic purposes of the unit, consistent with the unit strategic plan.

10. Development of Human Resources

The development of human resources is one of the most important functions in developing universities to international level. Strict legal regulations currently inhibit the development of human resources in many continental European universities. The new Portuguese statutes will, it would appear, increase the possibility for the management of human manpower by offering promotion on the basis of teaching and scientific merit.

Recruitment and Endogamy ('inbreeding')

Open recruitment and competition is essential when renewing the staff complement of the university so as to avoid endogamy (inbreeding) which is rather a common, continental European phenomenon. However, for example, the Faculty of Economics (FE) at NOVA has decided not to recruit its own students as faculty members. This may pose a problem as research careers may already have commenced during the undergraduate phase of studies and it may not be fruitful to interrupt research that is advancing well. [The evaluation team has been informed that although FE is a research-oriented school that does not practise inbreeding, many of its PhD graduates sustain the links to the graduate programme and continue to be involved in its research projects, no matter where they have been hired afterwards.]

The university should, however, have a clear, strategic approach to attracting the best students from other European universities so as to diversify the research student base at Masters and PhD levels.

Gender Issues

The increasing proportion of female enrolment in higher education in the 20th century has been characterised as “dramatic progress”. However, the underrepresentation of women among academics and gender inequalities in academia still appears to be a persistent global phenomenon. Data for academic staff by gender show patterns of both vertical and horizontal segregation.

Women constitute the majority of higher education graduates in most of the EU countries, but their number decreases significantly when they begin to build up their scientific career at a university.

The evaluation team has considered the data for gender distribution among academic staff and found that Portugal and NOVA performs quite well. The proportion of female academic staff in NOVA is 41%, as against a Portuguese average of 41.8% and an EU-25 average of 36.4%.

The evaluation team suggest that this data should be continuously monitored and that the university should seek to develop gender equality policies and should highlight, for example, a number of successful role models in the university.

Management of Human Resources

Because of the decentralised structure of the university as discussed previously, the development of human resources is mainly taken care at the academic unit level but this is certainly one of those functions which should have a common, university-wide policy, which again needs special expertise and arrangements at the level of the rectorate.

Academic and Non-academic Staff in the University

The number of academic staff available to the university seems to be satisfactory in spite of the funding difficulties. The student/teacher ratio over the past five years is in the range 12.9-13.3 (with some variation depending on the nature of the academic unit) whereas the average figure in OECD countries in 2003 was 15.5. The level of academic qualification of teaching staff in NOVA has been rapidly increasing whereby in 2003 only 64% of teachers held a doctoral degree but by 2007, this had already increased to 72%.

In the SER, it is stated that there has been a decline in the total number of non-academic staff in recent years. This reduction has been handled by implementing a different and flexible recruitment pattern under the new legislation. The ratio of non-academic (non-teaching) staff to teaching staff in NOVA is 0.47, which is a rather low figure even by European standards. In North-America, this ratio is usually much higher being in the region of 1.0-2.0.

There is a strong need to increase the level of qualification of the non-academic staff in the university. It is essential that the university has an increased number of professionals in the position of academic support and administrative staff. The use of the term 'non-academic' staff is pejorative because of the need for an increased number of more academically qualified staff occupying these posts.

11. Administrative and Support Services

The university needs to develop better (external and internal) information and communication systems, which also belong to those activities which could better be conducted at the level of the rectorate, with the support of coordinating persons acting at academic unit level.

It is essential to develop the university's image and information communication with a range of external publics including potential undergraduate and post-graduate students, school teachers and other educators, the media, and other higher education institutions, alumni (through an association), business and industry. These should focus mainly on the national level but international communications should also be considered.

A more highly developed internal and external information and communication system should be developed to strengthen the unity of NOVA and the current and commendable development of a comprehensive information management system should be encouraged and accelerated. The evaluation team learnt that such a system is now under construction at NOVA.

Library

Library services are obviously well developed and the students did not indicate any significant problems in relation to access to textbooks although teaching staff in the Faculty of Social Sciences and Humanities (FCSH) lamented the lack of an integrated university-wide library catalogue. In the Caparica campus, a new, state-of-the-art library has recently been completed.

Computing Services

Students indicated that they considered computing facilities as sufficient but personal laptop computers for all represent an essential future.

Campuses

The university is operating in several distinct campuses (at a considerable distance, in some cases) but due to the high decentralisation of management this does cause much difficulty at present. Noting the evaluation team's earlier recommendation that a higher level of centralisation is required, the main office should still be retained notwithstanding the operational requirement that for local coordination some key services should also be localised in campuses.

12. Quality Assurance

Quality within the Bologna Process including the European Standards and Guidelines (ESG)

Every university has a responsibility to assure the quality of all its activities: its programmes of study, its research and its organisation and management. Under the Bologna Process, each signatory country, including Portugal, has responsibilities in terms of quality assurance. Specifically, it has an obligation to assure the quality of the programmes offered under the 3 cycles of the Bologna Process, as expressed in the *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG).

The ESG, however, clearly state that the primary responsibility for quality assurance (QA) lies with higher education institutions. Each country also has an obligation to establish an external QA system that ensures that each university has in place well-functioning and effective QA systems. Each university has a responsibility to ensure that its study programmes have been developed in a manner consistent with the Bologna principles, including the need to move from an input-based, curricular system led by the teacher to an outcomes-based system based on the needs of the learner.

Quality Assurance at the University

NOVA has taken this process very seriously. In co-operation with the university Bologna Office, the university Quality Office has, we believe, taken the correct approach towards the development of a quality assurance system that is appropriate for the university. It has looked at systems that have been put in place in other parts of Europe and has selected a quality management system that it believes is most appropriate for the university.

The evaluation team believes that it is now opportune and timely to introduce this quality management system. If an effective internal quality management system is put in place now, it will withstand the rigours of any external quality assurance system put in place by the new National Quality Assurance agency, which has now been established.

The internal quality assurance system that the university puts in place must, of course, be consistent with Part 1 of the ESG. It must contain the essential elements specified in those standards: such as a university-level quality assurance statement, systems for the approval, monitoring and periodic review of study programmes and administrative services, a systematic process for the quality assurance of teaching and non-teaching staff (including mechanisms designed to support staff in the improvement of teaching quality) and a student assessment system that is designed to achieve the learning outcomes specified for each study programme.

While the restructuring of academic programmes under the Bologna Process is important and essential, the true test of success is whether these study programmes deliver the stated learning outcomes and this can only be ascertained when a quality assurance system has been put in place to evaluate how and whether these learning outcomes are being achieved. It is also important to use the quality system to evaluate whether the university has the correct programmes in place and particularly whether it needs to adapt, merge or retire programmes. The evaluation team believes that, in particular, the large number of 2nd cycle programmes needs to be reviewed.

The evaluation team believe that the university has put in place the essential elements of such a system. The Bologna Office, with the support of the academic community, has engaged with restructuring the programme offerings. The quality office has developed a quality assurance system that it believes it best suited for the university and it now needs, we believe, the active engagement of the academic staff and students in rolling this programme out across the university.

NOVA is a university with a history of decentralisation but ultimately all students graduate with a Universidade Nova de Lisboa award and a quality assurance system must ensure that the NOVA quality brand applies at all units in the university, irrespective of their origin, size, scope, disciplinary background or geographical location. Quality does not, however, mean uniformity and the diverse nature, size and disciplinary structure of the academic units means that the establishment of a “one size fits all” QA policy would be inappropriate.

Diversity permits difference in approach and allows the development of good local practice. The evaluation team believes, however, that the sharing of good local practice is very important and it is essential that the university provides opportunities to share good practice at the level of the academic units across the university to permit the development of good institutional practice.

The establishment of the Council of Deans allows for the coming together and sharing of experiences, ideas and challenges of the managers of the different academic units. The university can encourage similar cross-institutional sharing of experience and practice in other areas such as the assessment of students and the assessment by students so that each unit can select the most appropriate practices that best suit its pedagogic development.

With the support of the Bologna and Quality offices, with some additional resources at the level of the rectorate and the essential engagement of the academic units, the evaluation team believes that the QA system is ready to be rolled out.

13. Students

Student Profile

In Portugal, students are selected through a national, competitive test for all public universities, which seems to be a well-accepted procedure in many European countries although it limits the autonomy of the universities in terms of student selection.

NOVA is one of the strongest universities in Portugal if rated according to students' first choice in enrolment. Several of NOVA's academic units organise presentations in secondary schools of the region so as to stimulate applications which have increased significantly at a time of static intake to higher education (as determined by national policy).

Approximately 70% of NOVA's students hail from the greater Lisbon area, which makes the university regional in character. However this is not particularly surprising, as this is also a densely populated area, heavily populated by the higher educated social classes.

Students' Academic Performance

Student persistence and dropout rates are well monitored and reported and indicate that performance against such metrics is satisfactory in this university. The data reflects the outcomes based on the older, longer, first cycle system and it will be necessary to continuously evaluate these trends for the new Bologna-model degrees when these graduates emerge over the coming years.

14. Teaching and Learning

Programme Planning

The university is relatively free to develop its own educational programmes and NOVA has been innovative from the beginning in commencing new programmes such as computer science, environmental engineering, communication sciences and the MBA, which are important for contemporary society.

The planning of new programmes and courses (and curriculum planning for existing programmes) rests with the academic units and their pedagogic councils. There are also special coordinators of programmes. The rectorate and the Council of Deans then discuss these plans and finally the rector signs off on them.

Student opinion on their education is systematically investigated and the results are analysed in the academic units. The cooperation of academic units in the creation of joint programmes is obviously not satisfactory because there are no joint programmes in the first cycle and only five in the second cycle and two in the third cycle programmes.

It was also unclear to the evaluation team as to how the needs of society and employers are evaluated and how the tracking of employment of NOVA graduates has been exercised. Some representatives of local industry that the evaluation team met assured the team of their satisfaction with the quality of NOVA graduates. They indicated that the university has been very innovative in creating new programmes, often being the first in the country to do so citing, for example, the field of information technology and communications.

The students that the evaluation team met indicated their satisfaction with the education received and their ability to express this through surveys of student opinion. The evaluation team feels, however, that there should be a more, systematic analysis at university level of the aforementioned factors concerning the educational programmes and their impact on society.

The Bologna Process

The university has been active in developing its educational programmes according to the Bologna reforms through changing the degree structure, which should be finalised at the end of the academic year 2008-09. The implementation of the Bologna system has obviously been difficult and there has been some reaction and resistance to this from the academic staff.

The basic ideology in the Bologna agreement lies in a reformulation (where required) of the basic degree into two cycles composed of a 3-4 year (full-time of study) Bachelor (1st cycle) programme followed by a (1-2 year) Masters (2nd cycle) programme, 5 years in total. In Portugal and NOVA, there has not been significant movement between programmes and the teaching has not, as yet, really adapted from a curriculum-led input approach to a learning outcomes approach. The IEP team met with students from a number of the academic units and all 1st cycle students indicated that they intended to continue their studies into the 2nd cycle. It would therefore appear that the bachelor programmes are not particularly relevant to the labour market. Some of the

vocational and regulated first-cycle programmes such as engineering and medicine in NOVA may, as a result, in future be longer, in common with the other Portuguese universities and in some other European countries, too.

From the Bologna tools, ECTS is used in all programmes in NOVA and the diploma supplement is being produced. There has been, in some cases, a resistance by some of the academic staff in accepting the principle of credit transfer. This problem has to be resolved immediately because not only does it strongly contravene the Bologna principles of credit transfer but it is also against the principles of mobility and internationalisation, which is one of the stated primary goals of the university. Credit accumulation between different academic units in NOVA and between different Portuguese universities has also to be taken care of.

Teaching Innovation

The Bologna agreement also underlines the importance of changing the philosophy of education from teaching towards learning and especially towards student-centred learning. This includes project learning, cooperative learning, tutorial supervision and other active learning methods such as problem-based learning (PBL). The evaluation team did not see many signs of development of education in this direction in the university. Such methods require the development of more pedagogic expertise and pilot trials.

This requires teacher training and promotion of teachers based on pedagogic qualifications. Special prizes/awards to excellent teachers and to excellent teaching units can stimulate the development of new innovations in teaching and learning. Educational trials adapting the new methods should be started in units that are willing to develop education in this direction.

A good advancement has been already made in the field of E-learning. The Institute of Statistics and Information Management at NOVA (ISEGI) has, for example, developed the first E-learning Masters programme in Portugal.

Teaching and Learning Centre

There is currently no special, centralised office for the development of teaching and learning, which is certainly a very necessary part of an organisation and again is one of those university activities where a high degree of expertise is necessary. In the opinion of the evaluation team, therefore, centralisation of these activities with coordinators in the academic units is the best way for advancement in this area. Besides the development of the didactic methods, this office could also survey the present situation and especially the results of transfer to the Bologna system by adapting new models for evaluation such as the attainment of learning outcomes.

15. Internationalisation

Internationalisation is stated as a core mission of the university with special attention to Portuguese speaking (Lusophone) countries. Internationalisation is coordinated at the rectorate level through one of the vice-rectors and an International Relations Office. This kind of centralisation is necessary today, because many European mobility programmes are now so complicated that successful handling of them requires special competencies.

The status of internationalisation of NOVA is good. The number of Erasmus students places the university well among European universities. In 2006/7, there were 429 outgoing and 431 incoming students, which means that NOVA is ranked as the 57th university in Europe and 2nd in Portugal regarding outgoing students and at the same 57th position in Europe and 3rd position in Portugal regarding incoming students. These numbers indicate that approximately 2.5% of all NOVA students are incoming Erasmus students and that the numbers of incoming and outgoing students are well balanced. In particular, the evaluation team noted that the Faculty of Economics (FE) is responsible for 40% of the total number of Erasmus students at NOVA.

The university also wishes to increase the number of foreign, regular students, from the current proportion of 5.4%. In Portugal in general, there has been an imbalance with a much higher number of outgoing than incoming students but NOVA has managed to keep these number in balance.

For international mobility, the language used in teaching is an important tool. Of course, the Portuguese language is spoken in many countries other than Portugal and thus many of the university's undergraduate and postgraduate foreign students come from Portuguese or Spanishspeaking countries. However, teaching some courses in English (the principal language of research) is also necessary if the university wishes to increase the number of incoming students from outside of the Lusophone countries.

The university is already teaching some first cycle programmes through English (mainly in FE and in a minor extent in FCSH). All second cycle courses in FE are in English and the same is true of the third cycle programmes in the Institute of Chemical and Biological Technology (ITQB). This is also, of course, important for Portuguese students and the general proficiency of NOVA's students (and academic and administrative staff) in the English language was well-proven during the two visits. Also the teaching of Portuguese for non-native speakers is important for exchange students.

NOVA's internationalisation policy includes items other than student mobility such as the mobility of academic and non-academic staff, participation in international networks and programmes etc. A particularly good example is FE, which has established an international market for outgoing and incoming students so that about one-third of incoming students are foreigners and about 40% of the academic staff comes from outside of Portugal.

The internationalisation of research activities needs a good knowledge of the English language so it is necessary to establish teaching through English in the university's areas of scientific excellence, where this language is also required in daily research activities. It is also very important for the future of the university to have more foreign PhD students and other researchers, and professors to visit and work in the university, as mentioned in the strategic principles.

A general language strategy for the whole university is needed, although the knowledge and practice of the English language by students and younger academics is excellent, as verified by the evaluation team in several interviews. In this strategy, the university should also present how it intends to teach

foreign languages as part of its educational programmes and part of its programme for staff development.

16. Research

A very ambitious strategic goal of NOVA is to be a research-led university known at international level. For this reason, the university selected the areas of research output and management as a special focus for this evaluation and therefore research issues figured strongly in the presentation throughout the SER alongside the carefully-prepared supplementary documentation.

To be an internationally known research-led university is really an ambitious objective, but it is possible to trace in the history of NOVA that this focus has already existed for a long time, perhaps even from the beginning in 1973.

Although the IEP evaluation process is unable to do any detailed subject analysis of the scientific output of NOVA in the time available and the methodology is not designed to perform any form of ranking, it is quite obvious that the university has already succeeded quite well in developing its research activities. The university has largely applied scientific indicators and the results have been presented to the evaluation team in the form of benchmarking against some other Portuguese and European universities. Thus the evaluation of research activities is already well described. These evaluations show that NOVA certainly belongs to the group of Portuguese research universities and in certain areas of science and technology also reaches internationally good standards. It is also obvious that the scientific activities have been steadily growing as evidenced by the increasing number and citations of publications.

A recent excellent achievement is that the European Research Council awarded one of NOVA's scientists with an Advanced Grant, which was the only grant of this kind awarded to Portugal during the first round of this new EU research funding mechanism.

Research Strategy

Research strategies in NOVA are mainly defined and developed at the level of the academic units, the majority of which have their own research strategy. This is not only the case in this university but in the majority of universities, as scientific research is always very close to the interests of academic staff and should be managed very close to the local units, whatever they are.

It is, however, necessary to develop a common research strategic plan, which will then become a part of the university strategy, which the university is in the process of developing. This plan has two main objectives, the external and internal. The external focus is important because nowadays national authorities and international funding agencies require overall strategies for research. It might also be important for the strategic positioning of NOVA inside of Portugal. For these purposes, it is important to describe the priorities and excellence in research.

For internal use, again it is important to describe how the university is fostering research and improving performance and how it is advancing interdisciplinary research and avoiding overlapping and internal competition between research programmes, which is a special problem in NOVA because of its decentralised nature.

Organisation of Scientific Research

Three of NOVA's academic units (ITQB, ENSP and IHMT) operate only as postgraduate and research institutes, of which ITQB is a strong research-led institute which is very important for the research image of NOVA, in addition to the two research-led faculties, FCT and FCSH.

Due to the external funding through FuCT, the (Portuguese) Foundation for Science and Technology, the management structure of university research is based on research centres, which are more or less independent of the academic unit/departmental structures although operating in close connection with them. Most of the research units in NOVA have been acknowledged by and at least partially funded by FuCT. There are now 41 such centres in NOVA recognised by FuCT. Four of those are integrated with associated laboratories (AL), which are also centres of excellence established by FuCT. They are operating in the fields of biochemistry, biotechnology, materials science and tropical diseases. Three of them cooperate with other laboratories and universities such as the University of Minho and the University of Aveiro.

In addition there are also several research centres, which have not yet been recognised by FuCT but are waiting evaluation or reorganisation to be recognised as such in future.

Interdisciplinary Research

One of the main missions of the university is to specialise in interdisciplinary research. However, it seems that the number of joint studies between the different academic units is small.

The evaluation team believes that NOVA has in place structures which could promote interdisciplinary and thematic research projects. Because two of the research-led faculties are very large and as such multidisciplinary, there are certainly multidisciplinary research centres inside these faculties. ITQB is also not bound into the disciplinary teaching programmes and could be an excellent place for establishing thematic projects in cooperation with the departments in the faculties of FCT and FCM.

Medical sciences seems to be very much splintered in NOVA, divided as it is between four academic units: one faculty, one school and two institutes, and the evaluation team recommends that some joint operations should be planned in this area, if the university plans to raise the scientific status of this area of life sciences.

Research Staff

The development of human resources is the most important tool in order to attain excellence in research as in all other fields in a university. The research staff of NOVA is comprised of the academic staff of the university, researchers recruited through different grant programmes and postgraduate students. In addition there are postdoctoral researchers (which the university terms ‘students’ but a more appropriate name is certainly ‘researcher’ or ‘researcher in training’).

In 2007, there were 905 teacher/researchers qualified to PhD level, 61 other kinds of researcher, 201 post doctoral fellows and 1,218 PhD students. Approximately 45% of post doctoral fellows and PhD students are funded by FuCT.

For the development of research staff, it is very important to take care of the research career as the university (and Portugal in general) is trying to do. This career development should ideally include the following four steps:

1. Early student access to research during first cycle education: perhaps even exposure during secondary education,
2. PhD: a very important period for the whole system,
3. Post doctoral period: an opportunity for young scientists to start their own research with their own responsibility and
4. Advanced scientist: status with one’s own group or department.

The SER indicates that there are not enough full-time researchers in NOVA. The teachers in general spend 30% of their time on research but there are big differences between academic units as a consequence of the difference in the level of scientific activity.

The evaluation team recommends that the workload of teachers should be differentiated by adjusting the teaching load for strong researchers. A useful, strategic tool is whereby the university could create vacancies that do not carry teaching obligations, which could be given for certain periods, say 3-5 years, for excellent scientists among the academic staff. World-class research often requires full-time or practically full-time research during critical periods. It is also important, however, that where excellent scientific staff members are teaching, they should do so on 2nd and 3rd cycle programmes in order to reach the best students for research.

It is important that the university also has other means to encourage scientific excellence at different levels through promotion, prizes, awards etc. Prizes should be given at the university level because then they give a better strategic view and are more fully recognised. The academic units should give more practical support to researchers for travelling expenses etc.

Postgraduate Studies

PhD education is one of the most important ways to promote university research. In NOVA, the third cycle is already well-recognised and the university wishes to increase the number of these students. The development of PhD programmes is already good and the number of graduates is increasing. This number is also depending on national decisions or priorities because it is not economically sensible for a country to educate too many PhD's. At NOVA, there are no special organisational structures for doctoral education (such as graduate schools, for example).

The evaluation team supports the idea presented in the SER that graduate schools should be established at the university level in order to improve the

quality of doctoral studies, for the advancement of cooperation between different academic units and to promote interdisciplinarity, which means that the doctoral schools should not be strictly bound to the academic units but to the subject of the research. For example, if the subject belongs to the life sciences, the students may come from the Medical or Science Faculty or from any of the three research institutes operating in this area. Graduate schools could also establish international links and cooperate with graduate schools of other universities, both domestic and international.

Financing of Research

There is a dual funding system for research in Portugal as in many other European countries including the basic funding of universities and then a nationwide competitive funding process operated through FuCT. Additional funding comes mainly from EU programmes and as a result of cooperation with private enterprises.

According to data in the SER, NOVA has succeeded quite well in competitive funding. A special weakness mentioned is the reduced EU funding but on the other hand the global success in this funding source has been rather good. The EU is, however, transforming its funding strategies more and more towards competition, e.g. by the creation of the European Research Council. Thus, even in this sector, NOVA has to prepare for increased international competition, which can only be achieved through a better internal strategy.

Success in national and international competitive funding markets can be achieved by strategic management inside the university, which means fostering excellence and creating critical mass in the areas where it is possible, taking advantage of all the synergies of disciplines in the university. It is also important that the university's research funding strategy prepares for the full recovery cost of research activities which is essential in, for example, the upcoming EU programme FP7.

Research Support Services

A Research Support Office was established in the rectorate in 2007 and is helping to foster collaboration between the academic units by disseminating research information both externally and internally. This office is to be commended for the studies it is conducting on the quality assurance of research at NOVA such as the bibliometric study of research activity contracted to the University of Leiden.

This type of university-wide office is becoming more and more important. It could help to guide academic units to develop strategies, support external grant application, negotiate contracts, manage donations and fundraising, arrange for intellectual property rights and provide for ethical issues.

17. Other Services

Technology Transfer

NOVA has one of the longest-established entrepreneurship competencies in Portuguese universities. Activities are coordinated in the rectorate which also advises on patent registration. There is also a committee for coordination and enhancement of entrepreneurial activities chaired by one of the Prorectors. Recently, all entrepreneurial activities in NOVA were evaluated by an American expert resulting in a report which included the development of an action plan. This paper has produced very useful guidelines, which the evaluation team recommends should be followed.

There are several programmes for technology transfer with which NOVA and its innovative units, such as FCT and ITQB, are cooperating such as GABI, an intellectual property support unit located in Madan Park, which is a science and technology park operated in connection with FCT; IBET (a non-profit institution and biotechnology research organisation); UNINOVA, situated in

connection with FCT is creating new technology innovation centres and small firms and ADISEGI, an association for advancement of the development of ISEGI formed by 11 public and private institutions.

The promotion of entrepreneurship education is also an important tool. In close cooperation with FE, a techno-entrepreneurship training programme has been established for developing the entrepreneurial skills and culture in NOVA.

As a result of these innovative activities during the years 1995-2007, 49 start-up and spin-off companies were born and two R&D centres have been established. The number of patents has been increasing, 44 of which have been filed in the period 2005-2007, the majority coming from FCT, with some from ITQB and FCM.

Knowledge/technology transfer and innovation activities are very well advanced in NOVA but they should be integrated into the general strategic plan of the university. The university should outline the methods for expanding technology transfer such as partnership in research projects, industry sponsored chairs, educational courses taught by industrial experts etc.

Practical advancement can be conducted by the newly-established entrepreneurship office. Academic staff (especially the younger generation) also need advice to enhance their innovative activities. Entrepreneurial training is one important topic in educational programmes, and it is already very well advanced in NOVA. The regulations on intellectual property rights also need to be revisited.

Regional and Cultural Relations

Partnership with the region should be intensified. Universities are becoming more and more important in relation to local regions especially where they are the primary cultural producer in the area. In Lisbon, this is not the case due to the great presence of higher education institutions but NOVA still has its special field to offer to the city.

Cooperation between the municipalities and the NOVA is already well-established. Especially good relations seem to exist with the municipality of Almada due to the establishment of Madan Science Park close to FCT. With the city of Lisbon, NOVA is already collaborating with the two other large public universities in the project Lisbon: Erasmus Capital City.

18. Recommendations

In terms of strategic planning:

- The university should urgently produce and publish its general strategy
- The work should commence at the level of the academic unit and these academic unit plans should be collated and incorporated into the overarching university plan
- The academic units should then adapt their own plans according to the university-level strategic plan

In terms of fund raising and funding:

- A special development office for external communications and the image of NOVA should be established
- A strong alumni organisation should be established with a well known person appointed as chair of the alumni board and the rector should also play a role in creating and promoting this activity
- The overall brand for the university has to be created in the first place as NOVA which is, in itself, a good name for a brand
- In difficult economic times, the university must consider its suite of education programmes and decide if they are all still appropriate
- The university should try to increase the number of students in 2nd and 3rd cycle programmes

In terms of governance and management:

- The strategic planning and management of the university requires a common ideology, mission and vision for the institution
- The individual strategies of the academic units should be derived from the general, overarching strategy of the university
- The name of the university, NOVA and the image associated with the name must create the brand for all outputs of the institution
- Any future revision of university governance should give consideration to the representation of non-teaching staff on the General Council and the general involvement of post-doctoral appointees in institutional governance
- It would be worthwhile for the Council of Rectors in Portugal to arrange for the General Council chairs to convene nationally each year.
- The Rector should pursue his proposal to bring together external members of the General Council and all Faculty Councils for periodic exchanges of information and discussion of university-wide needs.
- The concept of autonomy of the academic units has probably been over interpreted in the university and a re-evaluation of the role of the central administration of the university and its organic units could facilitate the strategic development of the institution as a whole
- Full advantage should be taken of the mutual trust and respect that currently exists between the central and unit levels of management to centralise some more university-wide functions and services – especially those that are strategic in nature
- The Institute of Hygiene and Tropical Health (IHMT) and the National School of Public Health (ENSP) should be encouraged to co-operate together with the Faculty of Medical Sciences (FCM) e.g. by establishing a joint organisational unit so as to develop a critical mass of research in these medical areas
- The intention to decrease the number of departments in the Faculty of Medical Sciences (FCM) is welcome

- The university should identify operational areas where the convening of transversal groups such as the vice-deans for pedagogy, research strategy managers, quality assurance officers could assist in the development of fruitful cooperation between the central administration and the academic units
- More central organisation is required to expedite the advancement of interdisciplinarity
- Due to the complexity of many academic services, these cannot be delivered effectively by the presence of multiple local offices at the unit level and must be developed in one office for the whole university and only then distributed to the practical level

In terms of financial management:

- In the development of the university strategy there must be some special resources allocated for use by the Rector
- These strategic funds have to be top-sliced from the global university budget and as overheads from the non-governmental revenues
- They should be allocated by the Rector in a transparent manner consistent with the university strategic plan
- Similar strategic resources could be collected at the level of the academic units and then used for the strategic purposes of the unit, consistent with the unit strategic plan

In terms of the development of human resources:

- Open recruitment and competition should be encouraged when renewing the academic staff complement of the university so as to avoid endogamy
- The university should seek to develop a gender equality policy aimed at increasing the proportion of female members of academic staff and should highlight successful role models
- The data on the proportion of female members of academic staff should be continuously monitored and evaluated

- The development of human resources should be strengthened through the use of a university-wide policy, which requires special expertise and arrangements at the level of the rectorate
- The level of academic qualification and professionalisation of the administrative and academic support staff should be increased

In terms of administrative and support services:

- A more highly developed internal and external information and communication system should be developed to strength the unity of NOVA and the current and commendable development of a comprehensive information management system should be encouraged and accelerated
- This information management system should include the development of an integrated university-wide library catalogue

In terms of quality assurance:

- With the support of the Bologna and Quality offices and with some additional resources at the level of the rectorate, it is now opportune to roll out a quality management system consistent with the European Standards and Guidelines (ESG)
- This system should contain a university-level quality assurance statement, systems for the approval, monitoring and periodic reviews of study programmes and administrative services, a systematic process for the quality assurance of teaching and non-teaching staff and a student assessment system that is designed to achieve the learning outcomes specified for each study programme
- The large number of 2nd cycle programmes needs to be reviewed
- It is essential that the university provides opportunities to share good practice at the level of the academic units across the university to permit the development of good institutional practice
- The university should continue to monitor student persistence and dropout rates, particular for the new Bologna-model degrees

In terms of teaching and learning:

- An increase in the development of joint programmes is necessary particularly in the first cycle where they are currently non-existent
- The tracking of the employment of NOVA graduates needs to be better monitored and reported
- The development of new learning methods such as project learning and problem-based learning needs to be increased
- In order to stimulate innovation in teaching and learning, special prizes or awards at the university level should be instituted for excellent teachers and excellent teaching units
- Educational trials adopting the new learning methods should be started in units which are willing to develop education in this direction
- The establishment of a special centralised office for the development of teaching and learning should be considered

In terms of internationalisation:

- A general language strategy for the whole university is needed and NOVA should also present how it intends to teach foreign languages as part of its educational programmes and part of its programme for staff development
- The teaching of some courses in English (the principal language of research) is necessary if the university wishes to increase the number of incoming students from outside the Lusophone area
- The teaching of Portuguese for non-native speakers is important in relation to exchange students
- It is important for the future of the university to have more foreign PhD students and other researchers and professors to visit and work in NOVA

In terms of research:

- The university needs to develop a common research strategic plan, which will then become a part of the overall university strategy

- It is important to describe the university's priorities for excellence in research
- The university needs to build on the structures it has in place to promote interdisciplinary and thematic research projects
- As ITQB is not bound into the disciplinary teaching programmes, it could be an excellent place for establishing thematic projects in co-operation with the relevant departments in the faculties of FCT and FCM
- Some joint operations should be planned between the four academic units that operate in the field of medical sciences, if the university plans to raise the scientific status of this area of life sciences
- The workload of academic staff should be differentiated by adjusting the teaching load for strong researchers
- This could be accomplished by the university creating some vacancies that do not carry teaching obligations which could be given for certain defined periods for excellent scientists among the academic staff
- Where excellent scientific staff members are teaching, they should do so on 2nd and 3rd cycle programmes in order to reach the best students for research
- In order to have wider access to EU funds, a strategy for the full recovery of the costs of research activities should be developed and implemented
- The university should also have a means for encouraging scientific excellence through the use of prizes and awards at university level
- The establishment of graduate schools at the university level should be considered in order to improve the quality of doctoral studies, advance the co-operation between the different academic units and to promote interdisciplinarity
- Success in national and international competitive funding markets can be improved by strategic management within the university, which means fostering excellence and critical mass in the areas where this is possible, taking advantage of all the synergies of disciplines in the university
- The development of a university-wide research support office could help to guide academic units to develop strategies, support external grant applications, negotiate contracts, manage donations and fundraising and arrange for intellectual property rights and provide for ethical issues

In terms of other services:

- The university should follow the very useful guidelines produced following the external evaluation of all of the entrepreneurial activities in NOVA
- The university should outline the methods for expanding technology transfer such as partnerships in research projects, industry sponsored chairs, educational courses taught by industrial experts etc.
- The younger generation of academic staff need to be advised and supported so as to enhance their innovative activities
- The regulations on intellectual property rights need to be revised
- Partnership with the region should be intensified

19. Concluding Remarks

This review has taken place during an interesting time for Portuguese higher education. The team trusts that the Universidade Nova de Lisboa will find its comments and suggestions helpful, and wishes the university all the best for the next stage of its development.

Envoi

The IEP team wishes to thank the Universidade Nova de Lisboa once again for the excellent arrangements provided for the review team. It was a pleasure to be in NOVA and to work with the staff, students, and external stakeholders of the university.

