Augmented reality, the Murabbi and the democratization of higher education: alternative futures of higher education in Malaysia

Can professors at Malaysian universities become income self-generating, moving from an approach of “begging for money” to one where - while keeping their ideals of autonomy and scholarship - they are global knowledge entrepreneurs?

Can the university system move from place-based to augmented virtual reality with knowledge no longer restricted by time and space, but rather available 24/7? And how can academics best adapt to emerging disruptive technologies?

How can the quality of teaching and learning be transformed to meet the changing needs of students, parents, industry, government, and other stakeholders?

Can education move from traditional accreditation, generally for the elite, to full global democratization?

Can Malaysian graduates become highly marketable, making the world their home?

Can Malaysian lecturers and professors move from the lecture/exam model to more holistic pedagogy, helping transform the whole person, can they become murabbis by 2025?

The questions posed above were debated at AKEPT (Higher Education Leadership Academy, the Ministry of Higher Education) from March 25-29, 2013 by nearly fifty lecturers and deans. Lecturers deliberated for the first three days and deans for the last two. Their futures-oriented discussions were framed by the ‘six pillars’ futures approach (Inayatullah, 2008; Inayatullah, 2013). After their debates, the lecturers presented their findings to twenty-five deans from ten different public and private universities. After a lively discussion between lecturers and deans, the deans began their own scenario planning process. Like the lecturers, they focused on the changing nature of university education (virtuality,
augmented reality) and the importance of the educator becoming not just a lecturer or a professor but a leader in the community, locally and globally. The purpose of the lecturers – the “young brains” presenting to their senior deans - was to create an action learning iterative cycle, through which discussions could be focused, leading to immediate feedback and thus reflective learning. This process is in its second year. In 2012, deans and deputy vice-chancellors debated issues of the nature of learning (blended, face-to-face, virtual and integrated) and the futures of students services (parental, buddy, knowledge navigator and student-led) (Inayatullah, 2012). Year three will continue the foresight process but with different lecturers, deans and deputy vice-chancellors. The intent is not just to make recommendations to the Ministry of Higher Education but for individual scholars who to as well pursue specific actionable steps – what they can change in their university – and for the gradual development of champions of innovation (Brice, 2004) throughout the education sector. Thus, change can occur at multiple levels and at different points in the educational system.

This article is structured as follows. First is the overall context of foresight activities in Malaysia. Second are the recommendations of the lecturers to the Deans and the Ministry of Higher Education as well as recommendations of the Deans to the Ministry of Higher Education. Third is an explanation of the workshop process and the theories and methods used. Fourth and fifth are scenarios and strategies developed by the lecturers and Deans. Section six concludes this article by synthesizing the main themes and strategies discussed.

1 Context

The overall context for the foresight workshops is threefold. First, strategically, Malaysia has recognized that it cannot keep on playing catch-up with the West, and western universities, and thus must innovate, creating new visions and new measurements of these visions. Naturally, Malaysia has little desire to become stuck in the middle-income trap (Flaaen, Ghani and Mishra, 2013).

Second, Malaysia is uniquely positioned in the higher education landscape as Malaysia sends students to study abroad (the USA, the UK and Australia) and students, particularly from Southwest Asia, study in Malaysia. Marian Dewi in her article for University World News (2012) quotes Professor Siti Hamisah Binti Tapsir, a deputy director in the Malaysia Ministry of Higher Education as saying: “In term of recruiting international students we are number 10 in the world.” Writes Dewi, “Malaysia has a 3.7% share in the global market for international students. And the government is ambitious. It aims to double the number of international students it educates – up from around 100,000 today to 200,000 students by 2020, pushing Malaysia to be an education hub in the region, the sixth largest in the world” (Dewi, 2012). Malaysian universities as well have branch campuses overseas. For example, Limkokwing University for Creative Technology has branches in Cambodia, China, Indonesia, Lesotho and Swaziland (Dewi, 2012). This trend is likely to continue and there will be a structural shift, as the traditional source markets China, Malaysia, South Korea (sending students to Australia, the UK and the US) increasingly become global-scale destinations for international students (Ernst and Young, 2012). Indeed, Education Malaysia writes that Malaysia is currently ranked the world’s 11th most preferred study destination by UNESCO (Education Malaysia, 2013).
Third, Malaysia is not new to futures research, having used foresight methods and tools since the 1975 Malaysia 2001 conference (Azhari, 2011). Decades later, in the 1990s the World Futures Studies Federation held a number of meetings in Malaysia, most significant was a workshop in Penang, sponsored by the Institut Kajian Dasar (IKD – Institute for Policy Development) on Future Visions for Southeast Asia. The intent of the foresight work in the 1990s was to expand the economic base of Malaysia by entering the knowledge production economic sector. Among other issues, participants asked what-if Malaysia was an educational hub for the Islamic world? (Inayatullah, 1995) More recently, the Universiti Sains Malaysia (in Penang) and Universiti Teknikal Malaysia (in Meleka) have conducted scenario focused foresight workshops with the intent of articulating their strategic vision and developing foresight capacity among professors and students (Nasruddin & Inayatullah, 2012, Sirat, Azman & Azhari, 2008; Azhari, 2008; Universiti Sains Malaysia, 2007). The focus on alternative futures and sustainability at Universiti Sains Malaysia led to them being appointed the nation’s sole APEX (Accelerated Programme for Excellence) university (Universiti Sains Malaysia, 2007, Universiti Sains Malaysia, 2008).

Thus, given Malaysia’s strategic goal to advance in the world economy, its intent to become an international education centre, its history of using foresight for capacity building and strategic planning, it comes as no surprise that the Ministry of Higher Education is using the foresight framework as input to its long term higher education plan.
2 RECOMMENDATIONS

2.1 OVERALL RECOMMENDATIONS OF THE LECTURERS TO THE DEANS AND THE MINISTRY OF HIGHER EDUCATION

First, the Ministry needs to think outside-the-box and establish, as a pilot project, a professor-based university or a cooperative of professors. This is a non-conventional university based on the exceptional skill sets of a single or a few professors. To do this, high impact research needs to be commercialized and talent agencies are required to raise the profile of leading academics. Senior academics need to mentor younger lecturers in creating an innovative research culture. To create space for this alternative outlier future, clerical and other duties required of lecturers need to be curtailed.

Second, the Ministry needs to make the jump toward creating virtual or augmented reality (holograms, neural learning, and virtual learning). This means taking seriously the rise of digital natives (students raised in digital environments, who see virtual learning as the norm) and designing digital pedagogy platforms for their needs and aspirations. This also means moving away from place/time based universities to digital universities. To do this, investment in new technologies is a necessary factor as well as developing new modes of learning and teaching – virtual pedagogy. New technologies create new learning modes. New cohorts of students – being raised in different technological environments – have different expectations of learning and teaching. Structurally, this means customized education, being able to select courses from various universities in Malaysia and globally. In this model, the Ministry can, should, still set general core educational requirements to ensure relevance for Malaysian national development needs. To ensure that Malaysian higher education is not slowed down by resistance by tradition-minded academics (Inayatullah, 2004), the Ministry needs to be forward thinking and design pedagogy for augmented reality futures.

Third, the Ministry needs to ensure that Malaysian graduates receive skills that enhance their ability to be globally marketable. If this is not done, then Malaysia will be unable to move up the global economic value chain to knowledge and finance industries. To create this marketability, it is not only enough to focus on relevance of today’s industries, but instead the Ministry must anticipate tomorrow’s emerging industries and focus on them. Certainly, developing the professor-based university and augmented or virtual reality universities with far more course flexibility are excellent pathways to help create the global brain. Giving awards to academics who are on the verge of global recognition is crucial. As one participant pointed out, academic awards tend to be in the vicinity of 5000 Ringitt while Malaysia Idol song awards tend to be 100,000 Ringitt. This sends a clear message as to what is of relevance. Malaysia needs to start to imagine Nobel laureates emerging by 2025.

Fourth, instead of adopting linguistic and knowledge frames that reference the West, the lecturers suggested that the Ministry, following the advice of the Prime Minister, rethink the notion of lecturer and professor to that of the 21st century Murabbi. The murabbi, in their mind, was far more holistic, not just focusing on material needs, but on a balance of
physical, mental and spiritual. To become murabbis, far more flexibility and freedom was required for lecturers. The system needed to be less rigid, allowing murabbis and students to chart out their educational pathways. In this sense, the vision of the future was the “Nutritious Buffet” (Inayatullah, 2012a), where in cooperation with the Ministry, lecturers and parents, students set out their career and university curricula. Through collaboration, they articulate their preferred courses and futures. Of course, while this may put too much responsibility on general students, certainly in the elite and niche arenas – this mode of pedagogy and structure could begin. Overtime, if it worked, then it could be scaled to the rest of the educational system.

2.2. OVERALL CONCLUSIONS OF THE DEANS

The Deans were certainly amenable to the recommendations of the lecturers. However, they did point out that it is not just for the Ministry to take on additional responsibility or change, but the challenge is for each academic to ask what he or she can do for the nation.

With respect to augmented reality, the virtual university, they agreed with the lecturers’ recommendations but added that it was necessary to humanize education, to ensure that it was persons first, and not technology for the sake of novelty. They insisted that the virtual university done correctly could create a new relationship between professor and student; one based on friendship, with the lecturer-professor very much the guide, the murabbi.

Second, for this to occur, there needed to be transparency in the university and in the Ministry as well. Democratization of education was a necessary step in the evolution of higher education in Malaysia. For participants, democratization meant the end of political interference from the government and other associations. Rewards and positions needed to be based on merit. Finally, in so far as Malaysia exists in an international ecology of education, it was imperative that there be international recognized frameworks for the virtual university, for the free flow movement of credits and courses.

As metaphors for leading the way, the Deans suggested four possibilities. In the first, there are “no rules” - the university in this scenario would likely lose relevance. In the second, the university is traditional, following the rules, copying others, leading to a loss of innovation. In the third, one breaks the rules and creates innovation. But most significant was the university in which “one creates the rules”- this was the “anywhere, anytime, anyone, anyhow” world, with ubiquitous learning, and very much bottom up, for the masses. Of course in this new ecology, there are places for niche and elite universities.

To create these disruptions in the place-based and top down curriculum-centred education, and in the nature of the academy, leadership was central, argued the deans. Malaysia needed to move from the self-centred leader (I know everything), eschewing the top-down leader, and moving with the node-leader (the influencer i.e. I know everyone) to the holistic leader, who works with everyone, and leads cooperatively.

What was clear to lecturers and deans is that the current model of higher education, while excellent for the previous generation, could not meet the needs of Malaysia’s digital natives,
who sought to travel and work globally, who preferred far more flexibility in how, when and where they learned and worked. In the move toward virtual and augmented universities, it was crucial to create the new type of lecturer and professor – the murabi – and pivotally the Ministry needed to ensure transparency, trust, and incentives and platforms that allowed for the university-as-professor and other possible futures. Asserted lecturers and deans, it is time for a major overhaul. If not, the drivers of change – digital and neural technologies, the rise of digital natives, the challenge of climate change, and global education - will overhaul the university in any case, but in less desirable ways. The question was should Malaysia follow the rules or create the new rules: purchase the invention of others or create its own novel future.
3.0. FROM OVERALL TO CONCLUSIONS TO CRUCIAL DETAILS

These recommendations and conclusions were derived through the “Six pillars” foresight approach. This process is a structured way to map the future, identify emerging issues and trends, discern the first and second order of these implications, deconstruct metaphors and narratives, create alternative futures, design a preferred future, and invent related strategies. Each pillar has a number of methods to elucidate alternative futures. Most relevant for this report are the following: (1) the Futures Triangle, (2) Causal Layered Analysis (Inayatullah, 2004) and (3) scenario planning. In the futures triangle, three aspects are critical. The pushes of the present—demographic shifts, new technologies—the weight of the past—often in the form of a traditional mindset—and the compelling pull of the future, desired and preferred. Through a strategic analysis of these three forces, a plausible future can be created.

Causal layered analysis (CLA) seeks to unpack the future at four levels. This method and theory of knowledge seeks to deepen the future. It has four dimensions: first is the litany, or the day-to-day future, the data, the commonly accepted headlines of the way things are or should be. Solutions to problems at this level are usually short-term-oriented. The second dimension is deeper, focused on the root social, economic, political causes of the issue—the systemic. Solutions at this level tend to challenge traditional silos and be whole of government, multi-stakeholder-based. The third dimension is the culture or worldview. This is the big picture, the paradigm that informs what we think is real or not real, the cognitive lenses we use to understand and shape the world. Solutions at this level involve paradigm or worldview change. The fourth dimension is the myth or the metaphor—the narrative. Metaphors are often the vehicles of myths. Solutions at this level involve creating or finding a new organisational story.

The most effective organisational and institutional strategies are those that include all four levels: new data to measure the new desired future; systemic changes; mindset change and new metaphors. Moreover, in a proper causal layered analysis, the issue is examined from the perspective of multiple perspectives, with the strategic goal of articulating an integrated whole-of-worldview solution.

The scenario process involves identifying uncertainties and risks and developing alternative futures so that unknowns are named and strategized about differently in each future. While there are a number of scenario methods, in these workshops, the “Integrated” method was used. In this method, we begin with the “preferred future”, often an ideal type. From this future, the “disowned” is articulated. The disowned is what the ideal type is unable to account for, often its opposite. The third scenario is the “integrated”, as it combines the ideal with the disowned, thus making the future more plausible and robust. Finally, an “outlier” is articulated to address the unknown unknowns. This scenario method uses the CLA structure of litany, systemic, worldview and metaphor to describe the characteristics of the alternative scenarios. Based on these methods, strategies are developed.

4.0 LECTURER SCENARIOS AND STRATEGIES
With the lecturers, four working groups were created. They were (1) The futures of the research professor, (2) The futures of virtual learning and the virtual university, (3) the futures of world marketable Malaysian graduates, and (4) MyMurabbi: the futures of the academic. In the section that follows we present aspects of the findings to illustrate the conclusions above.

4.1. New opportunities for the futures of the research professor

Group one discussed new opportunities for the futures of the research professor and proposed a model of the self-income generating professor. The self-generating professor is no longer funded solely by the Ministry; rather, funding may come from industries, NGOs, professional associations, and other interested parties. The goal is to increase commercialization through productive research and intellectual property creation. High impact research, argued lecturers, is more likely when there is collaboration to serve all humankind.

This group utilized several futures methods to clarify their vision, policy directions as well as recommendations.

The futures triangle clarified that the push towards self-income generating professor came from the needs of industry, a globalized economy and the advent of global knowledge based networks. To leverage these pushes, a supportive government policy was required. Government policy could enable a research-conducive environment which would lead to high impact research. However, certain ‘weights’ worked against the desired vision of the self-income generating professor as well as against the ‘pushes’ towards it. These weights and obstacles include: a lack of expertise, incentives and benefits; unhealthy competition between academics and between universities; lecturers overburdened with unrelated tasks; and segmented research funds between private and public universities.

After considerable analysis, four scenarios for research professors in 2025 were created:
Table 1: Scenarios - Research Professors 2025

The best case scenario or desired future for the research professor is that of a self-income generating professor who ultimately becomes recognised as a Nobel laureate. A day in a life of a research professor in 2025 centred around being a murabbi in the university, having a proper work-life balance and ensuring that there was a research apprentice, so skills could be handed to the next generation. To support this vision systemic changes are needed, such as policy makers and academics working hand in hand and in an environment that is research conducive. Research needed to become a lifestyle and focused on making the world a better place, by focusing on sustainability and liveability. To create this future, professors needed to stop chasing money and create the conditions for funds to chase them.

Their recommendations were:

(1) To the policy makers:
   - Form a research and talent agency
   - Establish a pilot professor-based university

(2) To the professors:
   - Enhance research collaboration with Industry
   - Enhance the mentoring of young academics so as to sustain the research culture
   - Commercialize high impact research
4.2. Futures thinking and strategic transformation for teaching and learning: the Virtual University

Group two focused on how best to improve the quality of teaching and learning for the future of 2025. The group decided that the best way to achieve this outcome was through virtual learning and the creation of a virtual university. The future, the group pointed out, has a history. The group developed a timeline to identify the key points. They were:

How did we get here, the history of the issue

Table 2: Mapping the Past - History of the Issue

After a process of questioning, investigating current trajectories, challenging the critical assumptions behind their forecast, they developed four scenarios for 2025. Four scenarios for the futures of teaching and learning in 2025 were also outlined.

The lecturers wished to avoid the “force-fed” future – the worst case and the business-as-usual – and imagine the best case, which was an “A La Carte” future.
### Table 3: Scenarios - The Futures of Teaching and Learning 2025

The group then articulated their preferred future: the establishment of a virtual, reality augmented university. For lecturers, this meant more than just a virtual campus, but the establishment of a virtual community, the use of green technologies, the creation of resilient learning systems, and a sustainable education structure. In this future, lecturers could work from anywhere and anytime and be able to enhance their income because of more focused work (less administrative trivia). The futures triangle method helped outline the pushes of the present which could help support this vision on one hand, and weights of the past that may, on the other, hinder it.
The Virtual University

**Push of the presents:**
- Demand on global students
- Advancement of technology
- Funding

**Weights of the past:**
- Lack of infrastructure (high speed internet)
- Assessment method
- Limited resources – skills, expertise
- Lack of proper policy
- Acceptance of the stakeholders

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<th>Table 4: The Futures Triangle - The Virtual University</th>
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The following recommendations were made to address the weights of the past:

1. For the lack of infrastructure, it was important to increase budget allocation and to create a university endowment fund from industry;
2. For the assessment method, an artificial intelligence modular system could be developed;
3. For limited resources, skills and expertise, IT training was required for society;
4. For the lack of a proper policy, ensure above suggestions become policy; and,
5. For acceptance of the stakeholders, to begin with, run a public awareness program

Lastly, this group made the following two key recommendations:

1. Improve the infrastructure for virtual university; and,
2. Restructure education system to be resilient to upcoming future trends

### 4.3 Leadership of the university of the future: marketable Malaysian graduates

The main question this group asked is ‘How to generate globally marketable Malaysian graduates’? To begin with, the group outlined a preferred future, that being of Global Malaysian Brain (GMB) 2025.

Four key scenarios were then identified for Global Malaysian Brain 2025:
Table 5: Scenarios – The Global Malaysian Brain 2025

In the first scenario, Malaysian students excel and have the capacity to find jobs anywhere in the world. In the business-as-usual and the worst case scenario, to varying degrees, Malaysian graduates are unable to find employment overseas. Perhaps in a worst case future, Malaysian graduates believe falsely that they can excel globally.

To move toward the best case, the participants utilized the futures triangle. They articulated the following pushes of the present supportive of the preferred future: (1) Highly motivated lecturers who desire institutional change; (2) Feedback and collaboration from industries and stakeholders, and (3) The use of cutting-edge technologies. On the other hand, the weights of the past working against preferred future were: (1) Degrees not recognised internationally; (2) Restriction of funding; (3) Quality of both lecturers and students and systems; (4) Lack of standardization of regulations; and (4) Resistance to make changes.

The following recommendations were provided as strategies to overcome above mentioned weights/barriers:
## Strategies to Overcome Barriers

<table>
<thead>
<tr>
<th>Issues</th>
<th>How to solve?</th>
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<tbody>
<tr>
<td>1. Degrees not internationally recognized</td>
<td>- Collaborate with internationally recognized professional bodies (i.e.: EASA, FAA for aviation, AACSB for business) to achieve globally recognized degrees</td>
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<tr>
<td>2. Restriction of funding</td>
<td>- Allocate more funding toward teaching and learning</td>
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<tr>
<td>3. Quality of both lecturers and students as well as systems</td>
<td>- Apply existing best recognized standard operating procedures in the selection of potential candidates - Develop suitable schemes for industrial experts/experienced lecturers so that they will be able to contribute and join universities</td>
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<tr>
<td>4. Standardization from related regulatory bodies (i.e.: MQA, BEM)</td>
<td>- Holistic assessment</td>
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<tr>
<td>5. Resistance to change</td>
<td>- Use peer to influence changes - Provide enhanced incentives</td>
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Table 6: Strategies to Overcome Barriers

Lastly, the overall recommendations supporting the desired future of Global Malaysia Brain 2025 with highly marketable graduates were:

1. Support students’ freedom and flexibility of choosing subjects and courses and help create customized degrees and the ability to select courses from any universities;
2. Standard operating procedures and policies to reinforce the borderless university at the ministerial level;
3. Collaboration among experts in the same field across all universities; and,
4. Creation of Virtual universities

### 4.4. What will future academicians be like in 2025? MyMurabbi.

...saya menggunakan istilah Arab, “murabbi” yakni tenaga pengajar dan penyelidik terbaik yang bermotivasi merujuk kepada pensyarah universiti... murabbi merupakan ahli ilmu berwawasan, guru yang berhemah tinggi, sarjana yang penguasaan ilmunya sampai ke tahap hikmah, pemikir penggerak zaman yang mempunyai kemahiran sesuai dengan peredaran waktu. Murabbi juga adalah pendidik yang mempunyai iltizam tinggi terhadap ilmu dan dunia keilmuan... (Dato’ Seri Najib Razak) (Prime Minister Office of Malaysia, 2013).

I am using the Arabic term ‘Murabbi’ to depict a team of highly motivated and excellent educators cum researchers, who consist of lecturers at universities. 'Murabbis' are visionary academics with high integrity, possessing knowledge that contributes to the well-being of others, thinkers who mould and influence the shape of the future. 'Murabbis' are educators
who possess a strong belief in the acquisition of knowledge and the quest for continuous learning. (Dato’ Seri Najib Razak)

This group discussed the futures of the academic. They identified the main issue as the mastery of the self. This was considered pivotal in creating a community of wise teachers.

A causal layered analysis of the issue provided the following insights:

From the view of the participants they could clearly see a bright future where educators were noble and the murabbi was a role model. However, this was contrasted with the current reality where educators had to multi-task, and were losing hope. They were tired. In the integrated scenario – the one that was plausible, participants saw that murabbis would be part of a balanced educational system, thus fulfilling their needs and that of other stakeholders.

**CLA – The Future Academic as Murabbi**

<table>
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<tr>
<th></th>
<th>View of lecturers</th>
<th>Current reality</th>
<th>Integrated scenario</th>
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<tbody>
<tr>
<td><strong>Litany</strong></td>
<td>Murabbis are noble educators</td>
<td>Lecturers’ jobs are becoming more complex</td>
<td>Knowledge-sharing is caring</td>
</tr>
<tr>
<td><strong>Systemic</strong></td>
<td>In order for murabbis to produce excellent students, the system should allow murabbis to exercise flexibility and freedom</td>
<td>The system sets the direction for lecturer job specification</td>
<td>Synergised students-murabbi interaction</td>
</tr>
<tr>
<td><strong>Worldview</strong></td>
<td>Murabbis only perform expertise-related tasks in multi-disciplinary fields; not saddled with unnecessary clerical work</td>
<td>Multi-tasking lecturers</td>
<td>Customizing murabbis expertise to suit students interest towards a resilient, competitive and sustainable society</td>
</tr>
<tr>
<td><strong>Metaphor</strong></td>
<td>Murabbi as role model</td>
<td>Buy one, get all for free</td>
<td>A balanced academic eco-system</td>
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Table 7: Causal Layered Analysis – The Future Academic as Murabbi

After that, four alternative futures were identified for 2025. In the outlier future, there was a return to the traditional mindset. Possible, but given the dramatic needs of Malaysia, they deemed it unlikely. The disowned, or what the preferred is unable to deal with, is the reality of the depressed lecturer. Their preferred was the lecturer as murabbi. They then integrated the preferred with the disowned, and imagined the murabbi as part of an educational ecosystem – the “enhanced murabbi”, as they had done in the CLA.
Table 8: Scenarios – Educator 2025

The final recommendations by this group were:

1. Customize the murabbi’s expertise to accommodate student’s interest in teaching and learning;
2. Humanize teaching and learning;
3. The Academy should come together as one in creating a new revolutionary model of education; and,
4. The Ministry should establish a system and create an environment where future academicians can function as murabbi.
5. DEANS

The deans underwent a similar foresight process; however, it was shortened to two days and they had the benefit of listening to the presentations of the lecturers. As there was less time for methodological development, they chose to build on the earlier presentations, extending them. The four groups were: (1) The Futures of academics in a virtual world, (2) Productivity and democratization, (3) Relevance and the virtual university and (4) Leadership and the future.

5.1. The futures of academics in a virtual world

The main question the group asked was ‘How should academics adapt to emerging technologies in 2025?’

They developed four scenarios as a way to answer this question:

(1) Expanding the role of academics (consultants/mentors/advisors to students and shareholders in the institution); (2) Development of e-modules, lesson plans; (3) Virtual lecturer-student buddy interaction, and (4) Emphasis on community services and human skills.

Their preferred future was identified as ‘whole person neuro orientate programs, virtual reality plus artificial intelligence’. Using the futures triangle methodology, the image they gave of this future was the following.

ACADEMICIANS AS WIZARDS

Table 9: The Futures Triangle – Academicians as Wizards
The supporting story for such a future was the ‘academic as wizard’. Essentially this extended the view of the lecturers. They agreed with the need to transform the lecturer to the murabbi, however, they wished to emphasize that the murabbi gained his or strength from sharing knowledge synergistically with students in the context of dramatic new technologies. Thus, they could imagine the virtual murabbi or the murabbi as hologram even.

The futures triangle identified additional supports and barriers in achieving this desired vision. The pushes of the present included: new technologies, greater interaction, the demand for a sustainable environment; while the weights of the past included: traditional policies and attitudes of academics (resistance to change); anti-social students, and a lack university autonomy. The following strategies were then outlined in order to minimize above mentioned problems.

<table>
<thead>
<tr>
<th>Problems:</th>
<th>Solution:</th>
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<tr>
<td>Over-emphasis on technologies in teaching and learning</td>
<td>Humanising teaching and learning</td>
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<tr>
<td>Top-down policy</td>
<td>Bottom – up approach and top-down transparency</td>
</tr>
<tr>
<td>Generation gap – digital divide</td>
<td>Buddy lecturer-student relationship</td>
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<tr>
<td>Connotation of ‘lecturer’</td>
<td>Re-definition of ‘lecturer’</td>
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<tr>
<td>Anti-social student population</td>
<td>Classroom as social platform</td>
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Table 10: Strategies to Redefine the Future Academy

This analysis then led to the following recommendations to the Ministry of Higher Education:

(1) Transparency in lecturer-ministry relationship;
(2) Minimising clerical tasks of lecturers;
(3) The Ministry should award full autonomy to academicians; and,
(4) The Ministry should not allow political interference in academic-related matters

They believed that this process was possible by 2025. It was a three stage process as education became more virtual, student-centred and focused on sustainability. They saw that more technologies could be combined with more wisdom, once the educational system became far more flexible.
The Pathway to 2025

Table 11: Backcasting – The Pathway to 2025

5.2. Productivity and democratization

This group’s main research question was: ‘what makes a productive university?’

Their preferred future had the following characteristics: (1) Improved collaboration among universities; (2) Greater mobility among students and staff; (3) Identification of niche area of each university; (4) Greater sharing of resources, facilities and expertise; (5) A change in building design – to cater for collaborative works among students and staff (easier access – virtually and real life); and, (6) Easier credit transfer among universities.

This was the democratized future, with universities collaboration to create a flexible student-academic national system. The degree was syndicated with easy transfer of courses between universities. Students could move easily in the system, finding what they needed. The metaphor was: “united we succeed.”

But this future was not guaranteed. There were other possibilities. These included:

(1) The business-as-usual future focused on tradition and accreditation. The underlying metaphor for this future was: “A degree is better than none.”
(2) The worst case in which universities all fight against each other, with varying fee structures and competition instead of collaboration. The underlying metaphor was: “fight tooth and nail.”

(3) There was an outlier scenario that was preferred but deemed it would take longer than 13 years to be realized. In this future, there would be an affordable fee structure for students, augmented reality classrooms (virtual but feeling like face to face) and a home university for each student. The metaphor was: “On Cloud Nine.”

To get to the preferred future, they imaged four phases beginning with technology literacy, followed by internationally recognized educational frameworks, followed by new KPIs for universities, leading to a syndicated degree – full democratization, or choice for students and lecturers.

Pathway to the Democratization

Table 12: Backcasting – the Pathway to Democratization

Their final recommendations were two simple equations:

(1) New management style = new thinking; and,

(2) No political intervention = democratization of education
5.3. Relevance and the virtual university

‘Will Universities be relevant in 2025?’ was the research question this group asked. There was an understanding that the most likely future if current trends continued would lead to a loss of relevance in the higher education sector. The critical assumptions made behind this forecast were: 1. all will have access to new digital technologies; 2. all will be computer/tech literate and 3. technology will be cheap and affordable.

After the process of questioning of the most likely future and the assumptions underlying it, four alternative futures and their defining characteristics were developed:

(1) Virtual University - Ubiquitous learning, Anywhere, Anytime, Anyone, Anyhow;
(2) Physical University - Lose the competition, Lose the students, Lose the talent;
(3) Open University - Physical plus virtual where students learn through their own initiative; and,
(4) No University- “I-no-go-university” - the inability to produce a relevant work force.

These four alternative futures – scenarios – were then deepened via causal layered analysis.

<table>
<thead>
<tr>
<th></th>
<th>Virtual University</th>
<th>Physical University</th>
<th>Open University</th>
<th>No University (“I-no-go-university”)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LITANY</strong></td>
<td>Ubiquitous learning</td>
<td>Relax, we are</td>
<td>Open Source</td>
<td>Learning from mistrusted sources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>comfortable</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SYSTEMIC</strong></td>
<td>Bottom-up</td>
<td>Top-down</td>
<td>Inside out, outside in</td>
<td>In all directions</td>
</tr>
<tr>
<td><strong>WORLD VIEW</strong></td>
<td>Anywhere, anytime, anyone, anyhow</td>
<td>Lose the competition, lose the students, lose the talent</td>
<td>Produce students who learn from their own initiative</td>
<td>Inability to produce a relevant work force.</td>
</tr>
<tr>
<td><strong>MYTH-METAPHOR</strong></td>
<td>“One create the rules”</td>
<td>“One follow the rules”</td>
<td>“One break the rules”</td>
<td>“No rules”</td>
</tr>
</tbody>
</table>

Table 13: Scenarios with Causal Layered Analysis
Of particular interest were their metaphors and myths, moving from a world of “one follows the rules” to one where “one creates the rules”.

As their preferred future the group offered the following vision:

   (1) Freedom from space and time  
   (2) Learning is fun and engaging and productive  
   (3) Instead of exams, portfolio-based and project-based  
   (4) Everybody is connected  
   (5) Broad and adaptive leaders  
   (6) Learning for the sake of learning

Two key recommendations were made. One was within the current parameters and a second more radical.

(1) In-the-box recommendation: More money for capacity building, more training to use the facilities, and

(2) Out-of-the-box recommendation: Full virtualised educational system.

5.4. Leadership and the future

The research question for this group was: How to nurture future leaders? How to achieve innovation that would result in holistic leaders?

Their concern was that if current trends continue, leadership will be based on the maxim: “what should others do for me,” that is, the “me-generation.” They, however, wished for an alternative future.

Their preferred future had the following four characteristics:

   (1) Self-empowered leaders;  
   (2) Self-actualized leaders;  
   (3) Monetary reward is secondary;  
   (4) Doing good for others and self; and,  
   (5) Holistic Leader (well-rounded, charismatic, dynamic, people person, knowledgeable, and a role model).

Along with the preferred, they developed four scenarios. They argued that the current model of leadership was overly self-centred: “I know everything.” With knowledge growing rapidly, this perspective was untenable. The traditional model too was not sustainable as with the expansion of globalization and research networks. The worst case was the top-down approach. Their preferred was a collaborative model that could eventually lead to great gains for Malaysia.
Table 14: Scenarios with Causal Layered Analysis

To create the preferred future, they recommended the following strategies:

1. More opportunity to be exposed to the world;
2. Use of new technologies in the educational system;
3. Continued investment in human capital – brains and skills;
4. Identify and develop niche areas;
5. Be futuristic, many possibilities and unforseen opportunities; and,
6. Open door rather than close door – include all stakeholders.

Lastly two recommendations were made to the Ministry:

1. In the box: We need to produce more eminent scholars by providing our professors with more support in terms of funding, opportunity, networking, international exposure, and developing their talent; and
2. Out of the box: We need to create a super scholar – a noble laureate by 2025. We need to search for talent, more national recognition, a lucrative reward, title and respect.
6.0. CONCLUSION: SYSTEMATIZED RECOMMENDATIONS

The recommendations by lecturers and deans who participated in The Futures of Higher Education in Malaysia process can be systematised in the following categories:

- **Establishment of a pilot project**, such as a professor-based university or cooperative of professor based university, or, a virtual university, ‘custom-made’ university and borderless university.

- **Enhancement of digital teaching and learning processes**, including investment in digital technologies and pedagogies, increased budget allocations for IT training and module development within VR and AI systems.

- **Customisation of degrees**, support students’ freedom and flexibility of choosing subjects and courses from multiple universities.

- **Changing of the culture in higher education**, crucially, enhancing transparency and democratization, minimising clerical tasks of lecturers and researchers, supporting holistic academic leaders, giving more autonomy to academics, de-politicising and humanising higher education.

- **Enhancing collaboration** between the university and industry, between the Ministry and academics, between academics themselves (i.e. mentoring), and between lecturers and students.

- **Supporting research activities**, such as commercializing high impact research, supporting researchers by developing their talent and by giving more support in funding/rewards, opportunities, networking and international exposure.

- **Rethinking of dominant frames of reference**, rethink assessment criteria, as well as the underlying assumptions and ‘stories’ of higher education.

- **Anticipating upcoming futures trends** by the restructuring of the education system to be responsive and resilient towards forthcoming changes as well as actively co-create desired futures with all stakeholders in the higher education system.

REFERENCES


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