

Ten-Year Development Plan of Macao Polytechnic Institute

Macao Polytechnic Institute

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TABLE OF CONTENTS

I. Current Conditions of MPI and the Basis for its Development

- A. Programme Teaching
- B. Scientific Research
- C. Faculty Development
- D. International Cooperation and Exchanges
- E. Professional Training
- F. Campus Facilities
- G. Student Activities

II. Evaluating the Environment: Opportunities and Challenges

- A. Opportunities for MPI's Development
 - 1. The Macao SAR Government's Initiative in Support of Higher Education
 - 2. Institutional Advantages Afforded by the "One Country, Two Systems" Policy
 - 3. The Development Strategy of "Moderate Industrial Diversification"
 - 4. A Cultural Background of Sino-Western Convergence and Intercourse
 - 5. Realistic and Theoretical Basis for Development
- B. Challenges Facing MPI's Development
 - 1. Macao's Higher Education Enrollment will be Affected by a Decrease in its College-age Population
 - 2. Development is Constrained by Existing Laws and Regulations
 - 3. Intensity of Competition in the Local Tertiary Education Market

III. The Advantages and Problems of Development

- A. An Analysis of the Advantages in the Institute's Development
 - 1. Adequate Funding
 - 2. Distinctive Curricula and Research Catering to Social Needs
 - 3. Extensive Exchanges and Cooperation
 - 4. Development of Students' Ability is Effective
- B. Problems in the Institute's Development
 - 1. The Institute cannot meet the Demand for High-level Expertise for the Socio-economic Development of Macao due to Restrictions on its Operation
 - 2. Current Academic Structure is Incompatible with the Requirements of Degree Education

3. Programme and Curriculum Adjustment Mechanism is Incompatible with the Economic and Technological Development of Macao and Neighbouring Areas
4. Faculty Development still lags behind
5. Research Level falls short of Dual Emphases on Teaching and Research
6. Current Management System cannot fully meet the Needs of the Institute's Upgrade to University Status
7. Lack of Land and Space has been a Major Hindrance to the Institute's Development

IV. Vision, Mission and Motto

V. General and Specific Objectives

A. General Objectives

B. Specific Objectives

1. Career Development
2. Scale of Operation
3. Organizational Structure of the University
4. Discipline Development
5. Curriculum Planning
6. Scientific Research
7. Teaching Staff
8. International Exchange and Cooperation

VI. Safeguards

- A. Adopting Beliefs and Culture fitting of a University
- B. Establishing a Practical and Efficient University Management System
- C. Improving the Ability to Source Diverse Funding and Efficiency in the use of Funds
- D. Improving Public Services and Campus Construction

The Core of Development Planning (New Development)

Ten-Year (2010-2019) Development Plan of Macao Polytechnic Institute

(Draft)

Established on 16 September 1991 under Decree Law No. 49/91/M, Macao Polytechnic Institute (MPI) is a multidisciplinary public institution of higher education which was formerly a part of the privately-owned University of East Asia, Macau. Nearly ten years having now elapsed since the handover, the time is ripe for MPI to make a long-term strategic plan in order to adapt to the changing economic and social environment. The crafting of the current Development Plan is based on analysis of the following aspects: trends in the development of tertiary education; the Macao SAR government's strategic choice for "moderate industrial diversification" in the economic structure; a SWOT analysis (evaluation of the institution's Strengths, Weaknesses, Opportunities, and Threats involved in the implementation of its objectives) for the Institute's development in the next decade.

I. Current Conditions of MPI and the Basis for its Development

In the academic year 2008/2009, MPI had 2,766 full-time students enrolled on its degree programmes and 208 full-time academic staff. In addition, each year over 20,000 participants attend MPI's professional training courses on a wide range of subjects. Currently, there are 13 training and research units at the Institute. In the academic year 2008/2009, MPI offered 32 undergraduate programmes as well as 10 joint master's degree programmes in collaboration with Peking University, Beijing Language and Culture University, Beijing Sport University, Queen Mary University of London, Monash University, Australia, and Hong Kong Polytechnic University.

A. Programme Teaching

Since the 1990s, the Institute has launched various programmes catering to local needs for economic and social development. In the field of teaching, the Institute combines theory with practice. All the programmes MPI offers are practically oriented with emphasis on applied sciences and industrial technology. According to the period of study, these programmes are divided into 3-year higher diploma programmes and 1-year supplementary bachelor degree programmes. More recently, 4-year bachelor degree programmes have also been added to the Institute's curricula.

B. Scientific Research

The research conducted by MPI orientates toward serving educational needs, investigating livelihood and controversial topics and promoting socio-economic development. Research projects and research funding have been on the increase; the number of academic papers published has dramatically increased, especially those listed in the AHCI, EI, SCI, SSCI Indexes, and the key Chinese periodicals index.

C. Faculty Development

After many years' efforts the academic qualifications of academic staff at MPI have been generally upgraded; the number of full-time teachers has also grown steadily; among full-time faculty, the number of teachers holding a doctorate or master's degree has increased dramatically. Faculty structure has been improved and the overall quality of faculty enhanced.

D. International Cooperation and Exchanges

The Institute has established three major networks of cooperation and exchanges with Chinese, English, Portuguese-speaking countries or areas, working with over 20 well-known universities in the Greater China Region, Portugal, the United States, the United Kingdom, and Australia.

E. Professional Training

The Institute has established a distinctive role in gaming teaching and research, English teaching and training, continuing education and special projects training, offering a large number of professional training courses which cater to the specific needs of the community.

F. Campus Facilities

A new academic building is expected to be completed and open to use in 2010, and the number of beds at the Orchid Tower Student Hostel has been increased. Other measures which the Institute has taken for development needs and facilities enhancement include upgrading computer hardware and software, increasing internet bandwidth and the construction of a web service system. All these promote more effective use of campus facilities.

G. Student Activities

The Institute uses its advantages to organize various student activities which, in combination with teaching practice, is aimed at broadening students' horizons and encouraging intellectual exploration, as well as creating a good academic and cultural atmosphere on campus. It is effective in promoting comprehensive development of

the students.

II. Evaluating the Environment: Opportunities and Challenges

A. Opportunities for MPI's Development

1. The Macao SAR Government's Initiative in Support of Higher Education

Since its founding, the Macao SAR Government has been dedicated to supporting Macao's higher education aimed at programme enhancement and quality assurance. Such strong policy support from the Government will undoubtedly provide strong momentum for the development of MPI.

2. Institutional Advantages Afforded by the "One Country, Two Systems" Policy

With the successful implementation of the "One Country, Two Systems" policy in the Macao SAR, Macao's higher education sector has been given a strong impetus. On the one hand, Macao has great advantages and benefits in student recruitment, as well as convenient cooperation and academic exchange opportunities with tertiary education institutions on the Mainland. On the other hand, under the "Two Systems" principle, Macao's higher education sector enjoys relative autonomy in terms of its management system, funding, and curriculum development, with freedom in choosing an appropriate path in line with Macao's unique characteristics and local needs.

3. The Development Strategy of "Moderate Industrial Diversification"

Industrial upgrading within the global value chain combined with the pressure of competition will inevitably raise local human capital and technological know-how in Macao. Moreover, a new regional cooperation platform has been institutionalized with the publication of the Reform & Development Plan of the Pearl River Delta Region, giving strong impetus to cooperation and exchange between Macao, Guangdong Province, Hong Kong, and the greater Pearl River Delta region. The current new momentum behind regional economic integration is multifarious and comprehensive, covering a wide area and involving high level government institutions. As a public institution of higher learning which has always stressed application, MPI has been offered significant space for growth by the new trends in industrial development.

4. A Cultural Background of Sino-Western Convergence and Intercourse

Macao has been at the "crossroads" of Sino-Western cultural exchanges over the

past 400 years. In this context Macao's higher education has been characterized by an infusion of cultural pluralism, reflected by the multiple players in the education sector, the current use of three written languages (Chinese, Portuguese and English) and four spoken languages (Chinese-Cantonese, Chinese-Putonghua, Portuguese and English) in Macao's educational system, the coexistence of four educational systems (i.e., Chinese Mainland, Chinese Taiwan, British, and Portuguese) at Macao's schools, and the intensity and extensiveness of international exchange and cooperation. With internationalization being a major trend in higher education, Macao's special position in channeling cultural exchange between East and West will also provide the driving force for the Institute's development.

5. Realistic and Theoretical Basis for Development

According to the overall development projection, Macao's higher education will see a substantial breakthrough in both quantity and quality, with higher education enrollment doubling in ten years' time. Macao's institutions of higher education will develop the roles that the institutions have set for themselves based on their current situation and distinctive characteristics. The size and role of MPI should be defined on the basis of these projections concerning Macao's higher education context.

B. Challenges Facing MPI's Development

1. Macao's Higher Education Enrollment will be Affected by a Decrease in its College-age Population

Macao's newborn population had been on a linear decrease from 1992 to 2002, which means Macao's college-age population will decline over the next decade. The subsequent decrease in the college-age population will definitely impact higher education enrollment rates in Macao over the next decade. However, demand for higher education will continue to be robust among Macao's incumbent local and foreign workers and in Macao's neighbouring areas, providing opportunities for MPI's further expansion.

2. Development is Constrained by Existing Laws and Regulations

Current legal restrictions make it difficult for the Institute to experience breakthroughs in programme development. The long-awaited new law, "Higher Education System", is yet to be introduced, and adjustments to the Institute charters cannot be put into practice at the moment. These are barriers to the urgently needed development of the Institute.

3. Intensity of Competition in the Local Tertiary Education Market

Macao is small in size and population, with a unitary industry structure. In this micro-economic and social environment, the 10 tertiary institutions in the territory will compete fiercely with each other for students, teachers, and other professional, academic and research resources. Faced with such a stark situation, the Institute must choose the right position and take a path of differentiation, turning pressure into motivation, as it seeks to develop in a time of change.

III. The Advantages and Problems of Development

A. An Analysis of the Advantages in the Institute's Development

1. Adequate Funding

The Institute, being a major government-funded public institution of tertiary education, has been privileged with adequate funding over the years and a steady increase in government financial allocations. Adequacy of government funding has been a guarantee for the Institute's overall operation.

2. Distinctive Curricula and Research Catering to Social Needs

The Institute currently offers programmes in much demanded areas of study which are unique to the Institute, including Chinese-Portuguese and Chinese-English translation, physical education, visual arts, biomedical sciences and gaming studies. In the field of academic research, the Institute has established nine research centres which dovetail Macao's socio-economic and cultural development. This also reflects the Institute's core position in fulfilling an important service for Macao.

3. Extensive Exchanges and Cooperation

MPI participates actively in cooperative programmes with internationally renowned institutions of higher education, student exchange programmes, mutual qualification recognition projects as well as joint research centres. The Institute has also been a major organizer of international conferences with the participation of scholars and academic institutions from all around the world. So far, the Institute has established major cooperative and exchange networks with Chinese, English and Portuguese-speaking countries or areas. It has been at the forefront of internationalizing higher education.

4. Development of Students' Ability is Effective

The Institute has always been strict with admissions, with only students of merit being admitted. The Institute adopts a whole-person approach to education through a

variety of activities such as competitions, seminars, arts and cultural festivals, which enables its students to think, judge, care and ultimately act responsibly.

B. Problems in the Institute's Development

1. The Institute cannot meet the Demand for High-level Expertise for the Socio-economic Development of Macao due to Restrictions on its Operation

As a tertiary institution that directly serves the territory, the Institute must produce expertise and skills that best suit Macao's social development. Macao's economy is becoming more diversified, as various sectors such as public service, health care and business register a growing demand for high-level expertise. In this respect, the Institute's development is very much hindered by the current restrictions upon its operation.

2. Current Academic Structure is Incompatible with the Requirements of Degree Education

A change is required in the structure of the curriculum within the framework of a university system, incorporating general education into professional education.

3. Programme and Curriculum Adjustment Mechanism is Incompatible with the Economic and Technological Development of Macao and Neighbouring Areas

As a social development-oriented institution of higher learning, the Institute is unable to keep up with Macao's socio-economic development due to the lack of a flexible mechanism to adjust its curriculum and course offerings.

4. Faculty Development still lags behind

For the Institute to become a high-level university, it needs a higher percentage of doctorate holders in the faculty, a team of distinguished experts and scholars, as well as a considerable number of internationally renowned academic leaders in key disciplines and interdisciplinary fields.

5. Research level falls short of Dual Emphases on Teaching and Research

There is still an outstanding gap when compared with high-level universities in neighbouring areas, particularly falling short in the area of the Institute's dual emphases on both teaching and research. Therefore the Institute needs to maintain what it has achieved and further encourage quality research.

6. Current Management System cannot fully meet the Needs of the Institute's Upgrade to University Status

With the upgrading and rapid development of the Institute, its management system and various institutions need to be adjusted and revised to improve management efficiency.

7. Lack of Land and Space has been a Major Hindrance to the Institute's Development

The Institute is constrained due to a lack of land and space. This is a major deficiency in the basic conditions for sustainable development, which makes it difficult for development in terms of both quantity and quality.

IV. Vision, Mission and Motto

Vision

The Institute aims to build a “distinctive, multidisciplinary, open, application-oriented high-level university for Macao and the neighbouring areas”.

Column 1 Vision

MPI's vision is based on its current development, distinguishing itself from other local institutions of higher learning. The Institute must continue to strive for excellence as well as applicability and service, as it improves on both teaching and research, the objective being dual emphases on teaching and research. For the Institute to become one of the first-rate universities of Macao and its adjacent areas, it must differentiate its orientation from such institutions as the University of Hong Kong, the Hong Kong University of Science and Technology, the Sun Yat-sen University, the South China University of Technology, and the University of Macau, if the Institute aspires to join this league of leading institutions in the region.

Mission

The Institute is committed to the provision of quality whole-person education which seeks to promote academic freedom and innovation in a blend of Eastern and Western cultural traditions. This approach enables its students to inherit, create, share and use what they learn as well as care for others in order to promote social progress.

Column 2 Mission

A university's mission is an embodiment of its philosophy, core values and functions, and hence the rationale for its existence. "Education" and "scholarship" are the twin missions underlying the existence of a university, signifying an integration of liberal and professional education in the cultivation of people. The Institute's commitment to the promotion of social progress must be realized within its unique tradition of cultural exchanges. The nature of a university's academic development lies in its academic freedom and responsibility to explore truth and pursue innovation.

The transmission of knowledge is exemplified in the interaction and inspiration that take place during the course of training. The creation, sharing and use of knowledge are reflections of a university's commitment to research, social service, external cooperation and communication. The Institute's commitment to servicing the community needs to be integrated into its larger functions, which embody its self-awareness as an institution of higher learning.

Motto Knowledge, Expertise, Global Vision

V. General and Specific Objectives

A. General Objectives

In the coming ten years the Institute aspires to complete its transition from college to university status as it continues to excel in both education and research. It aims to establish seven major systems: a reasonably structured, focused and distinctive curriculum; a whole-person approach to education that cultivates both all-roundedness and expertise, and a continuing education programme that best serves Macao's social development; an innovation system that places research at the service of teaching and of the community; an optimized faculty structure that will have a major influence in the region; a people-oriented, efficient and pragmatic management system; a high level, broadly cooperative, project-based international exchanges and cooperation system; a public service system embodied in a digitized campus and driven by modern management methods. With the establishment of these systems, the Institute hopes to excel as a high level university in Macao and the neighbouring areas.

Column 4 Becoming a University

Under the current development, MPI has good timing and conditions for transition from college to university status.

1. In view of MPI's trend in offering a variety of disciplines, if courses associated with socio-economic development are added in time, discipline development will be reinforced. MPI's research is directed towards serving educational needs, solving controversial social problems, and promoting socio-economic development. All these form a strong development potential. In recent years, MPI's achievements in teaching and research have received increasing recognition from society. Therefore, upgrading to university status will certainly be one result of MPI's development.

2. The "3+1" academic structure of MPI was inherited from Portugal. At the time Portugal joined the European Union the system was abolished there but not in Macao, so this system is outdated. Moreover, there is a lack of systemic coherence in training talents, a big difference from the whole-person education concept nowadays, as well as a gap between the "3+1" module and international programmes. Re-adjustments and re-arrangements are required under a university structure.

3. Macao's unique cultural advantages are reflected at MPI, including close articulation with overseas universities and multi-communication channels. These advantages contribute to the overall development of MPI which is crucial in upgrading to university status.

4. A merger trend has emerged in worldwide tertiary education institutions. Aside from diploma and associate degree programmes originally offered, specialty education institutions also now offer bachelor degree, master's and doctorate programmes, upgrading to university level. Meanwhile, universities have begun to undertake vocational training and skills development tasks as well. MPI ultimately follows this international trend.

5. Macao's current economy aims at diversification, with industrial structure continuously being upgraded, transformed, and management standards being raised. In such an environment, there is an increasing need for masters or doctorate-level expertise in the civil service, health care and business sectors. As MPI is limited by the current legal restrictions, higher-level programmes to train top professionals cannot be offered to suit Macao's economic development. As such, the necessary legislation to remove these barriers should be passed as soon as possible.

6. A number of MPI graduates and outside students expect to continue further study in MPI. However, as mentioned above, MPI is limited by current legal restrictions in offering higher-level programmes. As a result, these students are turned away to other institutions, which is a great waste in terms of operational resources.

B. Specific objectives

1. Career Development

In the next decade, MPI will follow a principle of gradual and orderly progress in its development, and strive to complete its four-step goal.

2010-2011 Period of upgrade transition: Endeavor to rename the Macao Polytechnic Institute to Macao Polytechnic University so as to establish its position as a university (see vision), developing the disciplines and administrative structure befitting a university, while also working towards campus expansion.

2012-2015 Period of solid foundation: Complete campus expansion, adjust the layout of the campus functional structure, recruit high-quality staff and conduct professional adjustments and augmentations to disciplines so as to set a solid foundation for the expansion of scale of educational provision.

2016-2017 Period of rapid development: Accelerate the expansion of scale of educational provision and effectively enhance visibility and reputation through discipline development, competence development, science and technology, faculty team building, international cooperation, and campus construction.

2018-2019 Period of robust growth: Further augment the quality of education management and standard, with undergraduate education forming the bulk of the programmes, and master's and doctorate degrees equally emphasized. The overall strength of the Polytechnic will increase significantly, it gradually becoming a high quality university serving Macao and the neighbouring areas.

Column 5 Clarification on the Name of the University

“Macao Polytechnic University” can better represent the “brand” established through the Polytechnic’s long history of development; not only is it prudent but also meets the wishes of the majority of the Polytechnic staff. As the Macao Polytechnic Institute is well known and has a certain visibility in the community, renaming the Polytechnic to “Macao Polytechnic University” is in line with tradition, and the promotion of its new name needs no further explanation from a historical perspective.

2. Scale of Operation

The overall scale of operations will experience further expansion. By the end of 2019, the number of degree students in the Polytechnic will, based on existing numbers, double to around 5,500, an average of 7% growth per annum. Undergraduate students will account for the majority of the student population, about 5,000 persons. Taking the upgrade to university as an opportunity, the Polytechnic actively develops post-graduate education, striving to enroll about 500 persons by 2019 (of which master’s degree students account for about 400 persons, and doctorate students about 100). On average, continuing education and other training programmes will be maintained at around 20,000 student-times per annum.

Column 6 Analysis of the Scale of Operation

1. After upgrading to a university it is necessary to maintain a certain scale of operation, say 5,000 students, so as to improve social and economic efficiency.

2. According to data from the Statistics and Census Bureau, the university-age population (18-year-olds) in 2010 is far higher than the corresponding newborn population back in the 90s. From this, it can be projected that in the next decade the number of university-age applicants may be much more than the corresponding newborn population.

3. After the Macao Polytechnic Institute has upgraded to university status it will be the main public tertiary institution to recruit local students. The enrollment will be about 1/4 to 1/5 of the total annual university-age population, which is about 1,000 local students. Within four years, the number of local undergraduate students at the Polytechnic will have reached about 4,000. Another 250 foreign students will be recruited each year, making up a total of around 5,000. In the next decade, the number of applicants for graduate education will easily reach 500.

4. In the next decade, the Polytechnic needs to promote the diversity of the student body from a sustainable development perspective, increasing an appropriate number of outstanding overseas students, and including more students from the Mainland. A diverse composition of students broadens the vision of university students, while an exchange of different cultures enables the Polytechnic to widen its vision for an internationalized future.

5. In the long run, Macao higher education institutions need to recruit more Mainland students, not only as a gesture of giving back to the homeland, but also as a foundation for the development of Macao's future. Although Mainland students may not work in Macao after their graduation, they will not forget the training offered by Macao. This is advantageous in the economic and cultural exchange between Macao and the Mainland.

3. Organizational Structure of the University

The academic units will be renamed as faculties. The faculty and its affiliated departments are to be established according to the following rationale:

- 1) The economic and social developmental needs of Macao and the neighbouring areas:

As an application-oriented university, the Macao Polytechnic needs to be closely

linked to the development trends of future industries through analysis on “opportunities” for industries. Areas such as management of the gaming industry, commerce, finance, accounting, the exhibition industry, cultural industry, computer information technology and environmental protection are worth major consideration.

- 2) The traditional features and development possibilities of the Macao Polytechnic Institute:

In planning the curriculum design of the university, the retention of existing majors and their further development must be considered. In addition, the overall possibility of further development, the general education courses offered, the allocation and adjustment of these courses within the framework of the university must be considered through a unified arrangement.

- 3) The norms and limits of university discipline development:

The organization of the Polytechnic is discipline-based. The development of disciplines must follow certain norms and limits, taking the customary practice of other universities as reference. In naming the Polytechnic and its subordinate faculties, the nature of the disciplines must be taken into account.

- 4) Highlight key areas and coordinate development:

From the perspective of Macao as a micro-society, the development of disciplines should meet the needs of economic development, and from an overall consideration avoid an obvious duplication with the disciplines of other universities in Macao. Where possible, the Polytechnic should select a different path of development, highlighting its unique characteristics.

The original six schools will be fine-tuned to form the following six faculties:

Faculty of Languages and Translation

Faculty of Humanities and Social Sciences

Faculty of Gaming and Business Administration

Faculty of Applied Science

Faculty of Arts and Design

Faculty of Health Sciences and Physical Education

In addition to faculties, the Polytechnic includes other units:

Institute of Continuing Education

Seniors Academy

Social, Economic and Public Policy Research Centre

“One Country Two Systems” Research Centre

4. Discipline Development

The Polytechnic will establish a management department of discipline development to effectively coordinate and guide the planning and development of emerging disciplines, cross-disciplines, and major disciplines; increase the cooperation with Mainland universities and related organizations; and strive for breakthroughs in the construction of key disciplines, a research base, and laboratories for the purpose of providing a platform to further tap the potential of disciplines, and to enhance the quality of research.

The Polytechnic will establish a graduate management department to strengthen discipline development in graduate education. By 2019, it will form a comprehensive system of academic disciplines, while bolstering the management of graduate education, awarding of degrees, and various management systems.

5. Curriculum Planning

The Polytechnic will establish general education courses, gradually refining

Chinese, Putonghua, English, mathematics, computer studies, physical education, health, arts education and other foundation courses. According to the nature of the discipline, each course will be allocated under the management of the relevant major or faculty. The Polytechnic will proceed with the implementation of a course elective system, a credit system and gradually improve its teaching management system. It will carry out curriculum structural adjustments, and expand bachelor degree programmes to meet the economic and social developmental needs in Macao and the neighbouring areas. It will build about 10 brand programmes that have great impact in Macao and the neighbouring areas. In addition, it will promote construction of disciplines with an interactive learning network.

6. Scientific Research

The Polytechnic promotes research on an extensive scale through the establishment of a variety of research centres. It encourages interdisciplinary research with practical and academic value, which contributes to teaching and provides service to the region. The Polytechnic strives to promote various research projects at all levels and provide substantial increase in research funding. This will result in a remarkable increase in the number of publications, which is a guarantee to growth in scientific research in terms of both quantity and quality.

7. Teaching Staff

The overall teaching staff planning is based on the principles of efficiency and sustainable development. By 2019, the ratio of full-time to part-time teachers will be no less than 4:3, the student-teacher ratio will be controlled at around 14:1, with about 300 full-time teachers, and about 230 part-time teachers. Student-administrative staff ratio will be controlled at around 15:1. By 2019, teachers with master's degrees

will account for over 95% of the full-time teaching staff, and those with doctorate degrees will be more than 70%, with around 20 leading scholars of considerable influence in their fields both in the Mainland and abroad.

8. International Exchange and Cooperation

By 2019, friendly relations with 20 education institutions will have been established, forming a network of international exchange radiating across five continents. Substantial exchanges and cooperation models which are project-driven will be established, with the number of foreign students amounting to around 100.

VI. Safeguards

A. Adopting Beliefs and Culture fitting of a University

In line with the development of a university, the principle of educating people and the concept of academic supremacy will be adopted as common beliefs within the campus. Under a common understanding of university autonomy and academic freedom, social responsibility will be nurtured. Adhering to the university motto of “*boxue, jingsi, rongtong, dushi*”, a university culture of innovative spirit, teamwork, dedication, tolerance and openness will be molded.

B. Establishing a Practical and Efficient University Management System

Management systems at the faculty and university levels will be established, allowing a practical and efficient university management system to be developed. Human resource management should comply with the performance principle, forming a work environment that offers “opportunities to do things, platforms to perform well, rewards to success”. The intent is to create conditions for the development of teaching staff. Improvements in teaching quality controls and self-evaluation systems, as well as management of teaching quality in all aspects will ensure a continuous enhancement of teaching quality.

C. Improving the Ability to Source Diverse Funding and Efficiency in the use of Funds

In order to ensure that the university receives adequate funding in the future while undergoing rapid development the Polytechnic requires on the one hand greater financial support from the government and on the other an improvement in its ability to raise funds from other sources. A variety of channels such as donations, external services, expanding the student body and an appropriate increase of school fees will provide sources for acquiring the required operating funding.

We will optimize resource allocation within the University in order to avoid unnecessary, repetitive use of funds. This will improve efficiency in the use of funds and build an economizing campus.

D. Improving Public Services and Campus Construction

We will improve the operating mechanisms for coordinating and sharing of the University's resources and provide a platform for a quality public service. On the basis of the overall planning of the campus, an increase in library space and book collection will be made to provide sufficient support for teaching and research. There will be enhancements to the reputation and standards of journal editing, academic publishing, and archive building.

To meet the 2019 overall goal of doubling the operational size of the Polytechnic, the following three options for a campus construction plan have been developed:

1. **The original campus as headquarters, with appropriate expansion on the periphery.** Fully exploit and use the land and premises in the surrounding area. Through coordination and reconstruction, the University forms a unified whole in the Napa area, basically meeting the needs of all aspects of teaching.
2. **500-600 acres of new land resources.** Consider construction of a

3. **Expansion of academic and administrative buildings to create room for development.** Re-plan the existing campus by building a new 18-storey academic building along Rua de Luis Gonzaga Gomes. After students move into the new building, the old academic and administrative buildings will be removed to allow space for building an athletic stadium with a 200-meter track, thus creating a campus suitable for students' moral, intellectual and physical development needs. The design of the new teaching and administrative usable area will reach 77,000 square meters (14 square meters per student). This will accommodate the basic requirements of teaching and administrative space needed for the doubling of the student body.

In the case of the first and third options, the dormitory needs of approximately 1,000 beds for foreign students must be met. It could be possible through government investment to convert vacant factory buildings into student dormitories to ensure that foreign students receive proper accommodation arrangements. This also provides safeguards for the sustainable development of the Polytechnic.

The Polytechnic needs to optimize the functional layout of the campus, improve public infrastructure, campus internet access and the campus environment. High quality planning and construction will gradually establish a campus that is both functionally efficient and aesthetically pleasing.

The Core of Development Planning (New Development)

- 1. One Mission:** Develop into a distinctive, multidisciplinary, open, application-oriented, high standard university in Macao and the neighbouring areas.
- 2. Two Emphases:** Equal emphasis on teaching and research.
- 3. Three goals:** Upgrade status (University), expand school (space), and establish systems (the modern university system).
- 4. Four Developments:** Upgrade and transform, reinforce the foundation, rapid development, and robust growth.
- 5. Double-Five Scale:** 5,000 undergraduates and 500 graduate students. (double the total size, an average annual increase of 7%)
- 6. Six Faculties:**
 - Faculty of Languages and Translation
 - Faculty of Humanities and Social Sciences
 - Faculty of Gaming and Business Administration
 - Faculty of Applied Science

Faculty of Arts and Design

Faculty of Health Sciences and Physical Education

7. Seven Systems:

Academic curriculum

Human resources training system

Science and technology innovation system

Teaching team system

Management team system

Communication and cooperation system

Public service system