BUSINESS ACUMEN

"Higher Education Insights:
Business Acumen and the Wisdom Journey"

Editors:
Nik Maheran Nik Muhammad
Nurhusna Zulkifli

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PREFACE

In today's competitive higher education landscape, business acumen is essential for institutions to stay relevant and sustainable. As higher education becomes increasingly intricate, institutions must possess the ability to adjust to shifting market dynamics, harness emerging technologies, and forge robust partnerships with industry and community stakeholders. The Ministry of Higher Education (MoHE) has underscored the importance of public universities finding alternative sources of revenue due to government budgetary constraints. Consequently, the imperative of cultivating business acumen among leaders in higher education institutions is particularly timely and pertinent. This focus aims to empower university leaders in strengthening their institutions' financial sustainability, thereby ensuring their long-term viability.

Business acumen in higher education refers to the ability of educational institutions and their leaders to effectively manage their resources and operations in a business-savvy manner and generating income to support the university expenses. This involves leaders who have strong understanding of financial management, strategic planning for income generation, marketing, and operational efficiency, among other key business principles.

In November 2023, the Higher Education Leadership Academy (AKEPT), in collaboration with Universiti Malaysia Kelantan, organized a seminar titled "Business Acumen in Higher Education Leaders." The seminar aimed to acquaint participants with diverse alternative income sources, cultivate business acumen among leaaders to strategically generate revenue, and explore avenues for university leaders to actively support start-ups and spin-off companies. This book compiles key highlights from the event, serving as a valuable resource to disseminate knowledge to a wider audience.

FOREWORD

In today's competitive marketplace, business acumen is no longer a nice-to-have skill—rather, it is a must-have. Whether you are a senior academic leader or just starting your career, the ability to understand and navigate the complexities of the business world is crucial to achieving success.

Given the prevailing climate of governmental budgetary constraints, the discussion of business acumen and financial sustainability is increasingly important. The world is currently facing global economic uncertainties. Every leader, whether academic or administrative, needs to think creatively to generate income, especially when dealing with limited resources. In line with objectives of the seminar, discussion were centered on methods to empower leaders to efficiently manage budgets and finances, explore diverse income sources, devise and implement strategic plans congruent with mission and objectives, and adeptly promote their institutions to attract students and funding.

I would like to express my heartfelt gratitude to the speakers and panelists for their excellent insights offered during the program. My deepest gratitude also goes to everyone who attended the seminar and contributed to fruitful discussions. At AKEPT, we sincerely hope that leaders in higher education institutions will take advantage of the programs we offer to continually develop their leadership excellence.

Prof. Dr. Harshita Aini Haroon
Director, AKEPT

ACKNOWLEDGEMENT

In the name of Allah, the most Gracious, the Most Merciful,

All praises are to Allah S.W.T. the Almighty for blessing the Taufik and Hidayah and giving us the opportunity and strength to accomplish this book. First and foremost, I would like to take this opportunity to express my appreciation to the speakers and panellists for their valuable sharing. The valuable sharing inspires us at UMK to publish this book as the compilation of important points during the seminar.

It was an honoured to host two esteemed leaders in academia, Prof. Dato' Dr. Noor Azizi and Prof. Dato' Dr. Ansary, who shared invaluable insights on developing business acumen in times of budget constraints and leveraging technology to thrive amidst disruption. Their expertise illuminated a path toward innovation-driven leadership. Following these fascinating keynotes, we were honored to receive eminent panelists who shared their practical experience in maximizing income production and innovation in universities. I am grateful to Datuk Dr. Wahid Omar, Dr. Mariani Abd Hamid, and Dr. Wan Raihana for their excellent contributions.

I would also like to take this opportunity to express my gratitude and appreciation to the Higher Education Leadership Academy (AKEPT) for your trust and confidence in our ability at Universiti Malaysia Kelantan (UMK) to run this program. Not to forget, thank you to all the secretariats who have contributed to the success of the seminar and publication of this book. Through this seminar, I hope participants are equipped with actionable strategies to enhance leadership and drive innovation within their institutions.

Prof. Dato' Dr. Nik Maheran Nik Muhammad
Project Leader, UMK

SYNOPSIS

In "Higher Education Insight", readers explore the complex world of business expertise in Higher Education Institutions (HEIs), revealing the significant impact of strategic financial management, innovation, and the commercialization of research grants. This book is a valuable source of knowledge for leaders, educators, and stakeholders who are dealing with the ever-changing academic environment, as seen by the insightful discussions on the AKEPT forum. The narrative revolves around two keynote speakers who possess extensive expertise and great wisdom. Their insights pave the way for a significant change in governance inside HEIs. Utilising their varied experiences in academia and industry, they shed light on the crucial connection between financial sustainability and institutional vitality. On top of that, by sharing fascinating stories and strategic knowledge, they emphasise the importance of using innovation and utilising artificial intelligence to improve financial performance and promote a culture of adaptability and resilience.

During the current debate, a group of skilled experts comes together to thoroughly examine the mutually beneficial connection between the commercialization of research grants and the generating of the funds for HEIs.

They passionately and persistently investigate new methods to uncover the hidden potential of research assets, establish important alliances, and take advantage of rising commercial prospects. In addition, their integrated knowledge and experience strongly urge the HEIs to adopt entrepreneurial mind-set and foster a flourishing environment for obtaining income through innovation. However, in the midst of discussions about innovation and commercialization, a key theme arises in the necessity of financial sustainability for HEIs. The book explores the complex issues that HEIs face in their efforts to achieve long-term financial stability, using detailed discussions and real-life examples. Readers will acquire significant insights into the strategic necessities and most effective methods that promote sustainable financial management in academics, including dealing with budget limitations and optimising resource distribution.

Nevertheless, "Higher Education Insight" goes beyond standard academic discourse, providing a comprehensive view on the intersection of commercial acumen and institutional achievement. This seminal work empowers leaders to handle the challenges of financial management with foresight and agility, paving the path for a future in which higher education institutions thrive as vibrant hubs of innovation, scholarship, and societal influence.

CHAPTER 1

STEERING THE ENTREPRENEURSHIP AND INNOVATION AGENDA

By PROF. DATO' DR. NOOR AZIZI BIN ISMAIL (UMK)

Embarking on a journey through the financial landscapes of renowned institutions, our dynamic keynote speaker unfolded a narrative that transcends numbers into a captivating saga. Delving into the financial reports of Harvard University and the National University of Singapore (NUS), he painted a vivid backdrop, setting the stage for a riveting exploration of financial challenges and triumphs.

Prof. Dato' Dr. Noor Azizi meticulously combed through the financial details, weaving a tale that resonates with Malaysia's Higher Learning Institutions (HLIs). From understanding how money is earned to unravelling the intricacies of investment dividends, the audience was guided through a maze of financial insights.

The outlines of the presentation are as follow:
- **Understanding the Financial Report of Higher Learning Institution**
- **Case Studies of NUS, Harvard and UMK**
- **Financial Challenges and What's Next?**
- **Leadership and Innovation**

UNDERSTANDING THE FINANCIAL REPORT

Diving deep into the heart of financial management, two key facets which are the concept of operating income and operating expenses.

1. Operating Income

Enigma of operating income was unravelled—where does the money flow from? The sources of operating incomes for HLIs that were explained include:

i)   **Tuition and Other Fees (Main Source):** A financial lifeline, albeit one that encounters detours as portions are redirected to cover scholarship expenses or refunded during unprecedented times like pandemics.

ii) **Investment Income:** A subplot of financial sustenance, sourced from the interest and dividends bestowed by subsidiary companies or other investment from endowments or waqf.

iii) **Other Incomes:** An eclectic mix, including residential fees, training program fees, consultation/service fees, royalties from copyright/IP, and the benevolence of gifts, donations, and sponsorships from corporations and philanthropists.

$$\text{Operating Surplus or Deficit} = \text{Operating Income} - \text{Operating Expenditure}$$

$$\text{Overall Surplus or Deficit} = \text{Operating Surplus or Deficit} + \text{Government Operating Grant}$$

1. Operating Expenses

Next up is to understand what are the operating expenses involved in managing HLIs. The major part goes into paying salaries and employee benefits. Other expenses in this category likely include:

- Travel
- Rent for buildings/facilities
- Insurance
- Healthcare for both students and staff
- Printing/Publishing
- Advertising and marketing
- Supplies and equipment

Therefore, for leaders and those involve in financial management, the key focus is grasping the ideas of <u>operating income</u>, operating expenditures, <u>operating surplus or deficit</u>, and <u>overall surplus or deficit</u>.

In short, without government operating grants, due to the heavily discounted tuition fees that can go up to 90%, public universities find themselves in a big financial hole. Even with this grant, most are still in deficit (because government operating grants sometimes do not compensate the discounted fees), requiring them to dip into any cash reserves they might have. This is why having cash reserves is crucial for Higher Learning Institutions (HLIs).

CASE STUDIES: NATIONAL UNIVERSITY OF SINGAPORE (NUS), HARVARD UNIVERSITY AND UNIVERSITI MALAYSIA KELANTAN (UMK)
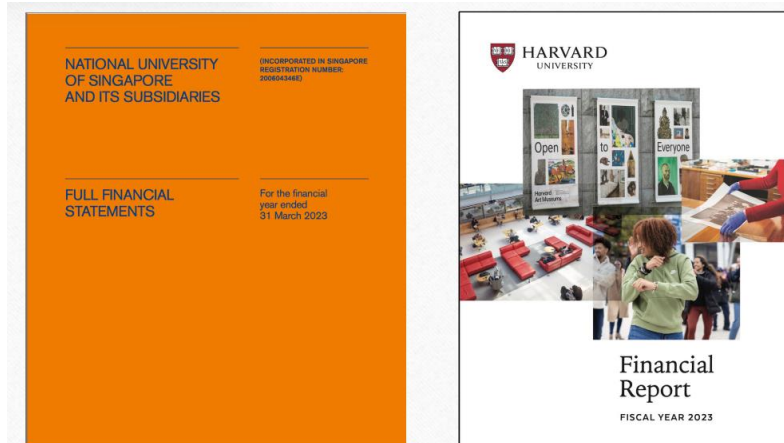
INCOME STATEMENT

Items	NUS	Harvard
Operating income:		
Tuition and other fees	800,733,000	1,331,557,000
(-) Scholarship and other student awards	(27,122,000)	(181,295,000)
Net Fees	773,601,000	1,150,262,000
(+) Other income	274,752,000	1,278,798,000
Total operating income	**1,048,353,000**	**2,429,060,000**

Items	NUS	Harvard
Operating expenditures:		
Salaries and employee benefits	1,144,575,000	3,049,380,000
Other expenses	583,484,000	2,256,313,000
Depreciation and amortisation	91,717,000	424,809,000
Total operating expenditure	**1,819,776,000**	**5,730,502,000**

Items	NUS	Harvard
Total operating income	1,048,353,000	2,429,060,000
(-) Total operating expenses	(1,819,776,000)	(5,730,502,000)
Operating surplus/(deficit)	(771,423,000)	(3,301,442,000)
(+)Investment income (loss)	(271,676,000)	2,461,283,000
Grants (operating) and others	760,820,000	1,025,662,000
Surplus (deficit)	**(282,279,000)**	**185,503,000**

Key takeaways from the financial statements of these two top universities in the world:

1. Without government grants and other sources of income, they are actually spending more money than they are earning from tuition and other related fees—without government grants and income from investments, the deficit is about SGD 771 million for NUS and USD 3.3 billion for Harvard.

2. Fortunately, they have a big savings fund (endowment) that they invest. However, in 2023, NUS lost about SGD 270 million on their investments (which is a rare case). Harvard, on the other hand, earned about USD 2.4 billion from the interest and dividends of their invested endowment (worth more than USD 50 billion).

3. NUS received around SGD 760 million in operating grants, while Harvard received over USD 1 billion.

4. Even with all these sources of income, investments, and government grants, NUS is still experiencing a deficit of SGD282 million. For Harvard, they have some surplus, but it is not a very large amount.

Several factors contribute to the sustainability of the operating income of the National University of Singapore (NUS):

1. Diverse Revenue Streams: NUS diversifies its revenue sources, including tuition fees, research grants, donations, and commercial ventures. This diversification reduces reliance on any single source of income, enhancing financial stability.

2. Strong Academic Reputation: NUS's global reputation for academic excellence attracts top-tier students, researchers, and faculty members. This enhances the university's ability to generate revenue from tuition fees, research grants, and philanthropic contributions.

3. Research Excellence: NUS's strong emphasis on research and innovation enables it to secure competitive research grants from government agencies, industry partners, and international organizations. The university's research output and collaborations contribute to its operating income while advancing knowledge and addressing societal challenges.

4. Strategic Partnerships: NUS collaborates with industry partners, government agencies, and other academic institutions to leverage resources, expertise, and funding opportunities. These partnerships facilitate technology transfer, commercialization of research, and joint initiatives, bolstering the university's operating income and impact.

5. Efficient Financial Management: NUS implements prudent financial management practices to optimize resource allocation, control costs, and maximize revenue generation. This includes budget planning, cost containment measures, and performance monitoring to ensure operational efficiency and sustainability.

6. Philanthropic Support: NUS benefits from philanthropic contributions from alumni, corporations, and other benefactors who are committed to supporting education, research, and community engagement. These donations enhance the university's financial resources and enable investments in scholarships, infrastructure, and academic programs.

7. Adaptability and Innovation: NUS continuously adapts to changing market dynamics, technological advancements, and educational trends. The university embraces innovation in teaching, research, and administration, fostering agility and competitiveness in an evolving higher education landscape.

By leveraging these strengths and adopting a holistic approach to financial management, NUS ensures the sustainability of its operating income while fulfilling its mission of advancing knowledge, nurturing talent, and serving society.

SCENARIO AT MALAYSIA PUBLIC UNIVERSITIES (IPTAs)

MYTH: *IPTAs are bad in financial management – they do not know how to generate income and rely too much on government grants.*

REALITY: *unlike NUS and Harvard, tuition fees for undergraduate at local universities in Malaysia are heavily subsidised (up to 80% - 90%). Even the residential fees are subsidised by the university.*

QUESTION: *Do government (operating) grants received compensate the amount of subsidised fees? If the answer is NO, what are the alternative income that universities should focus on?*

CASE STUDY OF UNIVERSITI MALAYSIA KELANTAN (UMK)

	2018	2019	2020	2021	2022
Net Tuition fees	23,382,244	23,684,603	25,272,306	25,568,027	29,312,169
(+) Other income	9,666,454	7,920,268	5,712,148	5,369,837	7,351,990
Total operating income	33,048,698	31,604,871	30,984,454	30,937,864	36,664,159
(-) Total operating expenditure	(156,572,620)	(157,402,701)	(150,554,471)	(146,351,915)	(161,839,823)
Operating surplus (deficit)	(123,523,922)	(125,797,830)	(119,570,071)	(115,414,051)	(125,175,664)
(+) Government grants	107,716,200	115,671,358	99,035,490	110,039,400	128,567,800
Surplus (Deficit)	(15,807,722)	(10,126,472)	(20,535,527)	(5,374,651)	3,392,136

The biggest challenge for public university leaders is managing finances when they are uncertain about how much operating grant that they will receive from the government. Looking at the audited financial records, UMK received the least amount of operating grants (only RM99 million) in 2020, plus some tuition and residential fees were refunded to the students during the pandemic, leading to the highest deficit (RM20 million). In reality, while income from the tuition fees is predictable, universities can only estimate the amount of operating grants from the government, which is largely depending on the economic condition of the country. That is the tricky part.

So, what can we do to ensure the sustainability of the university? (*Bear in mind that a few public universities have zero cash reserve*). People would suggest to be innovative, generate new income, reduce expenses and adopt Outcome Based Budgeting (OBB).

Those suggestions sound like solid strategies, but the real question is, are they feasible?

1. **Being Innovative**: It is a great idea, but innovation takes time, resources, and sometimes a bit of trial and error, with certain risks to consider. Plus, not all innovations guarantee an immediate financial return.
2. **Generating New Income**: Easier said than done. Finding new sources of income can be a challenge, and it might not happen overnight. It requires strategic planning and implementation.
3. **Reducing Expenses**: This is feasible, but it often involves making tough decisions, like cutting costs on things that might be essential for the institution. It requires careful balancing to avoid negatively impacting the quality of education and services.
4. **Adopting Outcome-Based Budgeting (OBB)**: This is a more structured approach, but it requires a significant shift in how budgeting is traditionally done. It might take time for the institution to fully embrace and adapt to this model.

In essence, these suggestions are feasible, but they come with their own set of challenges and require a thoughtful, phased approach. It is like navigating through a maze—possible, but it takes careful planning and execution.

Looking back at audited financial statement from Harvard University Financial Report 2023;

Sources	2023	%
Undergraduate	409,890,000	22
Graduate and professional degree programmes	687,136,000	37
Continuing education and executive programmes	544,039,000	29
Board and lodging	221,235,000	12
Total	**1,862,300,000**	**100**

Harvard Other Revenue

Key takeaways from Harvard University Financial Report 2023 are:

- The highest incomes are generated from postgraduate and professional degree programmes (USD687 million) as well as continuing education and executive programmes (USD544 million).
- Board and lodging (eg: accommodation) is also quite high.
- Harvard earned around USD 281 million from publishing and royalties for their copyrights such as case studies.
- Other example, Stanford hosted a series of 45-minute breakfast meetings with CEOs and important people. They recorded these talks and sold them.
- Royalties from commercialisation of IP generated almost USD 60 milion.

- At Harvard, there are three types of professors: those who write and publish in top-notch journals, those who write top selling books (like John Kotter), and those who write case studies.
- What we can do is to strive to be at that level where people are willing to pay for our expertise such as consulting services and executive education programmes or to read case studies we have written.

Sources	Amount
Publication and royalties from copyrights	281,024,000
Royalties from commercialization of IP	58,989,000
Rental and parking	141,449,000
Services income	136,811,000
Health and clinic fees	72,580,000
Sales income	32,376,000
Interest income	15,317,000
Others	54,350,000
Total	**792,916,000**

ALTERNATIVE SOURCES OF INCOME:

- ❖ Attract more postgraduate and international students (non-subsidised or low subsidised)
- ❖ Explore micro-credentials that is sellable (eg: in collaboration with credible online platforms such as Emeritus and Coursera)
- ❖ Conduct open and tailored executive training programmes that can be sold to individual/ agencies/ company.
- ❖ Introduce professional (non-degree) programmes based on market demands (not subjected to the MQA regulations).

- ❖ Consultancy services – Offer your expertise to industries through consultancy services. Businesses care more about what value you can offer to them than how scientifically fancy you are.
- ❖ Commercialisation of copyrights and IPs – especially from research products. To make this work, researchers need to understand the industries they are dealing with and create product or services that meet the needs of the industries. The key is to be relevant.
- ❖ Subsidiary companies
- ❖ Endowment

OUTCOME BASED BUDGETING (OBB)

A strategic approach to budgeting that focuses on defining the desired outcomes or results that an organization aims to achieve, rather than just allocating funds based on traditional inputs or activities. In the context of HLIs, OBB involves aligning financial resources with the specific educational outcomes or goals that the institution aims to achieve. Instead of funding faculties/departments/programmes based solely on historical spending, OBB directs funds towards initiatives that will demonstrate the greatest impact on the identified outcomes. OBB promotes transparency by making clear connections between allocated resources and expected outcomes, and holds the units accountable for achieving the specified goals within the allocated budget.

To make Outcome-Based Budgeting (OBB) work well, universities need to be clear about what they want to achieve. They should not have too many goals. The key is to be focused and specific. Here are the success factors for OBB:
i)   Clear outcomes (SMART – Specific, Measurable, Achievable, Relevant and Timebound) that align with the vision, mission and strategic goals
ii) The setting of outcomes are data driven, not perception
iii) Stakeholder engagement for buy-in and support
iv) Performance measurement for tracking progress – The University Quality Council should have a meeting every three months to do this.
v)   Performance evaluation for continuous improvement
vi) Resource alignment
vii) Leadership commitment and support
viii) Flexibility and adaptability to changing circumstance and needs
ix) Communication and transparency to build trust

"During my tenure as Vice Chancellor, I asked department heads of department and deans to re-evaluate how much money they truly needed to reach their 2019 goals, using OBB. Seven out of nine faculties returned the extra funds they were given initially. The other two faculties presented their plan and justifications why they needed the budgeted amount. In the end, UMK saved RM2.8 million by adjusting the budget. This highlights that the actual amount needed to achieve goals is often less than initially thought. So, when we talk about Outcome-Based Budgeting (OBB), it is about making sure our budget matches the expected outcomes or goals that need to be achieved."

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CHALLENGES AND WHAT'S NEXT:

1 **Upskilling and reskilling of lecturers for executive training and consultancy**. Industries do not care much about academic titles; you need to understand and speak their language to consult them. The business world is different from academics, so keep learning to be a good consultant.

2 **Lack of confidence among industry players toward local products/services.** Learn how to prepare effective paperwork, not just research paper. Convince people about your products or services in in five minutes; otherwise, they would not have time to listen. Learn the art of pitching confidently.

3 **Competition from professional consultancy and training providers**. There are abundance of opportunities, but can we compete with others in the professional world outside academia? Being a consultant has risks, though the rewards are high.

4 **Reward and promotion systems biased towards academic criteria.** There must be strong political will from the board, vice chancellor and top management to recognise those who have contributed outside the academic realm such as in consultancy work. A special track is needed for those actively contributed in training and consultancy.

5 **Competition from reputable foreign academic institutions**

6 **Lack of funding for research and commercialisation activities.** There are limited funds for research. Must understand basic and applied research. Compared to the applied research that can generate immediate impact, basic research requires bigger funding with long-term impact. Commercialisation is easier said than done. The reality is less that 5% of the patented products and services can be commercialised. Universities need funding for product validation before the patented product could enter market. An end-to-end ecosystem is needed to facilitate product commercialisation process.

7 **Strict MQA/KPT regulations on professional non-degree programmes.** There should be a bit of liberalisations from our regulators so universities can grow and generate income from professional non-degree programs designed for industries that do not necessarily need MQA recognition.

8 **Lack of a proper ecosystem for entrepreneurship activities.** Universities need to work closely with various funding agencies.

9 **Lack of public awareness for endowment/waqf/zakat.** It is not easy to get philanthropies for endowment/waqf/zakat unless you have something meaningful that could touch their heart. Focus on alumni; successful individuals may contribute generously when they appreciate how the university shaped their success. That is how great universities like Harvard get the funding. People come to those institutions to give the money because of the quality they provided.
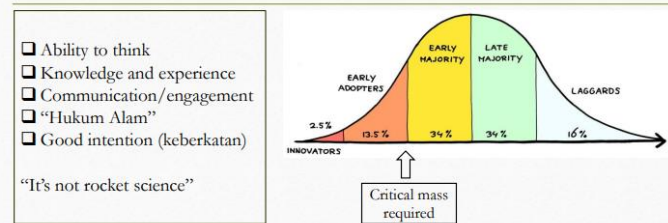
10 **Lack of financial literacy among HEI leaders.** Leading a university is not easy. The learning curve is steep. One must master strategic planning, marketing and branding, and most importantly financial management. Leaders should base their decisions on facts, not just perceptions.

LEADERSHIP AND INNOVATION

"Kejayaan Yang Dipermudahkan" dan "Kejayaan Yang Diberkati"

1. **Ability to think** – To lead effectively, one needs the ability to think, and for that, one must have the knowledge.
2. **Knowledge and experience** – Reading is the key to gaining knowledge, and leaders should read extensively. No one is too busy; it is all about priorities. Leaders must prioritize continuous learning through reading and meeting people. Experience, on the other hand, comes from executing things. Having knowledge is useless if they are not put it into action. Instead of preaching, a leader must act and set a good example.
3. **Communication/ engagement** – Leaders must have the ability to speak clearly, to convey the messages and make sure that others understand. But remember, to bring change, one must be ready to be misunderstood. History shows that real change often comes from unconventional or "crazy" leaders. When faced with opposition, reach out and try to mend relationships. When people hate you, you go and hug them.
4. **Understand "Hukum Alam",** which relates to the bell curve. Only 2.5% are innovators, those that can think outside the box, and only 13.5% will support the ideas. We need the 16% as the critical mass to push things forward. The early (34%) and late majority (34%) will follow. The remaining 16% are laggards, who will resist to any changes. Ignore them. Also understand the Pareto Principle, the 80/20 rule.
5. Exceptional leaders always **have good intentions**. People judge leaders by their actions, not just their words. True leaders do not set out to lead; they become leaders through their consistent actions and sincere intentions.

A Bit About Leadership & Innovation

- Ability to think
- Knowledge and experience
- Communication/engagement
- "Hukum Alam"
- Good intention (keberkatan)

"It's not rocket science"

Bell Curve (Diffusion of Innovation Theory)

•The instigators of change, the Innovators, make up only 2.5%. They are the brains behind pushing things forward.

•Following them, we have the early adopters, forming the Critical Mass, accounting for about 16%. This 16% is crucial in accelerating the spread of "new and unconventional" ideas. They are the driving force behind change in institutions.

Q1 **How to convince top management that their bombastic idea is not feasible?**

Any reasonable person will be convinced or believe you if you back up your points with data. In my previous roles as Deputy VC, Deputy DG, and VC, I have noticed that a lot of paperwork is not up to par. Additionally, it is crucial to gain the support of other stakeholders—be ready with solid justifications and data. It is important to understand three aspects of leadership: leading from the top, leading from bottom, and leading from side. Sometimes you need to lead from the side to gain the support of your colleagues to persuade the top leader.

Q2 **How to push for professional non-degree program despite strict regulations from MQA/KPT?**

The battle is not easy and the fight would take some time. We can strengthen the Deputy Vice Chancellor Committee (Jawatankuasa TNCA) by working through the Vice Chancellor Committee (Jawatankuasa Naib Canselor) and the Chairperson Committee of the Board of Directors (Jawatankuasa Pengerusi Lembaga Pengarah) to advocate and encourage that. Autonomy should be restored to universities, allowing them to independently determine the structure of professional non-degree programs while maintaining the standards and guidelines established by the Malaysian Qualification Agency (MQA) for professional degree programs.

Q3 **How to generate income if faculty member and even the leaders at HLIs do not have the entrepreneurial mindset?**

One is about courage. A great leader must be able to look into people face with a smile and tell them some bitter/harsh truth relating to realities on ground which ordinarily no one would dare. And to grow, one needs to be open about their mistakes. The world outside academia is distinct, so it is crucial to grasp the language of business. This understanding helps in educating students to meet industry demands. It is also important to engage with industry professionals to leverage their experiences for better classroom learning. Universities should prioritize promoting entrepreneurship driven by innovation and supported by science and technology, aligning with the nation's needs.

CHAPTER 2

ADAPTING TO TECHNOLOGY DISRUPTION: EMBRACING THE CULTURE OF ENTREPRENEURSHIP AND INNOVATION IN HEI LEADERS.

BY: PROF. DATO' DR. ANSARY BIN AHMED
(FOUNDER PRESIDENT ASIA E-UNIVERSITY)

Professor Dato' Dr. Ansary bin Ahmed, the Founder President of Asia e University speech explored the strategic application of technological advancements and data-driven insights to enhance the quality of educational delivery and improve the overall student experience. Leveraging his extensive experience as the group managing director of The Asia e Learning Private Limited, a Collaborative Multinational University, Prof. Ansary shared valuable perspectives from the private institution sector. His insights provided a deeper understanding of effective approaches to managing higher education institutions within the constantly evolving landscape of education.

Prof. Dato' Dr. Ansary commenced his presentation by imparting crucial lessons learned from transitioning from the academic world to entrepreneurship. Firstly, he emphasized the challenging nature of business, highlighting that it is not inherently easy, and many individuals lack formal training in business. Learning, especially from mistakes, becomes a cornerstone for entrepreneurs, necessitating resilience and perseverance for success. Secondly, he pointed out the shift from academic specialization, where individuals become experts in narrow fields through pursuits like PhDs, to the broader expertise required in the business realm. Entrepreneurs must broaden their knowledge, skills, and expertise to cover diverse spectrums beyond their original academic focus.

His presentations followed the structured outline:
- **Why Embracing Technology Disruption is Important for Universities?**
- **The Need to Embrace Entrepreneurship and Innovation**.
- **Specific Examples of Technology to Increase Revenues**.
- **Case Studies: Successful Implementation of Artificial Intelligence (AI)**.
- **Entrepreneurial University**.
- **Developing Business Leadership**.

How to jump the S-curve

To survive and thrive in the knowledge services sector, universities must reinvent themselves by jumping the S-curve – moving from the maturity stage of "peak higher education" to the growth stage of knowledge services. However, reinvention is challenging because organizations become trapped by today's assumptions. To maintain a dynamic competitive advantage, universities need to adopt a new set of behaviors to get and stay ahead.

" Business model disruption is here. We are experiencing it. I had been skeptical it would land in my lifetime, but it is happening now.

Bruce Lines
Chief Operating Officer, The University of Adelaide, Australia
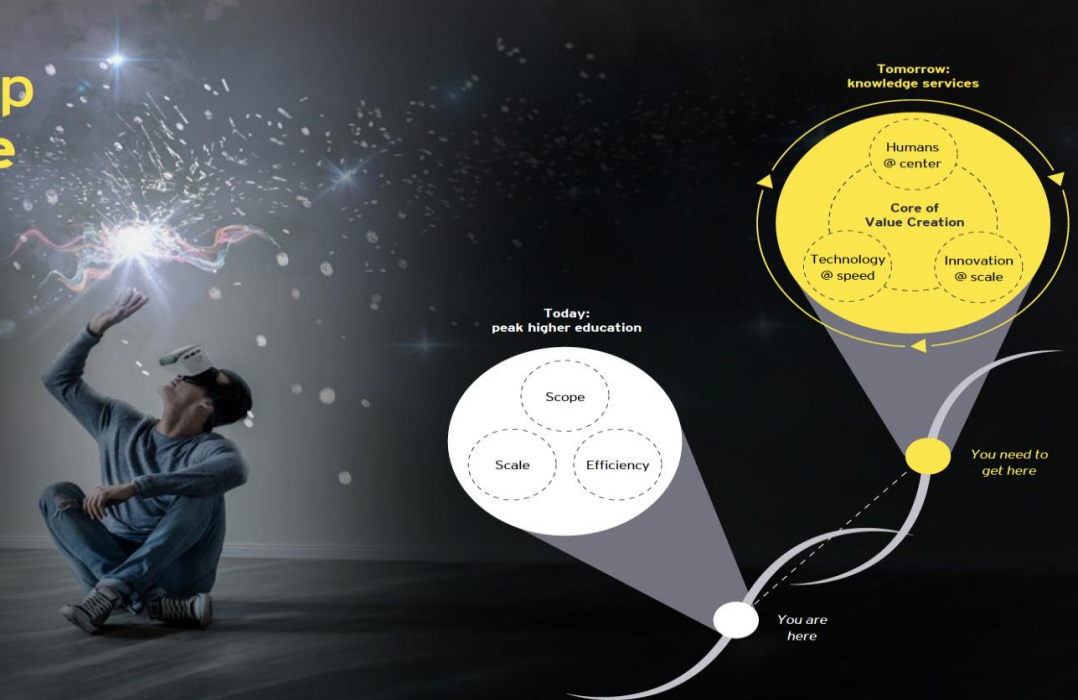
THE FUTURE OF UNIVERSITY – ERNST & YOUNG REPORT

Ernst & Young's report underscored the similarity between the universities established around 4000 years ago and the universities we have today. It raised concerns about the viability of current university models in the coming two decades, particularly in the face of technological disruptions altering traditional business approaches. In navigating this technological shift, the report posited that universities should concentrate on three fundamental aspects of value creation: human-centric approaches (human@centre), scalable innovation (innovation@scale), and swift adoption of technology (technology@speed). It emphasized that for survival, universities must:

1. **Be clear of the long-term purpose.**
   Where you want to be in the next 5-10 years? Ask, "Why are you here?" Purpose will help you maintain relevance as you journey into an uncertain future. Is your purpose to advance lifelong education well-being, collaborate to solve global challenges, unlock knowledge and commercialise research, or something else?

2. **Think "future-back" to set your reinvention agenda**
   We need to reimagine our approach to conducting business in the education sector. This involves reimagining how we can generate revenue beyond government allocations. To generate new income streams, we cannot rely on traditional methods, as what has proven successful today may not be effective tomorrow due to the rapidly changing environment. It requires innovation, courage, and a willingness to try new approaches. Each day, the question should be, "What new initiatives can be undertaken?" It's essential to identify and connect the dots, creating novel services or products that people are willing to pay for, recognizing that transactions play a crucial role in the overall equation. As leaders at university, we have to ask, "How will my institution be relevant in one or two decades?" Use scenarios beyond the "What if?" questions to define the choices you need to make today. What if the sector consolidates via mergers? What is universities form global partnerships such as the airline sector? What if universities become digital platforms? Engage with your broader ecosystem, including technology and consulting partners to think differently about the future.

3.   Build new value with new capabilities.

We require skills that extend beyond our specific areas of expertise. Unfortunately, most academics are trained to be experts in their respective fields but lack training as entrepreneurs or innovators in the business realm. Despite this, there is a governmental expectation for academicians to generate revenue. This poses a significant challenge, as the existing structure and governance of universities may hinder academics from succeeding in the business world. It is a harsh reality we must acknowledge. The solution lies in reimagining how we navigate the rules and regulations to enter the business sphere and generate income.

When it comes to commercialization, the process from conceptualizing ideas to making them market-ready is time-consuming, often spanning several years. However, achieving market readiness does not guarantee market penetration. To succeed, we must grasp marketing channels and thoroughly understand the desires of the market. Adopting a reverse approach, it is crucial to identify what the market wants and conduct research to deliver precisely that. Ask, "How can we create long-term sustainable value for all our stakeholders?" The historical value came from scale, scope and efficiency. Tomorrow, value will come from a new set of dynamic behaviours: putting human at the centre, driving innovation at scale and deploying technology at speed. Leapfrog the competitors with reinvention and a digital-first mindset. Address a customer need-flexibility, personalization or a job guarantee for graduates. Innovate the learning model and industry partnerships to enable this. Deliver it with AI-driven personalization and digital credentialing. Scale it up. To build this competency, go outside your sector to find leadership talent from other industries living with reinvention, such as retail, media or financial services. Accelerate your development through partnerships, acquisitions or hiring new capabilities.
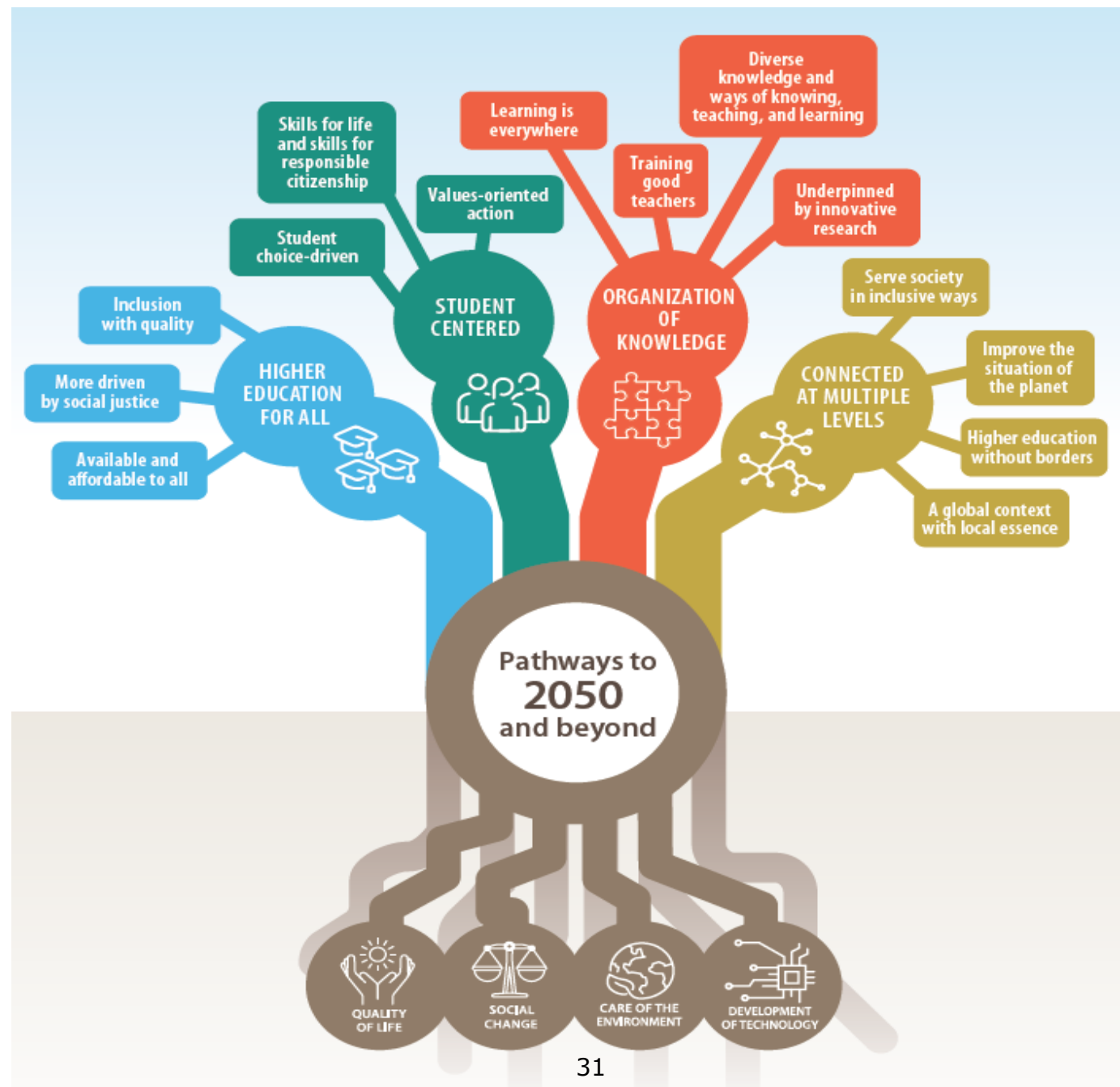
4.   Invest across the three-time horizons

How can we leverage on technologies in order to improve product/ services. Ask, "How can we manage for today and change for tomorrow?" Balance the reinvention agenda so that you can keep thinking about exponential change.

Horizon Now	**50%** Investment	Focus: Strengthen the core business models and operations of the university of today. For example, protect sensitive information with cybersecurity, or use data and analytics to track and improve outcomes and efficiency.
Horizon Next	**40%** Investment	Focus: Build the new business models and technologies for the university of tomorrow. For example, develop a next-generation digital learning ecosystem to deliver customized, "on-demand" learning and build partnerships with industry or in new geographic markets.
Horizon Beyond	**10%** Investment	Focus: Make big bets to reinvent yourself and your industry. For example, build an intelligent campus using internet of things (IoT) and AI, and create a "research as a service" marketplace.

"Those that figure out how to capture multiple markets and do multiple things with the technology are going to thrive and grow, and it is going to be at the expense of other schools." – Dr. Michael K. Young, Former President, Texam A&M University, US.

THE BUSINESS OF HIGHER EDUCATION

Skills for life and skills for responsible citizenship

Student choice-driven

Values-oriented action

Inclusion with quality

More driven by social justice

Available and affordable to all

HIGHER EDUCATION FOR ALL

STUDENT CENTERED

Learning is everywhere

Training good teachers

Diverse knowledge and ways of knowing, teaching, and learning

Underpinned by innovative research

ORGANIZATION OF KNOWLEDGE

Serve society in inclusive ways

Improve the situation of the planet

Higher education without borders

A global context with local essence

CONNECTED AT MULTIPLE LEVELS

Pathways to 2050 and beyond

QUALITY OF LIFE

SOCIAL CHANGE

CARE OF THE ENVIRONMENT

DEVELOPMENT OF TECHNOLOGY

Higher Education for All

Higher education should represent and be driven by social justice; it needs to be real for everybody. As a human right, higher education should be available and affordable for all students who are willing to be part of it. Yet widening access to higher education should not in any way diminish its quality. It is necessary that higher education becomes more contextualized to the current global challenges be practical and experiential to include various academic and cultural experiences.

Organization of Knowledge

Higher education should dedicate its knowledge transfer and practices around skills for life and skills for responsible citizenship. It should promote diverse knowledge and ways of knowing, teaching and learning. Higher education institutional practices should be underpinned by innovative research. The acquired knowledge should allow students to develop skills to contribute to local socioeconomic development: topics such as innovation, entrepreneurship, ethics can contribute to this end.

The report by UNESCO identified four pathways to the future of higher education in 2050
Source:https://www.iesalc.unesco.org/en/futures-of-higher-education/pathways-to-2050-and-beyond/

Student-Centred

Students in higher education should be able to make academic and career choices based on their interests. Universities and other higher education institutions should allow students to co-create the curriculum whereas teachers would be adaptive to the changing demands. Flexible learning pathways should be provided to assist lifelong learning and motivate students to engage in real-life problem solving.

Connected at Multiple Levels

Higher education has a role to play beyond its institutional practices. It links to its surroundings and serves society in inclusive ways. Higher education has the mission and the capacity to improve the situation of the planet. Its development should be based on a global context with local essence and has an important responsibility in the development of society in different levels: globally, regionally and locally. Higher Education should generate inclusive systems through partnership with local authorities, local industry and the formation of regional university clusters.

Becoming an entrepreneurial university necessitates a strategic organization of knowledge—how we structure ourselves, cultivate the ecosystem, and determine the type of knowledge we incorporate. Additionally, establishing connections at multiple levels, involving networking and collaborations, is crucial for business growth. It is imperative to acknowledge and appreciate the individuals who have supported and guided us, opened doors, and offered assistance during the initial stages of our journey. True entrepreneurs recognize and appreciate the assistance they receive from others. They believe in rewarding those who contribute to their success and operate with a mindset of generosity rather than selfishness. In the entrepreneurial realm, the focus is not solely on personal enrichment; instead, success is achieved through collaboration, networking, and mutual support. It is a philosophy that underscores the importance of working together and lifting each other up to attain shared goals.

Universities excel in research and innovation, but much of this innovation stems from the initiatives of the university and individual researchers (university-driven and researcher-driven) rather than being driven by market demands. The key to aligning innovation with market needs lies in establishing strong connections between universities and industries. Continuous communication is essential, yet not all professors possess the skills for effective engagement. Therefore, universities should employ individuals with a deep understanding of the market, its needs, and a realistic awareness of what the university can or cannot achieve.

Recognizing that no single university can cover all aspects, collaboration becomes crucial. Networking with other universities, whether private or public, within or outside Malaysia, is imperative. Different expertise is required to meet diverse market needs, and universities must learn to build collaborative networks. Establishing a dedicated research and technology team becomes essential to effectively deliver products that align with market demands.

WHY EMBRACING TECHNOLOGY DISRUPTION IN HIGHER EDUCATION IS IMPORTANT?

1. **Global Competitiveness:**
   Technology disruption - key driver of global competitiveness. Universities that embrace and leverage technological advancements will be leaders in providing cutting-edge education and research.

2. **Enhanced Learning Experiences:**
   Integration of Ed tech allows for innovative teaching methods, interactive learning platforms, and personalized educational experiences, - more engaging and effective learning environment.

3. **Research and Innovation:**
   Technology disruption accelerates advancements in research and innovation. Universities adopting new technologies can lead in ground breaking discoveries, creating opportunities for academic and industrial partnerships.

4. **Operational Efficiency:**
   Implementing technology solutions streamlines administrative processes, enhancing operational efficiency. Automation of tasks, data analytics, and digital communication tools contribute to smoother university management.

5. **Cost Management:**
   Leveraging technology - cost efficiencies in various university operations. From online learning platforms to digital administrative systems, technology can reduce costs and improve resource allocation.

6. **Agility in Decision-Making:**
   Technology provides data-driven insights, enabling university leaders to make informed decisions quickly. This agility is crucial in responding to challenges and opportunities in the dynamic higher education environment.

7. **Strategic Positioning:**
   Universities that embrace technology disruption signal to stakeholders, including students, faculty, and industry partners, that they are forward-thinking and committed to staying relevant in a rapidly changing educational landscape.

WHY UNIVERSITIES ALSO NEED TO EMBRACE A CULTURE OF ENTREPRENEURSHIP AND INNOVATION?

1. **Adaptability to Change**:
   Entrepreneurial cultures promote adaptability and resilience, preparing both students and faculty to thrive in an ever-changing academic and professional landscape.

2. **Industry Relevance:**
   Embracing entrepreneurship ensures that academic programs remain relevant to industry needs, producing graduates who are not only academically proficient but also equipped with practical skills sought by employers.

3. **Research Commercialization:**
   Entrepreneurial cultures encourage the commercialization of research findings, translating academic discoveries into products or services that can benefit society and contribute to economic development.

4. **Economic Impact:**
   Universities that embrace entrepreneurship contribute to the economic development of their regions by creating job opportunities, supporting local businesses, and attracting investment

5. **Innovation Hub:**
   Cultivating a culture of entrepreneurship fosters innovation hubs within universities, where students and faculty can collaborate on ground breaking projects and initiatives.

6. **Startup Incubation:**
   Universities can serve as incubators for student and faculty startups, providing the necessary support, mentorship, and resources to turn innovative ideas into viable businesses.

7. **Lifelong Learning:**
   An entrepreneurial culture encourages a mindset of continuous learning and adaptation, preparing individuals for a lifetime of evolving challenges and opportunities.

> *"In the current landscape, lifelong learning has become a universal pursuit. The continuous acquisition of knowledge is essential because the moment we cease learning, our understanding becomes obsolete. Every day presents an opportunity to learn, whether through reading or listening. As entrepreneurial leaders engaged in global business, it's crucial to maintain awareness across various realms, including political, economic, and social aspects. Avoid working in isolation and recognize the importance of staying informed and adaptable in a dynamic world."*

STRATEGIES IN USING TECHNOLOGY TO INCREASE REVENUE

1. **Flexible Learning Spaces:** Designing flexible learning spaces for different teaching methods and group sizes. These spaces support a variety of pedagogical approaches, from lectures to active learning and collaborative projects.
2. **Hybrid Learning Centres:** Some universities are creating hybrid learning centres that combine physical and digital resources. These centres offer students a place to access online content, collaborate on projects, and engage in hands-on learning experiences.
3. **Artificial Intelligence and Smart Campus Technologies:** Campuses are adopting AI and smart technologies for everything from security and energy management to personalized learning experiences.
4. **Learning Commons:** The concept of the learning commons brings together academic resources, library facilities, and technology in one central location. This encourages collaboration and multidisciplinary learning.
5. **Collaborative Workspaces:** To foster innovation and entrepreneurship, universities are creating collaborative workspaces where students, faculty, and even local businesses can work on projects and startups. These spaces often include access to mentors and resources.
6. **Internet of Things (IoT) in Campus Management:** Integration of IoT devices for campus management, including smart classrooms, connected campus infrastructure, and IoT-enabled wearables for tracking attendance or monitoring health and safety.
7. **Mixed-Use Campus Buildings:** Universities are developing mixed-use buildings that combine academic, residential, and commercial spaces. This approach can create a more dynamic and integrated campus environment.
8. **Adaptive Learning Platforms:** Adaptive learning platforms that dynamically adjust content based on individual student progress, preferences, and learning styles. These platforms leverage AI and data analytics to provide a personalized and optimized learning experience.
9. **Virtual Reality and Augmented Reality Labs:** Virtual reality labs and augmented reality spaces are being established to explore immersive learning experiences and conduct research in areas like digital arts and virtual archaeology.
10. **Robotics and Automation:** Adoption of robotics and automation for administrative tasks, campus services, and even aspects of teaching. Robots may assist with routine tasks - educators to focus on more complex and interactive aspects of teaching.
11. **Green and Sustainable Campuses:** Many universities are leveraging on technology to prioritizing sustainability and eco-friendliness in campus design. This includes energy-efficient buildings, green spaces, and initiatives to reduce the institution's carbon footprint.
12. **Global Collaboration Platforms:** Increased use of global collaboration platforms that facilitate international partnerships, joint research projects, and virtual exchanges. These platforms break down geographical barriers, enabling students and faculty to collaborate seamlessly on a global scale.

CASE STUDIES: SUCCESSFUL IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE (AI).

Combining Technology Disruption With Innovation And Entrepreneurship

Anant Agarwal - edX and Massachusetts Institute of Technology (MIT)

Anant Agarwal, served as the CEO of edX, a leading online learning platform created by Harvard and MIT. Under his leadership, edX expanded its global reach and offered high-quality courses from top universities, including many from Asia. He was not a traditional university leader, but his association with MIT is a successful fusion of education and technology to create a global educational platform.

Tan Eng Chye - National University of Singapore (NUS)

As the President of NUS, Tan Eng Chye has overseen several initiatives that have boosted NUS's global standing and financial sustainability. NUS expanded its international collaborations, increased research funding, and developed innovative programs to attract top talent from around the world.


Hiroshi Marui - The University of Tokyo

Hiroshi Marui, former President of The University of Tokyo, is known for his strategic vision and internationalization efforts. During his tenure, the university improved its global rankings and strengthened ties with universities in Asia and beyond, contributing to its reputation as a leading global institution.

Michael Crow - Arizona State University (ASU)

Michael Crow has been the President of ASU since 2002. Under his leadership, ASU has undergone a significant transformation, becoming one of the most innovative and dynamic universities in the United States. Crow's vision included expanding online education, increasing research funding, and fostering entrepreneurship.
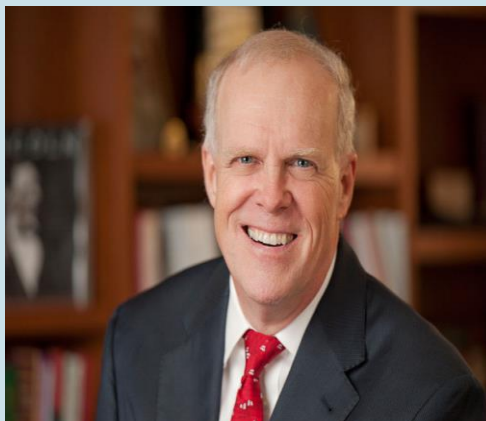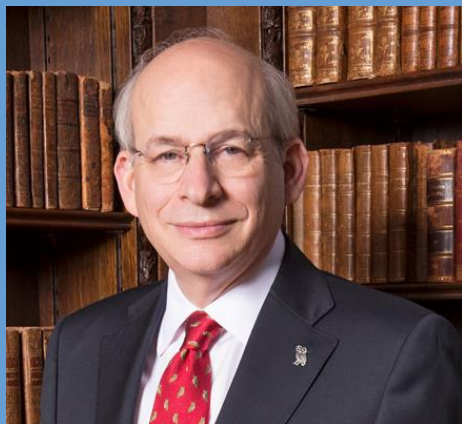
John L. Hennessy - Stanford University

John Hennessy served as President of Stanford University and later became Chairman of Alphabet, Google's parent company. His leadership at Stanford saw the university becoming a hub for entrepreneurship and innovation. Hennessy played a pivotal role in Stanford's close relationship with Silicon Valley, promoting the transfer of technology and knowledge from academia to industry. This relationship led to numerous successful startups and tech innovations.

Renu Khator - University of Houston

Renu Khator is the Chancellor and President of the University of Houston System. Khator implemented strategies to improve graduation rates, increase research funding, and enhance community engagement. Her leadership contributed to the university's improved rankings and expanded offerings.

### Satyam Sikha - Indian Institute of Technology Kharagpur (IIT KGP)

Satyam Sikha, the Director of IIT Kharagpur, has been instrumental in transforming IIT KGP into a global leader in technology education. He has focused on industry partnerships, innovation, and entrepreneurship, leading to successful collaborations with both Indian and international organizations and an enhanced educational experience for students.

David Leebron - Rice University

David Leebron, as President of Rice University, He initiated the "Vision for the Second Century" plan, which included substantial fundraising efforts, a focus on research, and the construction of new facilities. Rice University's growth in endowment and research activities reflects his successful business-minded approach to higher education leadership.

Angel Cabrera - George Mason University

Angel Cabrera served as President of George Mason University. He expanded the university's global footprint through the opening of a campus in South Korea and initiated the "Mason IDEA" project, which aimed to increase interdisciplinary research and entrepreneurship.

Li Shusheng - Tsinghua University

Li Shusheng, the former President of Tsinghua University in China, is known for his efforts to strengthen Tsinghua's global reputation. Under his leadership, Tsinghua University has expanded its international partnerships, improved research capabilities, and attracted top faculty and students from around the world.

ARTIFICIAL INTELLIGENCE: THE DIGITAL TRANSFORMATION

Embarking on a transformative journey, numerous universities worldwide have embraced the power of Artificial Intelligence (AI) to revolutionize their academic landscape. The integration of AI in higher education has not only reshaped traditional methods but has also paved the way for unprecedented advancements in teaching, research, and overall institutional efficiency. In this exploration, we delve into the success stories of universities that have navigated the digital transformation using AI, examining how these institutions have harnessed the potential of technology to enhance learning experiences, streamline administrative processes, and position themselves at the forefront of educational innovation. Prof Dato' Dr. Ansary briefly shared the success stories of these universities:
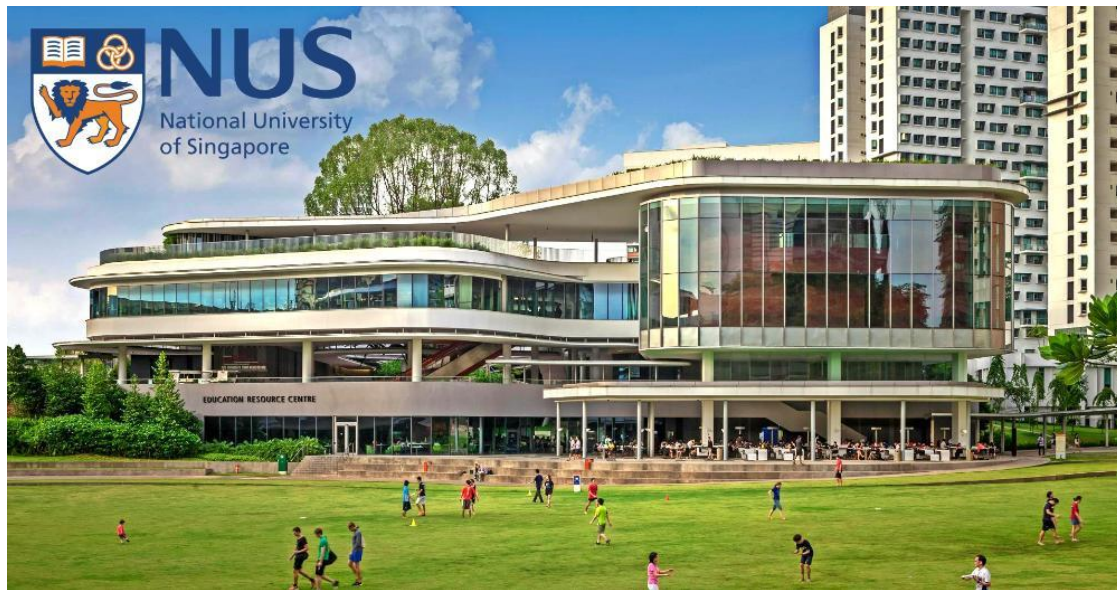
National University of Singapore (NUS)

NUS has established itself as a pioneer in technology-driven education and innovation. The Smart Nation Research Cluster at NUS focuses on cutting-edge technologies like artificial intelligence, data science, and digital innovation.NUS Enterprise, the entrepreneurial arm of the university, supports startups and encourages students to explore their entrepreneurial ideas through programs like the NUS Overseas Colleges, where students work on projects in innovation hubs globally.

KAIST (Korea Advanced Institute of Science and Technology) - South Korea

KAIST is renowned for its emphasis on science and technology education and has been a trailblazer in integrating technology into various disciplines. The university's Technology Management, Economics, and Policy Program foster an entrepreneurial mindset among students, encouraging them to apply technology in solving real-world problems. KAIST actively collaborates with industry partners, providing students with hands-on experience and creating a seamless transition from academia to entrepreneurship.

Massachusetts Institute of Technology (MIT) - USA

MIT's OpenCourseWare initiative has been a trailblazer in making educational resources freely available online. This not only fosters innovation but also allows for global access to high-quality educational materials. The MIT Media Lab serves as a hub for interdisciplinary exploration, bringing together students, researchers, and industry professionals to work on cutting-edge projects, often involving innovative edtech solutions.

Tsinghua University (China)

AI Research and Education – Tsinghua University is a key player in AI research and education. The university collaborates with industry partners and government agencies to advance AI technologies. It also offers AI-related courses and programs.

Indian Institute of Science (IISc), Bangalore

AI Research Lab – IISc hosts the Robert Bosch Centre for Data Science and AI, focusing on cutting-edge research in AI and data science. The center collaborates with industry partners and contributes to advancements in AI technologies.


University of Melbourne

Centre for AI and Digital Ethics (CAIDE) – The University of Melbourne has established the Centre for AI and Digital Ethics, focusing on research and education in AI ethics. CAIDE explores the ethical implications of AI technologies and works to develop responsible AI practices.

How Artificial Intelligence Is Transforming Higher Education?

In the ever-evolving landscape of higher education, the integration of Artificial Intelligence (AI) stands as a groundbreaking force, catalyzing transformative shifts across academic institutions. The profound impact of AI is not confined to mere technological advancements; rather, it permeates the very essence of how we teach, learn, and navigate the complexities of academia. Prof. Dato' Dr. Ansary delved into the nexus of AI and higher education and unveils the multifaceted ways in which intelligent technologies are reshaping classrooms, research endeavors, and administrative frameworks. He explained the realm of possibilities where AI is not just a tool but a catalyst for innovation, responsiveness, and a redefined educational experience.
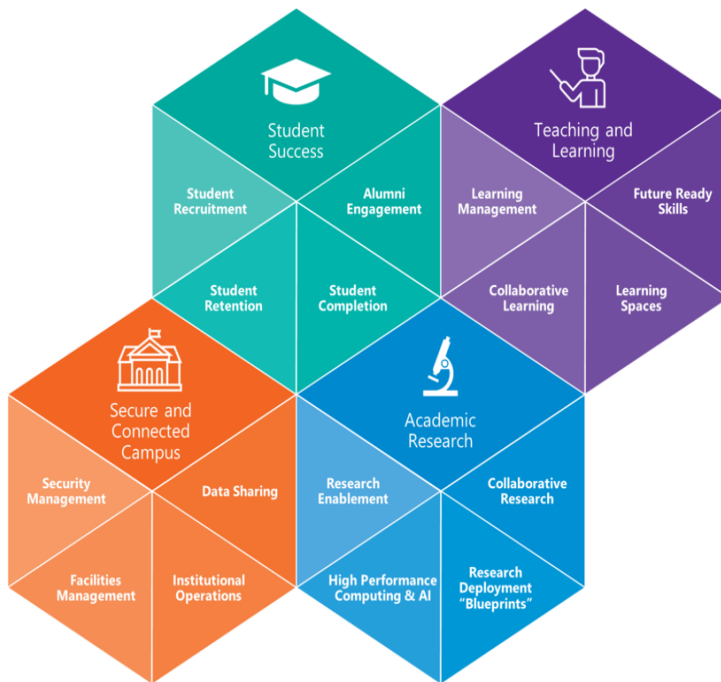
In the realm of higher education, Artificial Intelligence (AI) unfolds its transformative potential across four pivotal domains: student success, teaching and learning, the establishment of a secure and connected campus, and the augmentation of academic research. The adoption of AI in universities is not just a technological leap; it's a strategic move to usher in a more forward-thinking, cost-effective, and creatively empowered academic landscape. By automating mundane and routine tasks, AI allows human resources to break free from the shackles of repetitive work, paving the way for increased creativity, innovation, extensive research endeavors, and collaborative initiatives. The overarching objective is clear: to liberate individuals from routine tasks, thereby amplifying productivity and fostering a wealth of creative, forward-thinking contributions within the academic sphere.

Examples of how AI is implemented in campuses are:

i) **AI Incubators and Accelerators:** Universities are establishing AI-focused incubators and accelerators to provide a supportive environment for AI-driven startups. Universities offer resources such as mentorship, funding, and access to cutting-edge technologies to help entrepreneurial students and researchers turn AI innovations into viable businesses.

ii) **AI Data-Informed Decision-Making:** Effective decision-making in higher education requires the use of AI for data and analytics to make evidence-based decisions regarding curriculum development, student retention, and resource allocation etc

iii) **AI in Research Commercialization:** Universities are using AI to enhance the commercialization of research outcomes. AI technologies can identify market opportunities, analyze patent landscapes, and support the development of business strategies for bringing AI-related research into the market.

iv) **Generative AI:** Generative AI can be employed to create educational content, such as lecture notes, quizzes, and study materials. This can save educators time and contribute to a more diverse set of learning resources.

v) **Entrepreneurship Education in AI:** Universities are incorporating AI into entrepreneurship education programs. This includes courses and workshops that teach students how to leverage AI technologies for developing and scaling innovative business ventures.

vi) **Industry Collaboration and AI-Based Solutions:** Universities collaborate with industries to develop AI-based solutions through entrepreneurial initiatives. These collaborations often result in the creation of startups that focus on solving industry-specific challenges using AI technologies.

vii) **Artificial Intelligence (AI) and Machine Learning:** Increasing integration of AI and machine learning in educational technologies, including personalized learning experiences, intelligent tutoring systems, and data analytics for student performance prediction and intervention.

"Malaysia finds itself trapped in the middle-income trap, with a predominant 98% of businesses categorized as SMEs. Notably, these SMEs contribute significantly by employing approximately 60% of the Malaysian workforce, forming the backbone of the nation's economy. The challenge lies in transcending this economic plateau. The question then becomes: How can we leverage AI to navigate out of the middle-income trap? The key lies in equipping SMEs with the knowledge and tools to harness AI, enabling them to predict outcomes through descriptive, prescriptive, or predictive analytics and ultimately fostering the growth of these crucial enterprises."

Generative AI, has the Potential to Significantly Impact Higher Education

In the dynamic landscape of higher education, the advent of Generative Artificial Intelligence (AI) marks a paradigm shift with far-reaching implications. As we stand on the cusp of a technological revolution, Generative AI emerges as a transformative force that holds the potential to redefine and elevate the educational experience. This innovative branch of AI transcends traditional boundaries, offering a spectrum of possibilities that extend from personalized learning experiences to revolutionary advancements in research and administrative efficiency. Prof. Dato' Ansary shared how Generative AI is poised to leave an indelible mark on higher education, opening avenues for creativity, efficiency, and unparalleled innovation such as:

- **Content Creation and Personalized Learning** – Generative AI can be employed to automatically generate educational content, such as lecture notes, quizzes, and study materials. Save educators time and contribute to a more diverse set of learning resources.

- **Personalized Learning Experiences** – AI algorithms can analyse individual learning patterns and preferences, generating customized learning experiences to support personalized learning paths for students, addressing their specific strengths and weaknesses.

- **Language Translation and Global** – Generative tools can facilitate communication and collaboration among students and faculty who speak different languages. This is particularly relevant in international higher education settings.

- **Automated Grading and Assessment** – Generative AI can automate grading for certain types of assignments and assessments, saving time This efficiency allows instructors to focus on more qualitative aspects of teaching.

- **Virtual Teaching Assistants** – Generative AI to create virtual teaching assistants that answers routine questions, provide information about courses, and offer support to students. This enhances the overall efficiency of administrative processes.

- **Enhanced Accessibility for Diverse Learners** – Generative AI can be used to create accessible learning materials for students with disabilities. For example, generate text descriptions for images or provide real-time transcription for lectures.

- **Quick Feedback for Students** – AI-generated feedback Instant feedback on all aspects to student life cycle. For example, AI tools can provide students with instant insights into their performance, allowing for timely intervention and personalized guidance.

- **Support for Academic Writing** – AI tools can help students and researchers improve their writing skills by offering suggestions, checking for plagiarism, and providing grammar and style recommendations. But there must be detailed policies and guidelines for this.

ENTREPRENEURIAL UNIVERSITY ECOSYSTEM
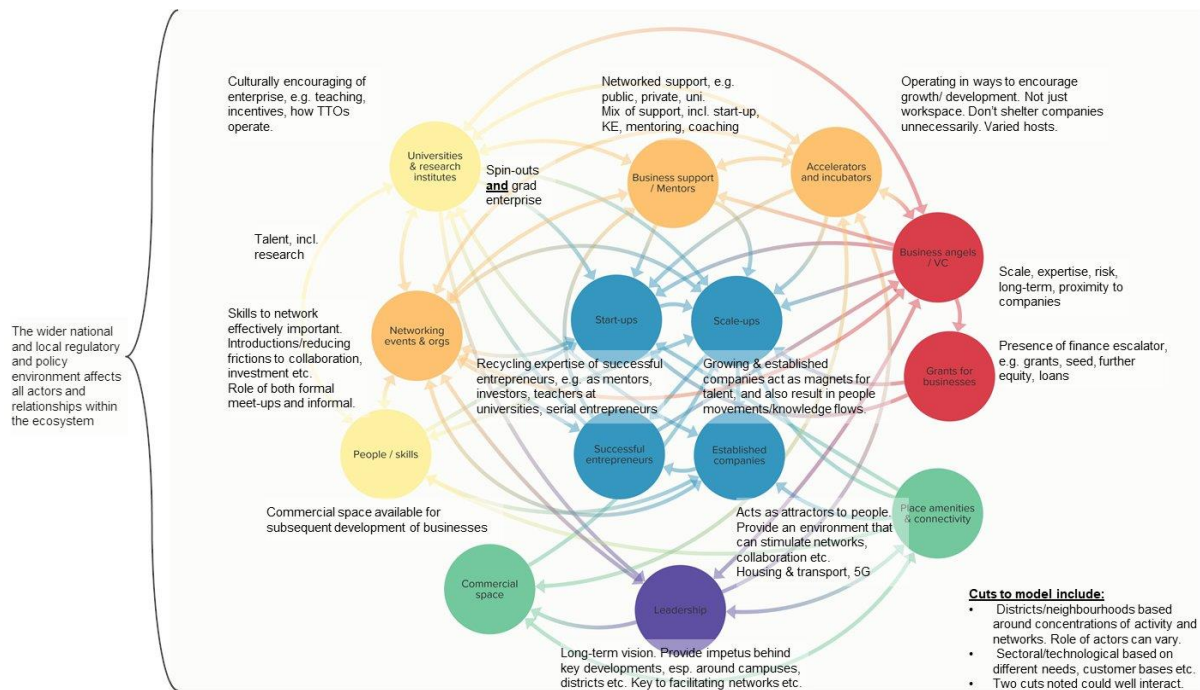
Dato' Ansary provided a brief overview of the Entrepreneurial University Ecosystem implemented by British universities. In Malaysia, it is essential to recognize that our existing ecosystem requires significant improvements to foster entrepreneurial spirit and generate income for universities. Acknowledging the imperfections in our environment, the key lies in cultivating creativity to navigate and carve out pathways for income generation in less-than-ideal circumstances. This adaptive approach becomes crucial in leveraging opportunities and addressing challenges within the entrepreneurial landscape of Malaysian universities.

DEVELOPING BUSINESS LEADERSHIP

1. **Empowering Leaders with Business Acumen**: Reflect upon your own characteristics—are you naturally inclined to be a business leader? If not, it is crucial not to feign such qualities, as doing so might lead to failure. Honesty with oneself is paramount. To cultivate expertise, a structured approach is necessary, involving training elements, assessment centres, and incubators to nurture academics into effective business leaders. Realism is key; allocate tasks based on expertise, allowing individuals to focus on what they excel at. While nurturing academics into business leaders is plausible, the numbers may be limited (around 5-10%). It is essential to harness a blend of strengths for collective improvement. For example, instead of attempting to transform every economics expert into a businessperson, identify those with the potential to become business leaders within the academic realm. Empowering leaders with business acumen is crucial, but recognition of individual potential is equally important.

2. **Nurturing the Culture of Innovation**: Cultivate an environment that fosters innovation rather than obedience. True innovators are those who challenge norms and break rules. Leaders should possess the ability to tolerate and support individuals who aspire to be innovators. Instead of hindering their progress, leaders should guide, encourage, and nurture them to evolve into disruptive innovators.

3. **Ensuring Long-Term Success:** Success requires resilience and perseverance; giving up easily is not an option. The key is to persistently fight for your goals. Business leaders, in particular, must master the art of selling. Selling is a skill that involves effective communication. It is essential to speak the language of business, avoiding academic jargon when engaging with business professionals. To truly connect, one must learn and adeptly use the commercial lingo that resonates within the business realm.

4. **Adapting to Changing Landscape:** Educational leaders need to be agile and responsive to change. It is crucial to stay informed about both local and global developments, as the geopolitical landscape significantly impacts those in leadership roles in higher education.

CHARACTERISTICS OF BUSINESS LEADERSHIP

- Communication skills
- Motivational skills
- Charisma
- Enthusiasm
- Resolution skills
- Management skills
- Negotiation skills
- Discipline
- Active listening
- Honesty
- Vision
- Decision-making skills
- Good image

Becoming an Effective Business Leaders in Higher Education: Lessons from Dato' Dr. Ansary...

Dato' Dr. Ansary also imparted valuable lessons that have guided him on his journey to becoming an effective business leader in the higher education sphere. These lessons encompass:

Formal Education
Pursue an advanced degree, such as an MBA, with a focus on business management and leadership. Take courses or certifications in specific business areas, such as finance, marketing, or project management.

On-the-Job Experience
Seek leadership roles or cross-functional assignments within your current organization to gain exposure to different aspects of business operations. Take on projects that involve financial analysis, budgeting, or strategic planning to develop practical skills.

Mentorship and Networking
Find a mentor who has strong business acumen and can provide guidance, share experiences, and offer feedback. Networking opportunities to connect with professionals who can provide insights into business best practices.

Self-Study
Read books, articles, and academic papers on business management, strategy, and leadership. Follow reputable business blogs and podcasts to stay updated on industry trends.

Online Courses and Webinars
Enrol in online courses and webinars offered by universities, professional organizations, and e-learning platforms. These courses often cover a wide range of business topics.

Case Studies
Analyse real-world business case studies to understand how successful organizations have navigated challenges and made strategic decisions. Create or participate in case study discussions to apply your knowledge to practical situations.

Master Financial Literacy

Improve your understanding of financial statements, budgets, and key financial metrics. This knowledge is fundamental to business. Consider financial management software or courses to develop your financial skills.

Industry Research

Stay informed about the specific challenges and trends in HE industry. Understanding industry-specific dynamics is crucial for effective decision-making.

Simulation Games and Workshops

Participate in business simulation games or workshops that mimic real business scenarios. These experiential learning opportunities can be highly effective.

Soft Skills

Develop soft skills, such as communication, negotiation, and critical thinking. These skills are essential for effective leadership and decision-making. Refrain from overtly displaying your intelligence, as the customer's perspective is paramount. Avoid challenging egos and instead, comprehend the psychology of your client. Hone your negotiation skills and develop a persuasive ability to effectively engage clients. It is crucial to discern when and where to express humility.

Continuous Learning and Feedback

Make learning a lifelong habit. The business landscape is ever-evolving, so staying up to date is essential. Seek feedback from colleagues, supervisors, and mentors to identify areas for improvement

Practice Decision-Making

Take on responsibilities that involve decision-making and problem-solving. Practice is key to honing your ability to make sound business decisions.

Professional Development Plans

Create a professional development plan that outlines your goals, the skills you want to acquire, and the steps you'll take to achieve them. Regularly revisit and revise your plan as you make progress and your career evolves.

CHAPTER 3

**SESSION TITLE:
AGILE LEADERSHIP IN HIGHER EDUCATION:
MAXIMIZING INCOME GENERATION AND
INNOVATION**

MODERATOR: PROF DATO' DR. NIK MAHERAN NIK MUHAMMAD

Professor Datuk Ir. Dr. Wahid bin Omar, renowned for his dedicated service as the Vice-Chancellor of Universiti Teknologi Malaysia (UTM) from 2013 to 2020. Currently holding the position of Professor of Amal Bakti at UTM, he boasts an impressive tenure of nearly 38 years with the university, with 21 years spent in various management and leadership capacities.

Theme 1: Experiences and Innovative Solution for Financial Sustainability.

Prof. Datuk Ir. Dr. Wahid bin Omar provided a comprehensive overview, initially delving into the broader perspective of financial sustainability and recounting how Universiti Teknologi Malaysia (UTM) navigated a significant budget cut in 2016. He underscored the global challenge faced by higher education institutions, particularly in balancing the delivery of high-quality education with limited funding, especially in public universities where student contributions cover only a fraction of actual costs. The impact of the 2016 budget cut from the Ministry of Finance (MOF) was significant, leaving UTM without operational funds for utilities and maintenance, leading to a deficit exceeding RM100 million against an operating budget of approximately RM60 million.

Responding to the financial challenges, UTM implemented a series of measures to endure and overcome the budgetary constraints. These included immediate actions such as terminating contracts with foreign professors, changing contract durations, discontinuing facility management contracts, and adopting a cost-effective "Do-it-yourself" approach for previously outsourced tasks. Travel benefits were curtailed, and staff contributed their funds to ensure planned meetings could proceed. The university also embraced eco-friendly practices, emphasizing recycling and striving for paperless operations, resulting in significant savings on electricity bills through successful energy management.

Taking a proactive stance in financial management, UTM established a financial "war room" and strategically invested in long-term assets such as student facilities, notably prioritizing Wi-Fi infrastructure. This forward-thinking investment proved crucial during the Covid-19 pandemic, receiving positive feedback from students who appreciated the quality of the Wi-Fi. Adopting an entrepreneurial mindset, UTM explored income-generating opportunities by monetizing existing assets and properties, reviewing rentals, increasing fees, and evaluating returns on investment (ROI). Anticipating reduced government aid, the university even considered the introduction of a Public University Private Wing as a survival strategy. Despite encountering resistance, these multifaceted approaches reflected UTM's resilience and innovative strategies to address financial challenges in higher education.

Theme 2: Strategies and Privatization as Sources of income

Prof. Datuk Ir. Dr. Wahid bin Omar highlighted several strategies related to privatization and the main sources of income for Higher Learning Institutions,

a) Investing in markets with potential returns,
b) Targeting new student demographics in countries where UTM has low enrollment.
c) Offering private education, such as full-fee diploma programs.
d) Introducing international programs where both international and local students can enroll, with international students paying full fees.
e) Implementing policies supporting spin-offs and levying licensing fees and royalties, resulting in UTM earning a dividend of RM104 million and RM8 million from commercialization.

UTM's revenue stems from academic income, yielding a dividend of RM140 million, with contributions of approximately RM8 million from commercialization and RM1.1 million from licensing. However, these financial inputs constitute a relatively modest portion of the university's overall income. Government support is still important and advocated for inventive income generation strategies that create opportunities for the university's staff.

Theme 3: Engaging Key Stakeholders: Enhancing Decision-Making And Accountability

According to Datuk Wahid, the specific risk management protocol will vary based on the unique circumstances of the project and the institution involved. It is advisable to involve key stakeholders, including project team members and relevant decision-makers, in the risk management process to gather diverse perspectives and insights. Prof. Datuk Wahid shared his experience as the Vice Chancellor of UTM of managing and successfully establishing UTM residency, highlighting the extensive process involving scrutiny of cash flow and student projections.

He emphasized that the approach to decision-making varies based on whether it is a personal endeavor, or for the institution. Besides, emphasizing accountability and honesty in decision-making. He also stressed the importance of negotiation with business partners. As a leader, one must be accountable of the decision that he/ she took in implementing the project even after his/her tenure has ended.

Theme 4: Earning Trust And Commitment From Subordinates

Prof. Datuk Wahid stressed that effective leadership necessitates courage, a readiness to embrace risks, and the creation of opportunities for the success of others. Leaders should proficiently communicate, embedding the university's vision and mission, all while avoiding micromanagement or disruptions to the organizational ecosystem. Additionally, the university should actively encourage the cultivation of spinoffs and support initiatives contributing to economic growth. Furthermore, he underscored the significance of seizing opportunities whenever feasible. Lastly, he advocated for empathetic management and the promotion of transparency to engage and involve individuals in the organization's pursuits.

Within the context of UTM, there are dedicated individuals like Ts. Dr. Mariani who embody the spirit of UTM and emphasize a profound connection and commitment to the institution. UTM, serving as a platform, aspires to contribute to societal betterment by endeavoring to improve people's lives through various initiatives and wholeheartedly giving back to society.

Theme 5: Present Conditions In Malaysian Public Universities For Entrepreneurial Initiatives

Prof. Datuk Ir. Dr. Wahid recounted his experience at UTM, emphasizing the importance of adjusting existing regulations. Instead of directly opposing regulations, he suggested making necessary adjustments after persuading relevant parties such as the university board, the Ministry of Finance (MOF), and the Ministry of Education (KPT). It is imperative to secure the support of the university board if any procedures need to be bypassed.

To garner this support, university leaders must first showcase their competence, rectify errors, and highlight their capabilities. Building trust with the board and related ministries is crucial. Effective management of capabilities contributes to establishing credibility, fostering trust among individuals who can depend on these competencies. Most importantly, confidence in oneself is paramount for the institution's improvement.

Theme 6 – Empowering Others: Essential Components of Leadership

In the pursuit of fostering an entrepreneurial mindset within academic institutions, it is imperative to extend this ethos not only to lecturers but also to all staff members.

Highlighting the indispensable role of a remarkable team as the bedrock of effective leadership, Datuk Wahid advocates for the acknowledgment and appreciation of team efforts as foundational steps toward attaining success.

He emphasizes the paramount importance of establishing credibility through actions that consistently adhere to principles of integrity and trustworthiness. Moreover, he extols the virtues of leadership that involve facilitating growth, empowering others, and providing conducive platforms for individual flourishing—essential tenets of effective leadership practice. Leaders are encouraged to leverage their wisdom to the fullest extent and contribute the efforts toward the university's goals.

Dr. Wan Raihana binti Wan Aasim, presently serving as the Vice President of the Technology Venture Fund at the Malaysian Technology Development Corporation (MTDC). With nearly a decade of experience at MTDC, she has collaborated with diverse stakeholders, government bodies, universities, and entrepreneurs in her capacity. Dr. Wan Raihana specializes in facilitating and providing financial support for the advancement of local technology-based companies and the commercialization of emerging technologies.

Theme 7: Roles and Contribution of Malaysian Technology Development Corporation (MTDC)

The second panelist explored the pivotal role and contributions of the Malaysian Technology Development Corporation (MTDC) in commercializing university research and development (R&D) and venture capital initiatives. The moderator underscored MTDC's significant impact on fostering innovation in R&D for the country and posed a question regarding how universities can leverage MTDC's facilities and the support previously provided to them.

MTDC is wholly owned entity of Khazanah Nasional reporting to MOSTI. Established in 1992 as a venture capital organization, MTDC primarily focused on funding local technologies for commercialization.

Over time, its role expanded from solely venture capital to supporting public-funded R&D in universities and research institutes, aiding in the commercialization of locally funded R&D.

While the Ministry shifted the mandate for R&D commercialization to another organization, MTDC continued its efforts in funding technology-based local R&D, not limited to universities. They emphasized their experience in assisting companies and researchers to bring their technologies to market. MTDC initially starting with venture capital but later evolving to realize that successful commercialization required more than just financial support.

MTDC expanded its role to offer advisory services, guiding entrepreneurs and researchers in financial planning, fundraising, and marketing strategies. The establishment of incubators within several universities and research institutes, including UTM, UiTM, UPM, UKM, and FRIM, aimed to foster collaboration among academia, researchers, and industry.

Additionally, MTDC provides training and support to academicians to enhance their skills in commercializing their products. Drawing on ten years of experience funding university R&D, MTDC acknowledged that successful commercialization demands

significant effort, including product development, navigating regulatory hurdles, and ensuring business sustainability. Dr. Wan Raihana emphasized that commercialization is not guaranteed success; it involves a meticulous process where only a small percentage of projects successfully reach the market. The challenges faced by universities in commercialization were highlighted, noting the pressure to generate revenue, as success in this aspect influences further research funding. MTDC stressed the complexity of commercialization, emphasizing the need for substantial investment and robust support for its success.

Theme 8: MTDC - Success or failures?

Dr. Wan Raihana delved into the perception of MTDC initiatives in universities like UPM, UTM, and UiTM, acknowledging that some view them as failures. She provided an example from the Symbiosis program, illustrating the protracted process of technology commercialization. In this instance, a medical device technology underwent 10 years of clinical trials before entering the market, emphasizing that this extended duration does not signify failure.

It is also highlighted the role of university to identify young students displaying entrepreneurial inclinations and guides them through a comprehensive program encompassing entrepreneurship, finance, and marketing.

For example, MTDC collaborated with UTM through UTM-MTDC symbiosis program which sought to pair selected students with university technology, offering them training akin to a CEO's responsibilities. The overarching objective is to extend financial support to these innovative ideas, enabling them to enter the market and attain successful commercialization.

Furthermore, assessing the success of this initiative becomes a matter of perspective. On one hand, if the measure is strictly tied to the number of technologies commercialized or the revenue generated from these programs, it might be considered a partial success or even a failure. However, viewing it through the lens of the complex and lengthy process of commercialization alters this perception. While some ventures may not have thrived commercially, they still validate market demand and contribute to the development of entrepreneurs.

A case within the program exemplifies this point, where a company from a local university spent about a decade developing a medical device technology without immediate sales or revenue. However, this prolonged journey does not equate to failure. The key lies in shifting the perception around such initiatives.

It is essential for universities, governments, researchers, and entrepreneurs to recognize and appreciate the arduous and challenging nature of the commercialization process. Success metrics should evolve to encompass the intricate journey these ventures undertake, considering not just immediate market gains but the broader impact on innovation and entrepreneurship.

Theme 9: Translating Research Into Marketable Product

Dr. Wan Raihana highlighted the critical steps for researchers venturing into market-driven research, offering valuable guidance for those in the early stages of developing research with the intent of translating it into marketable products. She underscored the need to prioritize the identification of customers and their needs, emphasizing the pivotal role of aligning research, product development, and R&D with market acceptance. The adoption of an entrepreneurial mindset, involving a careful consideration of market demand, potential, and the formulation of strategic marketing approaches, was deemed crucial for success.

From the inception of research planning, it is crucial for researchers to incorporate market considerations. Emphasizing the significance of formulating the research proposal while contemplating potential customers and buyers, she warned against postponing this consideration until after the research is completed. Such delay could give rise to substantial issues, potentially resulting in a product that does not align with market demands during the commercialization phase.

A fundamental formula for successful commercialization from revolves around having a product that customers are willing to pay for. This understanding of success encompasses the identification of customers, understanding their needs (customer pain), and structuring research and product development in alignment with these identified needs.

Furthermore, the pivotal role of universities in supporting the transition toward commercialization, highlighting their significance in fostering and assisting developmental initiatives. She stressed the necessity of active engagement with the external world, recommending researchers to participate in trade shows and exhibitions and seek advice and connections from organizations like MTDC. MTDC, known for providing extensive support and guidance to researchers, plays a crucial role in facilitating networking and professional connections in the realm of market-driven research.

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Theme 10: Funding Opportunities Through MTDC And Other Agencies

MTDC offers two primary funding programs:

1. The National Technology and Innovation Sandbox (NTIS) Fund provides support for technologies or R&D projects initiated by universities. This funding ranges from RM250,000 to RM4 million and assists in activities such as market validation, technology testing, or commercialization efforts. The funds can be allocated for various purposes, including equipment purchases, staffing, and other essential expenses. It's important to note that this funding is primarily directed toward companies, such as start-ups or spin-offs, rather than universities. However, universities play a crucial role as intermediaries in facilitating the process between student companies and MTDC. The overarching goal of MTDC is to validate market demand, address specific customer needs, and facilitate both market and technology validation.

2. Another initiative in collaboration with MOSTI is the MYSTI program, designed to encourage government procurement. This program emphasizes the importance of government purchase preferences to alleviate market saturation. Obtaining approval for the program's logo can significantly benefit commercialization efforts and attract partners for technology licensing. Products featuring the program's logo receive an additional 10% advantage in government procurement evaluations. The logo marking process is available through MYSTI in 2023 via mysti.gov.my.

Furthermore, MTDC teams will facilitate the matching of technology with relevant ministries, ensuring alignment with government requirements. Lastly, knowing where to seek funding support is crucial, and MTDC offers guidance and direction for applicants, encouraging them to approach them for assistance and guidance in finding the right avenues.

Ts. Dr. Mariani binti Abdul Hamid, the award winner the Product Commercialization and Innovation Award at the prestigiuos Anugerah Akademik Negara 2023. Serving as the lead researcher at the Bioproduct Institute in UTM, she is also the founder of DerMAGs Skincare Products. Dr. Mariani's achievements underscore her expertise in product commercialization and innovation, making her a notable figure in her field.

Theme 11: Journey of Commercialization through the lens of the Recipient of the Product Innovation and Commercialization Award, Anugerah Akademik Negara 2023

The moderator underscored instances where universities hesitated to endorse spin-off and startup companies, expressing skepticism about their likelihood of success. The motivation behind entrusting these endeavors to researchers was to acknowledge and reward their accomplishments resulting from their research endeavors. The moderator posed three questions:
1. What factors have been instrumental in propelling your success?
2. How have you, or the university, created opportunities for your current position?
3. How much has DerMAGs, the business you are running, contributed to the university in terms of funds?

Responding to the questions, Ts. Dr. Wan Mariani recounted her journey of commercialization that originated from innovation and led to the successful commercialization of a research product developed during her Ph.D. studies in South Korea from 2009 to 2012. Upon returning to Malaysia in 2012, she initiated human efficacy studies utilizing local Malaysian skin after completing preclinical studies, including in vitro and human efficacy studies.

In 2012, Ts. Dr. Wan Mariani participated in the Leaders in Innovation program under the guidance of Professor Ramlan Abdul Aziz from the Innovation and Commercialization Center at UTM. This involvement exposed her to an elevator pitch during a boot camp, emphasizing the challenge of condensing information into a concise one-minute pitch to engage potential stakeholders. The university played a crucial role in facilitating theher journey, providing an environment conducive to academics' involvement in commercialization and pitching programs.

In 2014, with support from Professor Ramlan Abdul Aziz and others, Dr. Wan Mariani established a spinoff company, receiving seed funding of RM20,000 from ICC UTM to develop the first prototype product, the DerMAGs intensive brightening serum. Professor Ramlan Abdul Aziz continued to be a significant supporter and mentor throughout the process, with the university's support being a critical factor, leading up to the product's patent stage. Ts. Dr. Wan Mariani highlighted the university's role as a pivotal factor in her entrepreneurial and product commercialization journey.

Biopro Cosmeceutical Sdn Bhd, founded in 2016, encountered a period of learning and adaptation during its initial years. Nevertheless, the company strategically overcame challenges by entering into a joint venture with a focus on marketing, all the while maintaining its primary emphasis on research and development (R&D) and production. This strategic move resulted in securing RM500,000.00, which was entirely utilized to establish UTM's inaugural facility incubator. By 2016, the company attained its first million in sales revenue and sustained a trajectory of ongoing success.

In terms of contributions to the university, the company paid licensing fees, royalties, and an endowment, totaling around RM700,000.00, and provided in-kind raw materials valued at approximately RM400,000.00, benefiting postgraduate and final year students for research purposes.

Theme 12: Passion for Academia and Entrepreneurship

Dr. Mariani's decision regarding her choice to remain affiliated with the university despite embarking on an entrepreneurial journey revealed that her choice was motivated by a profound sense of loyalty and a heartfelt desire to give back to UTM. She pointed to her academic journey and the deep emotional bonds she formed with the institution as the driving forces behind this unwavering commitment. Dr. Mariani expressed her intention to share knowledge and make meaningful contributions to the university while effectively managing her time between UTM and her entrepreneurial endeavors.

Theme 13: Expanding Research Impact: Beyond Academia and Into Commercialization

Academicians should pursue activities that genuinely interest them. For example, academicians who have achieved significant research breakthroughs leading to publications, awards, and recognition, whether at a local or international level, should aim to expand the impact of their research beyond academia, making it valuable knowledge for a wider audience. Often, academics confine themselves to a certain point, especially in terms of commercialization. It is essential to break free from these limitations.

For instance, individuals with impactful research findings should consider extending the scope of their research beyond academic circles. By embracing commercialization guidelines, fulfilling key performance indicators (KPIs), and seeking indirect improvements through engagement with agencies and marketing strategies, they can maximize the potential impact of their work. Collaborating with agencies and leveraging marketing efforts offers vast potential for broader dissemination and utilization of research findings

CHAPTER **4**

CONCLUSION

FOSTERING BUSINESS ACUMEN IN HIGHER EDUCATION INSTITUTIONS: LEVERAGING RESEARCH FOR FINANCIAL SUSTAINABILITY

In today's rapidly evolving educational landscape, higher learning institutions (HEIs) face multifaceted challenges, including financial sustainability. To thrive amidst these challenges, HEIs must cultivate a robust business acumen, capitalize on research endeavors to generate income, and strategically allocate resources. The above discussion explores the nexus between business acumen, research-driven income generation, and the pivotal role of leadership in ensuring HEIs' financial sustainability.

Business Acumen in Higher Learning Institutions:

Business acumen encompasses the ability to understand and navigate the complex interplay of economic, market, and organizational factors to achieve sustainable success. In HEIs, cultivating business acumen involves fostering an entrepreneurial mindset among faculty, administrators, and students. It requires a holistic understanding of the institution's financial landscape, including revenue streams, cost structures, and market dynamics.

One of the fundamental aspects of business acumen in HEIs is effective resource management. This entails optimizing existing resources, diversifying revenue streams, and identifying new opportunities for growth. Moreover, fostering a culture of innovation and adaptability is crucial for HEIs to remain agile in responding to changing market demands and technological advancements.

Transforming Research into Income:

Research is a cornerstone of higher education, driving innovation, knowledge creation, and societal impact. HEIs possess vast intellectual capital and research capabilities that can be harnessed to generate income. However, the translation of research into tangible economic benefits requires strategic planning, collaboration, and commercialization efforts.

One avenue for monetizing research outcomes is through technology transfer and intellectual property commercialization. HEIs can patent inventions, license technologies to industry partners, or spin-off startups based on innovative research findings. Additionally, partnerships with corporations, government agencies, and philanthropic organizations can facilitate research funding and commercialization opportunities.

Furthermore, HEIs can capitalize on their expertise by offering consultancy services, professional development programs, and customized training to external stakeholders. By leveraging research-driven insights, HEIs can create value for businesses, governments, and communities, thereby generating additional revenue streams.

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Primary Sources of Income for HEIs:

HEIs derive income from various sources, including tuition and fees, government funding, research grants, philanthropic donations, and commercial activities. While tuition revenue remains a significant source of income for many HEIs, there is growing pressure to diversify revenue streams and reduce dependence on traditional funding sources.

Research grants play a pivotal role in financing academic research and innovation projects. These grants are typically awarded by government agencies, private foundations, and industry sponsors to support specific research initiatives. Additionally, philanthropic donations from alumni, corporations, and individuals contribute to HEIs' financial sustainability by funding scholarships, research centers, and infrastructure development.

Moreover, HEIs engage in commercial activities such as technology transfer, executive education, and event hosting to generate income. Revenue generated from commercial ventures can supplement traditional funding sources and provide financial stability amidst economic uncertainties.

The Role of Leadership in Financial Sustainability:

Leadership plays a critical role in shaping HEIs' financial sustainability strategies and driving organizational change. Effective leaders must possess vision, strategic foresight, and the ability to inspire stakeholders towards common goals. They are tasked with aligning institutional priorities, fostering a culture of innovation, and making data-driven decisions to optimize resource allocation.

At the heart of leadership in financial sustainability is the ability to balance short-term financial objectives with long-term strategic priorities. Leaders must navigate competing interests, manage risk, and foster collaboration across departments to achieve sustainable growth. Moreover, they must champion transparency, accountability, and ethical conduct to build trust and credibility with internal and external stakeholders.

Furthermore, leadership in HEIs entails fostering a culture of entrepreneurship and continuous improvement. Leaders must empower faculty, staff, and students to innovate, take calculated risks, and embrace change. By fostering a culture of creativity and experimentation, HEIs can adapt to evolving market dynamics and seize emerging opportunities for growth.

Collective Responsibility: Ensuring Financial Sustainability in Higher Education Institutions

Amidst global economic challenges impacting institutions globally, universities face financial constraints, underscoring the importance of distributing this burden across all staff members rather than solely relying on management. Each individual bears a responsibility to contribute to the sustainability of the university.

In conversations regarding business acumen and adaptive leadership, the onus is not solely on senior management; rather, it necessitates collective innovation, determination, and seizing of opportunities from every member, akin to the assistance provided by agencies like MTDC. Everyone must foster creativity, determination, and work together to support the institution.

Additionally, as leaders, it is imperative to start organizing structured plans for aspirations and future endeavors. This entails structuring everything meticulously, from setting goals to outlining plans. Finally, it involves self-appreciation, with individuals valuing the organization they work for and cultivating passion in their pursuits.

In conclusion, fostering business acumen, leveraging research for income generation, and strategic leadership are integral components of ensuring financial sustainability in higher learning institutions. By cultivating an entrepreneurial mindset, capitalizing on research-driven insights, and aligning institutional priorities, HEIs can navigate financial challenges and thrive in a competitive environment. Effective leadership is paramount in driving organizational change, fostering innovation, and building a resilient financial foundation for the future.

EDITORS

Dato' Prof. Dr. Nik Maheran Nik Muhammad is currently the Deputy Vice Chancellor (DVC) of Academic and International of Universiti Malaysia Kelantan (UMK). Prior to that, she has held various leadership positions ever since she joined UMK namely as the Director of Corporate Affairs, Dean of Student Affairs and Alumni, Director of Global Entrepreneurship Research & Innovation Centre (GERIC), Centre of Excellence in Entrepreneurship, and Senior Director of UMK Entrepreneurship Institute. Formerly, she served Universiti Teknologi MARA (UiTM) for 10 years and the Inland Revenue Board (LHDN) for 11 years. Her last post at LHDN was as the Assistant Director of LHDN Kelantan Branch, before she entered the academic world in 2002. Apart from being the Deputy VC, she serves as a full-time professor in Finance and Entrepreneurship at the Faculty of Business and Entrepreneurship, UMK. Thus far, she has written 40 books and more than 100 other publications such as journal articles, case studies, conference proceedings, and creative writing in the areas of behavioural finance, entrepreneurship, leadership, and decision-making. She has also won many awards nationally and internationally and one of her highest achievements was the Asia Pacific Entrepreneurship Leadership Award by ACEEU (Entrepreneurship Accreditation Council and Engagement University) Europe 2020. Professionally, she is a member of the Chartered Institute of Taxation Malaysia (CITM), Malaysian Financial Planning Association (FPAM), Institute of Bankers Malaysia (IBBM), and Global Differentiation Fellow of Strategic Management Inc. of the United States of America (USA).

Nurhusna Zulkifli is a dedicated individual with a passion for fostering entrepreneurial leadership in the higher education sector. As a Research Officer cum Coordinator for this project, she played a pivotal role in the success of this capacity-building initiative. She successfully liaised with speakers and panelists, demonstrating exceptional organizational skills by compiling their presentations, lecture notes to ensure that the program was not only engaging but also a valuable resource for the participants. Nurhusna also served as Project Coordinator for UMK-ACEEU Accreditation Project. In this role, she played a crucial part in UMK's recognition as the first public university in Malaysia accredited as an "Entrepreneurial University" by the Accreditation Council for Entrepreneurial and Engaged Universities (ACEEU) based in Germany. Nurhusna's coordination of the accreditation process, effective communication with internal and external stakeholders, and diligent collection of supporting documents played a significant role in UMK's prestigious achievement. Beyond these responsibilities, Nurhusna's dedication to fostering entrepreneurial efforts was evident as she involved in UMKNexus Project to develop multidisciplinary student enterprises and expanding their exposure to the US market. She also made significant contributions to the advancement of entrepreneurship education in Malaysia by actively participating in the development of the MoHE Guide to Entrepreneurship Integrated Education (EIE), Malay translation of the HEI Entrepreneurship Action Plan 2021-2025, and report preparation for UMK's participation in the 2020 MoHE Entrepreneurship Awards (MEA). Nurhusna's journey is a testament to her unwavering commitment to driving institutional achievements and promoting entrepreneurial excellence.
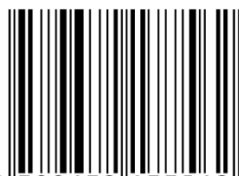
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