

LEARNING CURVE



UPM
UNIVERSITI PUTRA MALAYSIA

SOARING
UPWARDS

Tahniah

UPM DI TANGGA **270**
QS WORLD UNIVERSITY
RANKING 2016

↑61
DARI 2015

QS WORLD
UNIVERSITY
RANKINGS

UNIVERSITI PUTRA MALAYSIA

MEASURING UP

It's all in the fundamentals

TRIPLE WIN: Universiti Putra Malaysia lets in on how it made the leap in ranking

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"Everybody has to own UPM. When you have ownership, you do your best."

UPM vice chancellor
Dr Aini Ideris

UNIVERSITI Putra Malaysia (UPM), one of the country's five public universities designated with research university status, has much to celebrate of late.

Described as one of triple wins by its vice chancellor Professor Datin Paduka Dr Aini Ideris, UPM clinched the 17th spot in the Quacquarelli Symonds (QS) University Rankings: Top 50 Under 50 2016/17 — a leap of 21 places from its previous 38th spot among the world's best universities which are less than 50 years old.

In the QS World University Rankings 2016/2017, it climbed up 61 places to 270th position, from the 331st placing last year, among the world's top universities. It is now the second best university in Malaysia (it was in the fifth position last year), after University of Malaya which holds a joint 133rd worldwide ranking.

On Aug 31, UPM was ranked the country's Most Innovative University by Reuters Top 75: Asia's Most Innovative Universities. In the same ranking, it was placed in the 73rd position based on its performance in science, invention of new technologies and in helping to drive the global economy.

Dr Aini, an alumni member of UPM and its eighth vice chancellor, said: "Getting here is not something that you can do overnight. It's not something that happens when a new person comes in. The university staff members have worked at it for years." Dr Aini has served the university since 1979 and officially stepped into her latest position on Jan 1.

Making a significant leap up the rankings in a year took six years of planning before coming into fruition.

Over the years, the university undertook numerous initiatives to turn UPM into an internationally recognised university. In particular, Putra Global 200 comprises plans to place UPM among the World Top 200 Best University in 2020.

"The QS rankings help UPM to gauge its status as a university of international repute. The rankings help it to benchmark itself against the best universities in the world and to improve, particularly in the aspects of teaching and learning, research and innovation."

And once the university scores high in one ranking, Dr Aini said its standing in other rankings follow suit.

"This is because the criteria are similar — there is a focus on teaching and learning, research and innovation."

NOT JUST NUMBERS

Dr Aini added that there was a time when UPM did not see the relevance of ranking.

After all, it has evolved well through the years from a School of Agriculture (1931) to the Malayan Agricultural College (1947), and on to Universiti Pertanian Malaysia (1971) and UPM (1997).

"The attitude was as long as you publish, teach and do research, then things were all right."

But it soon realised that ranking has its advantages, even though there are many criticism about it.

"Ranking is important as a medium to benchmark ourselves against international universities, and for us to further improve our overall performance as a research university. Through the ranking results, we know where we stand among other universities in the world in terms of citation impact, number of publications and internationalisation, for example. We adopt strategic approaches to improve shortcomings." However, not all ranking methodologies are suitable for every university.

The QS World University Rankings, for example, are broad-based as they assess tertiary institutions on six performance indicators relating to research, teaching, employability and internationalisation. To be eligible for ranking, the institutions must teach at both undergraduate and postgraduate levels, and conduct work in at least two of five faculty areas (arts and humanities; engineering and technology; social sciences and management; natural sciences; life sciences and medicine).

The Times Higher Education World University Rankings use 13 performance indicators with emphasis on industry input which Dr Aini observed is difficult to access in developing countries such as Malaysia.

The Shanghai Ranking, also known as the Academic Ranking of World Universities, assesses six performance indicators, all relating to research excellence including whether Nobel Laureates work in the institutions assessed.

Three years ago, UPM formed a corporate strategy group which convenes quarterly to look into rankings — particularly QS World University Rankings — and analyse the areas the university needs to improve on to make it better known at the international level. "We looked into the criteria for a good university, assessed UPM and took action. We will soon hold our third-quarter meeting for this year."

As there are many criteria with different weightage in a ranking exercise, UPM had to focus on what it can do.

"Certain criteria include international staff members which are not easy to recruit and we have to be



Dr Aini (right) briefing Deputy Minister of International Trade and Industries Datuk Ahmad Maslan (third from right) on the activities carried out at the Laboratory of Halal Services in UPM.



UPM Agriculture Engineering and Biosystems degree programme student Muhammad Faris Jaafar (left) runs his business in Taman Sri Serdang as part of the university's entrepreneurship programme.

selective to ensure their quality. And there's the question of affordability.

"We also look at other areas that don't require that level of investment and improve on them."

After the corporate strategy group analysis, UPM decided to focus on three areas: teaching and learning, research and services (professional as well as community).

"Our Master's students have to publish at least one publication, and postgraduate students, two. When I introduced this requirement as dean of the Graduate School, there were concerns that the move would delay the graduation of the students."

A mobility programme involves spending a minimum of two weeks

"But now that students know that it is a requirement, they have learnt to plan, research and write their thesis and paper for publication. We provide guidance. We teach them to write papers for journals. We do not just leave them in the hands of their supervisors."

UPM stresses on student mobility as part of the internationalisation criterion.

"We assist students in attending courses at universities abroad. In addition to building character and gaining knowledge, it is a way of promoting the university and its students."

A mobility programme involves spending a minimum of two weeks



UPM Faculty of Education students attend a mini symposium at the University of New England in New South Wales, Australia as part of their mobility programme.

or up to one or two semesters at foreign universities. "Memoranda of understanding and collaborations with international universities pave the way for student exchange. Local students, who have joined the programme, have a broader perspective of the world and a better network."

On being listed 73rd in the Reuters Top 75: Asia's Most Innovative Universities, Dr Aini said it was all done through data compiled by Reuters' sister company, Thomson Reuters Intellectual Property & Science, and its research platforms: Incites, Web of Science, Derwent Innovations Index, Derwent World Patents Index and Pat-

ents Citation Index.

"They never asked for any data from us. They look at innovation and whether there is a university entity in charge of it. Intellectual property and the number of patents and commercialised products and their value are also taken into account."

UPM was among the first in the country to commercialise its products, something which Dr Aini experienced first-hand.

A renowned scientist in the field of research related to disease control and production of vaccines for poultry, she led an avian medical research programme and was head of the Top-Down National Animal Biotechnol-

WORLD UNIVERSITY RANKING METHODOLOGIES

QS WORLD UNIVERSITY RANKINGS

They assess universities on six performance indicators relating to research, teaching, employability and internationalisation. To be eligible for inclusion, institutions must teach at both undergraduate and post-graduate levels, and conduct work in at least two of five faculty areas (arts and humanities; engineering and technology; social sciences and management; natural sciences; life sciences and medicine).

Criteria	Weightage (%)
Academic reputation	40
Employer reputation	10
Student-to-faculty ratio	20
Research citations per faculty member	20
Proportion of international faculty	5
Proportion of international students	5

TIMES HIGHER EDUCATION WORLD UNIVERSITY RANKINGS

They use 13 performance indicators, grouped into five categories. Institutions are excluded if they do not teach at undergraduate level, or if their research output is below a certain threshold.

Criteria	Weightage (%)
Teaching	30
Research	30
Research citations	30
International outlook	7.5
Industry income	2.5

ACADEMIC RANKING OF WORLD UNIVERSITIES

Also known as the Shanghai Ranking, it assesses six performance indicators relating to research excellence. The ranking considers all institutions with Nobel Laureates, Fields Medallists, highly cited researchers, papers published in Nature or Science, or a significant number of papers indexed by the Science Citation Index-Expanded or Social Science Citation Index.

Criteria	Weightage (%)
Alumni	10
Awards	20
Highly cited researchers	20
Papers in Nature and Science	20
Papers indexed	20
Per capita performance	10

ogy Project. Her research led to the commercialisation of the Newcastle disease vaccine (DV4-UPM) in 1995 and the fowl pox tissue culture vaccine in 1996.

"UPM contributed towards the creation of the first animal vaccine company in the country."

The university has stepped up its innovation game through Innohub, a market validation centre that validates its researched products.

"We train staff who have products that have potential to be commercialised on how to package them and pitch for funds."

"We work with entrepreneurs to train our students."

MOVING FORWARD

What would it take for UPM to keep the momentum and continue moving up in ranking?

"Strategising and commitment from the staff. Everybody has to own UPM. When you have ownership, you

do your best. I talked about *ihsan* in my book *Perutusan 100 Hari*. *Ihsan* means doing something with sincerity and integrity even when people are not in the know. It is about doing the best so you get good quality and excellence will follow," said Dr Aini.

"At the end of the day, it all boils down to strengthening our fundamentals. It doesn't matter if a university is not ranked but its fundamentals must be strong."

On whether a cut in government funding will affect UPM's ranking efforts, she said: "Pumping in money to improve ranking is not correct. Money is related to the work you do. If you have no funds, how can you do research? How can you send students for mobility programmes if there is no money?"

She added that established universities such as UPM have subsidiary companies that generate income as well provide grants.

"Less funding is not a hindrance to our plans."