

21ST MALAYSIAN EDUCATION SUMMIT 2017

“Education Reset: Changing with the Times”

28-29th March 2017 ❖ Sunway Resort Hotel & Spa

SUMMIT REPORT



Asian Strategy & Leadership Institute

Dedicated To Creating A Better Society

Executive Summary

The 21st Malaysian Education Summit with the theme “Education Reset: Changing with the Times” was held at Sunway Resort Hotel & Spa, Selangor on the 28th and 29th March, 2017. Approximately, around 200 participants representing academia, government agencies, private sectors and institutions of higher learning attended the summit.

Tan Sri Dr. Jeffrey Cheah, Chairman of the Asian Strategy & Leadership Institute (ASLI) and Chairman and Founder of Sunway Group in his welcome speech highlighted several of his concerns which he hoped could be addressed during the summit. He hoped that the time taken for the approval of courses can be sped up as it currently takes a year to 18 months. By the time changes are approved, the curriculum can be out of date. Hence, a faster and more responsive system is needed in an era where technology and new discoveries are advancing knowledge at a rapid pace.

YB Dato’ Seri Idris Bin Jusoh, Minister of Higher Education in his keynote address clarified that the allocations for research funds in 2017 is in fact not less than the previous year as MYR370 million was allocated in 2016 and is now MYR400 million. There are already existing collaborations with private colleges for research. Hence, research funds are not restricted to public universities, but are also open to private universities. Private universities are already allowed to charge their own fees with the condition that private universities need to inform the government what are the level of fees being charged. Proposals for a voucher system is a new idea which the Minister will look into. The use of forecast results has been allowed to admit students into university, but cannot yet be registered until full results are out. YB Dato’ Seri Idris Jusoh announced that the government is looking into a new form standardisation using the Common European Framework (CEF) which will allow English in Malaysia to be of European standard.

The summit’s first session featured the Vice-Chancellors Roundtable which focused on Visioning the Future of Universities. It was moderated by Tan Sri Ramon Navaratnam, Chairman of ASLI Centre for Public Policy Studies (CPP). Panellists were comprised of Vice Chancellor of SEGi University, Prof Dr. Patrick Kee, Vice-Chancellor and President of Taylor’s University, Prof Michael Driscoll, President of Multi-Media University, Prof Datuk Dr Ahmad Rafi Mohamed Eshaq, Vice-Chancellor of National University of Malaysia, Prof Dato’ Seri Dr Noor Azlan Ghazali, Provost and CEO of University of Reading, Malaysia, Prof Tony Downes, Deputy VC of Wawasan Open University, Prof Dr Maddhulika Kaushik and Vice Chancellor of University of Malaya, Tan Sri Prof Dr Mohd Amin Jalaludin.

They emphasised on the importance of deregulation. Let the universities get on with what they are good at. To get them doing new things we need them to be set free from over-regulation. Cultural change is hard in universities and likened it to moving the bodies in a graveyard – “you don’t get help from the inhabitants”. What we may see in the future is mergers of universities because of the hard times we are currently going through. Lifelong learning is the key and also equipping students to consistently pursue life-long learning.

The second session was moderated by Tim Bulow, CEO of Inti International University and Colleges, which discussed the ways to shape Malaysia as A Regional Education Hub: Challenges, Pitfalls and Opportunities. Role players included Craig Arden Sherri, President of Taylor’s College, Susan Milner, Director Education South East Asia of British Council Malaysia, Guy Perring, Regional Director of South East Asia, International Graduate Insight Group (i-Graduate), Prof. Khong Kim Hoong, Deputy Vice-Chancellor (Academic) of HELP University, Tengku Nurul Azian Shariman,

Executive Vice President of PEMANDU Associates, Prof Stephen Doughty, President & CEO of Penang Medical College and Associate Prof Elajsolan Mohan, President of the National Association of Private Educational Institutions (NAPEI). The session revealed that Malaysia is ideally positioned to be an educational hub because it plays host to a range of conducive factors. At this point of time, it becomes more important that Malaysia take advantages of global circumstances to be this education hub due to the rising levels of hostility on the basis of race and religion in other countries. Our multicultural setting is thus an important pulling factor for international students and which can contribute to Malaysia's role as educational hub. Thus, the challenge now for Malaysia is balancing credibility with cost. Work also has to be done in terms of community outreach. For now, institutions are very good at integrating students into Malaysian student life. But with new students coming from different countries bringing in new norms and cultures, much more has to be done. It was also noted that press coverage of certain nationalities in Malaysia tend to be equated with negative stereotypes such as drugs and crime. These occurrences need to be balanced by outreach activities organised by higher education institutions themselves.

The third session featured "In Conversation with Rahayu Ramli on Google for Education", moderated by Freda Liu, BFM Producer. She explained that what we are seeing more and more is Education 2.0. This includes problem based learning (PBL), collaborative and interactive learning, web tools and wikis. What we aim to do is get to education 3.0, she said. This is full personalised learning to be able to use all the tools around you to get the information that you need. She also argued that coding helps a child to learn problem solving. Made in Code is a program that is specifically designed for female students to help them realise that STEM is a viable career for them in the future. Google aims to build a community of learners. Teachers are the cornerstones of this, in that they are the pivot point of what the students are learning, she said. Countries are on different readiness levels, and need an understanding on how to shift the curriculum and shift the ecosystem in this direction. There is a race to get everyone online already. Kids are already using smart phones and tablets, so the trajectory is about creating better access turning this into better learning tools, she noted.

The fourth session was moderated by Daniel Chian, Chairman/ Council of Governors of Fairview International School. It discussed on a shift towards international syllabus. Panellists were Dr. Tan Khun, Principal of Sri Kuala Lumpur International Primary School, Bill Ironside, Principal of Sunway International School, Datuk Dr Chiam Heng Keng, Founding President of Early Childhood Care and Education (ECCE) Council, Roger Schultz, Head of Alice Smith School and Dr Paul Rogers, Headmaster of Kolej Yayasan UEM. In this session, panellists concurred there has been an increase in preference towards homeschool's and international schools, but the same increase has been observed with the Chinese-medium schools, even from the non-Chinese. In fact, during a PEMANDU lab in 2015, it was shared that the Tamil-medium schools have also increased in enrolment. This implies that many parents who cannot afford the fees of private schools are opting for medium schools or homeschool's, particularly parents who see the former to be too demanding and punitive in their treatment. A limitation of homeschool's and international schools is the issue of socialisation.

Home school student do not have the range of peers who differ in socioeconomic status, ethnicity, culture, and religious belief. They also may have an unrealistic view of society. Such students also may face a problem in subjects like history and geography, as they may not know much about their own country, while knowing better about the rest of the world, unless this has deliberately been included into the curriculum. There is also the emphasis on language as the main reason why parents send their children to international schools is to ensure that their children are proficient in English, while learning Bahasa Malaysia is not a priority. It is questionable if such a phenomena is good for Malaysia as there would be an increasing divide as children who can go to international school are

from parents who can afford it while those financial less able will send their children to national schools. This could lead to a widening racial and sociocultural divide.

Law King Hui, Group Managing Director of Sasbadi Holdings, moderated the fifth session on Strengthening Gender Diversity in Science, Technology, Engineering and Mathematics (STEM). Panellists were comprised of Associate Prof Dr Shanthi Tambiah, Deputy Dean Faculty of Arts and Social Sciences of University of Malaya, Prof Dr Hj Khudzir Ismail, Dean of Faculty of Applied Science of Universiti Teknologi Mara (UiTM), Prof Dato' Dr Aishah Bidin, SUHAKAM Commissioner and Professor of Law of Academy of Sciences Malaysia, Hjh Mahuran Saro, Head of Research at Talent Corp and Dr. Lyana Khairuddin, Research Fellow of Penang Institute Kuala Lumpur. This session identified factors that contribute to the low representation of women in STEM. It concerns with psychosocial factors and labour market factors. This implies that many girls are being discouraged from moving into the STEM fields by parents, community, culture, society, and schools. There is also a lack of role models and targeted educational policy towards girls and women. Student, parents, and teacher attitudes need to change. Subtle biases need to be removed if the ratio is to be realised. Labour market factors are very important and society must not push our girls into fields and a situation where they are unemployable. Therefore, the labour market needs to be more gender-sensitive.

The sixth session featured "Education Transformation in a Time of Austerity". It was moderated by Tan Sri Michael Yeoh, CEO of ASLI. Panellists comprised of Prof Dato Dr Khalid Yusoff, Vice Chancellor & President of UCSI University, Nik Ariff Nik Omar, and General Manager of Microsoft Malaysia, Prof Abdul Aziz Baba, Vice Chancellor of International Medical University, and Prof Dato Dr Raman Narayanasamy, Vice Chancellor of Quest International University Perak. The issue of austerity requires a more cohesive discussion involving policy-makers and members of the community. Prioritisation is needed. This session emphasised on the need to look at the economics of universities especially in the context of having more than one world-class university in the country. Can the returns justify these kinds of aspirations?. There needs to be efforts to maintain strategies particularly in challenging economic times. It is important to leverage on new technologies to ensure student learning experience is optimised. We need to ensure that the product is work-ready and can perform based on the expectations of the industry. Several strategies were recommended, namely, self-funding to enhance product offering, development of strategic partnerships to retain and increase funding and internal funding to improve operational efficiency. It was also highlighted that public and private universities should first prioritise efforts to maintain high standards of education and the employability of students. In private enterprises, positive cash flow is highly important but benefit must ultimately be derived by the student from the education provided. Courses should thus be market-driven in order to ensure that the employability of graduates are at a maximum. Universities can also strengthen their relationships with large companies.

In the final session on Education Technology, a key to Unlocking the Fourth Industrial Revolution, moderated by Prof Dr Ali bin Selamat, Chief Information Officer of University Teknologi Malaysia (UTM), Panellists were represented by Hasnul Nadzrin Shah from IBM Malaysia, Albert Chai, Managing Director of CISCO Malaysia, Fitri Abdullah, Country Managing Director of Oracle Corporation Malaysia and Tuan Bahari from the Ministry of Education. Several strategies were recommended by panellists to improve the utilisation of educational technology in Malaysia. Firstly, is to prioritise a more practical and applied curricula. Technology can help facilitate this through collaborations on open platforms. Next, is to embrace new technologies in order to increase educational outcomes and expand educational varieties. Thirdly, is to integrate industry into the entire process of education. We need to look at different levels of success, within the context of different

demographics and the issues of addressing the challenge of people living in rural areas; and to allow teachers to choose the kinds of technology they want to utilise.

YB Datuk Dr. Mary Yap Kain Ching, Deputy Minister of Higher Education, in her closing speech spoke about how technology is changing the way universities teach, research, support students, as well as administer themselves. She explained how digital technologies will transform the way value is created within tertiary education, she said. We have to make our places of education more internationalists in their outlook, she argued. In a globalised world and a 24-hour economy, we can no longer afford to be insular. We have to also look outside ourselves for the best practices available. However, to compliment this, not only is a greater technical know-how essential, but a better representation of our diverse society – especially in regards to female participation.

DAY ONE

WELCOME SPEECH

Tan Sri Dr Jeffrey Cheah

AO, Chairman, Asian Strategy & Leadership Institute (ASLI)

Tan Sri Jeffrey Cheah welcomed delegates to the summit, seeing it as an opportunity to affirm commitments to take on greater responsibility in strengthening the Malaysian education sector. Malaysian education has gained international recognition for providing high quality services at an affordable price. However, an era of rapid change leaves no room for complacency. As such, the sessions lined up in the summit explore the challenges faced by the education sector in Malaysia at great depth in line with the summit's theme, 'Education Reset: Changing with the Times'.

Tan Sri Cheah highlighted several of his concerns which he hoped could be addressed during the summit. Firstly, he hoped that the time taken for the approval of courses can be sped up as it currently takes a year to 18 months. By the time changes are approved, the curriculum can be out of date. Hence, a faster and more responsive system is needed in an era where technology and new discoveries are advancing knowledge at a rapid pace.

The issue of research funds was also discussed. It is notable that some private institutions have gained national and international recognition for their research although they have little to no research funding compared to public universities. Since there is a national need for centres of excellence under public control, perhaps a greater proportion of research support funds can be opened up for bidding to the private sector. However, the government has recently cut research grants for public universities. Therefore, a review of this move is necessary to enable major research projects in public universities to at the very least be partially restored, including joint research collaborations between private and public universities.

The control of fees is another major concern amongst private institutions, which is an area best left to the market. The US model is one that Malaysia may want to emulate, where Ivy League institutions are free to charge their own fees, and also provide financial aid to deserving students. The government may want to consider deregulating fees or at the least regulating private universities to charge their own fees provided they have a robust scholarship or bursary scheme in place.

MOHE should encourage competition as it brings out the best in people. Tan Sri Cheah has always encouraged competition, even constantly reminding the Vice Chancellor of Sunway University and the Pro Chancellor of Monash Malaysia to compete for students, parents, funds, and even in the area of sports. In this context, the government can consider introducing a voucher system to level the playing field in terms of selection of university by students. Vouchers can be distributed to students qualified for university entry and allow them to pick an institution of their choice. If the voucher are insufficient to cover fees, students can top up the balance. Universities which are not competitive and are unable to attract students will likely and eventually close down

Tan Sri Cheah also suggested to allow universities be allowed to take in students based on their forecast results. Currently, waiting for actual results will put young people at risk of drifting for a few months. It would be better instead to allow them to sign up for universities using forecast results to save valuable time. Should they not meet minimum requirements, they can be withdrawn once their

results are announced. This revised practice will allow Malaysia to recruit more students locally and from abroad, boosting efforts to build Malaysia into a larger education hub.

In some academic disciplines the Malaysian Qualification Agency requires students to pass the Malaysian University English Test (MUET) before they can enter a local university programme. However, students often have other English qualifications which are of equivalent or a higher level. MUET assessments are only scheduled three times a year. He urged the Minister to consider accepting a range of English tests rather than limiting it solely to MUET.

Malaysia has come far due to the enlightened policies of the government and public-private partnerships which have become the foundations of the country's growth. However, there is no time for complacency as we face competition in the education sector from universities in other nations. Malaysians need to keep pace with a rapidly changing world. Much of the matters highlighted is addressed by the Malaysian Higher Education Blueprint, which states that Malaysia needs to move on to a higher education system where the ministry is a tight controller and one that the ministry is focused primarily on its role as policy maker and regulator, and where higher education institutions are empowered to steer their own journey of growth.

The government may want to consider establishing a Higher Education Consultative Council to garner detailed feedback on implementing the policy proposals contained in the Blueprint. Tan Sri Cheah was glad that the government is aware of the situation and is implementing measures to reform the system. He ended his welcome address by thanking all sponsor and participants for taking part in the event and look forward to hearing more of the government's measure from the Minister.

KEYNOTE ADDRESS

YB Dato' Seri Idris bin Jusoh

Minister of Higher Education

YB Dato' Seri Idris Jusoh thanked ASLI for inviting him to the Malaysian Education Summit for the fourth time. He then began by addressing the seven matters brought up by Tan Sri Jeffrey Cheah and informed delegates that five of them were already in the making. For instance, the Ministry is going online with the approval of courses, making changes with its procedures and policies, as well as conducting a review of Act 555 in Parliament to make it more convenient for private institutions in the country. The Minister also clarified that the allocations for research funds in 2017 is in fact not less than the previous year as MYR370 million was allocated in 2016 and is now MYR400 million. There are already existing collaborations with private colleges for research. Hence, research funds are not restricted to public universities, but are also open to private universities. Private universities are already allowed to charge their own fees with the condition that private universities need to inform the government what are the level of fees being charged. Proposals for a voucher system is a new idea which the Minister will look into. The use of forecast results has been allowed to admit students into university, but cannot yet be registered until full results are out. YB Dato' Seri Idris Jusoh announced that the government is looking into a new form standardisation using the Common European Framework (CEF) which will allow English in Malaysia to be of European standard. He is also aware of remarks made in the private sector and is willing to work together to deliver students the best education.

The Minister showed a video presentation of the Soaring Upwards campaign taking place all over the world by Malaysian students overseas and thanked all those involved for making this campaign a success. On the question of how to redesign education in Malaysia, YB Dato' Seri Idris Jusoh explained that it started with the Education Blueprint in 2013, followed by the Higher Education Blueprint in 2015. Several challenges have been addressed were raised such as the issue of quality. The Minister urged local universities to continuously innovate and was glad with the performances of several in recent times which standards are comparable to the top universities of the world. The likes of University Malaya, Universiti Sains Malaysia, Taylors University, and University Islam Antarabangsa also ranked well in QS rankings. For instance, University Malaya came in 23rd for electronic and electrical engineering and fared well in the areas of developmental studies, mechanical engineering, chemical engineering, and education. Malaysian universities rank in the top 100 in the world in 52 subjects and are within the top 1 percent in the range of top 300 overall rankings. The Minister also noted the consistent improvements with University Malaya which has improved its rankings the past four years, from 167th in 2013 to 133rd in 2016. It is hoped that University Malaya will be in the top 100 before year 2020, while Universiti Putra Malaysia and a few others will be in the top 100 by year 2025. YB Dato' Seri Idris Jusoh also noted that Malaysian universities are not only improving in the QS survey, but also in the Times Higher Education rankings. Malaysian researchers are also highly acclaimed in many of the world's top university's and are leaders in respective fields.

The Ministry aims to produce holistic graduates, which is why it developed the Integrated CGPA using the eight domains provided by UNESCO, OECD and in consultation with the World Bank. They believe that students should not only be assessed in their knowledge but in other areas such as entrepreneurship, communication skills, ethics, practical skills, and so on. ICGPA was introduced two years ago as a means to evaluate students so that they can become holistic, entrepreneurial, and

balanced. This programme began with only two universities in 2015 currently has 20 universities, 5 polytechnics and colleges communities participating.

A gap year will be introduced, though the concept has been adopted for some time in other countries. However, the difference in Malaysia is that a gap year will be incorporated with national service. In September 2017, some students will be going for a gap year while some will be going for national service. National University of Malaysia and Universiti Teknologi Malaysia are working with the police, army, and JPAM to introduce this gap year programme. With this, the government's hopes to create more holistic students.

Graduate employability has been improving over the years though more can still be done. Community colleges are seeing as much as 97.2% employability, while polytechnics recorded 88.6% employability. To ensure students are employed, the government came up with the 2U2I system, where students do two years in the university and two years in the industry. This initiative began with five universities in 2016 and now has seven universities and sixteen programmes undertaking this approach. This provides students with the opportunity to gain work experience and earn some money at the same time. This will help students in a small way who often find themselves in debt by the time they graduate. Ongoing 2U2I collaborations include data engineering between UTM and MDEC, UPM and ISP (Farm Management), and many more are in the pipeline. The Ministry also introduced a CEO Faculty Programme together with 63 CEOs in Malaysia from Maybank, Khazanah, Shell, Motorola, and AirAsia.

On addressing the matter of English language standards, YB Dato' Seri Idris Jusoh praised the Prime Minister for setting up the Cambridge Malaysian Education & Development Trust (CMEDT) which designed the Cambridge Assessable Test (CAT) to deliver a framework of English qualification which is recognised by the Common European Framework of Reference (CEFR). This programme has already begun in Universiti Pendidikan Sultan Idris (UPSI). Other universities were urged to catch hold of the programme as teachers will be unable to teach English in schools unless they are of C1 and C2 quality. If one can teach English in Malaysia which such a level of qualification, one can teach English in any other European universities.

Yet, such actions are still not enough as the world is changing. This year, there has been a greater emphasis on how one can redesign higher education. One such concept is "Jukebox Education" where one can pick and choose courses from various parts of the world. Other parts of education on how to teach and learn also need to be redesigned, such as self-directed learning where students are made the co-creators of knowledge instead of merely being the recipients of knowledge. Even the elderly can still continue the pursuit of knowledge through lifelong learning. Malaysia has recognised Massive Open Online Courses (MOOC) as a "country", rather than an institution, where one can learn at anytime, anywhere and anyone. Accreditation of Prior Experiential Learning (APEL) is also recognised in Malaysia where credits can be obtained for what one has learned.

YB Dato' Seri Idris Jusoh emphasised that education institutions are not solely about research but is also about how education has been conducted in classrooms. They need to incorporate changes with big data and the Internet of Things, Bitcoin, and Blockchain, whereby new things are constantly emerging due to technology. With such an importance in technology, the Ministry has put a requirement that by 2023 30 percent of lecturers need to be practitioners to ensure they are up to date with the latest in technology.

YB Dato' Seri Idris Jusoh concluded his keynote address by reiterating that education in Malaysia is being redesigned and promised to deliver the best education system as the Minister of Higher Education.

SESSION ONE: Vice-Chancellors: Visioning the Future of Universities

Moderator: Tan Sri Ramon Navaratnam

Chairman of ASLI-CPPS

Tan Sri Navaratnam began by noting that the minister had highlighted some important points. He went on to say that the day's topic was important because we are living in uncertain and dynamic times. He proposed that in 10-20 years time, about 20% of jobs that exist now will be redundant, and that with the digital economy, the whole scenario and landscape will change. Therefore, we need a vision for the future and can't depend purely on politicians to plan.

Panellists:

Prof Dr Patrick Kee

Vice Chancellor of SEGi University

Prof Kee explained that universities could choose one of 3 types of marketing: Differential, Concentrated or Orchestrated. He also noted that nowadays, students need to be able to connect via the Internet and through social media as this offers them a unique and personalized experience that wasn't available to them previously. He went on to explain that to address cheating, the ministry has established regulation through regional centres, but that they also need to engage with students to interact with facilitators.

Prof Michael Driscoll

Vice Chancellor & President of Taylor's University

Prof Driscoll began by arguing that surviving in the market place and keeping costs under control is something all players have to do. He admitted that he didn't know what universities would be like in the future, though in the near term they would probably be the same as they are now. He explained that the education sector is very slow changing and has a long product cycle. It takes 18 months to approve a new course, he noted.

Prof Driscoll said that before there is change, we need to have a long vision. We have to ask ourselves, what do we want our universities to be in the future? How can we be successful and meet the needs of stakeholders, students and the wider society? Rather than guess what higher education will look like, we should look at what the policies are offering, he argued. We also need an environment where universities are more autonomous.

In closing, Prof Driscoll noted that the government, in its approach, should be trying to promote the creative arts that will improve the lives of Malaysia through a rich culture. This is what the world's

great cities have (London, New York LA, Tokyo). This is the true enrichment of life rather than teaching the young to be salary men, he said.

Prof Datuk Dr Ahmad Rafi Mohamed Eshaq

President of Multimedia University

Prof Eshaq began by saying that we must first understand our audience. The way that they think and what they require is different. What they want is fun learning, and the way that you handle the class has to be interactive yet simple, he explained. In closing, he said that we can see this in teacher evaluations. The ones that try to adapt and be more agile have no problems in their class or with attendance, and that the goal is for the graduate to transition from a job seeker to a job creator.

Prof Dato' Seri Dr Noor Azlan Ghazali

Vice Chancellor of National University of Malaysia

Prof Ghazali began by asking what are we doing for the future? To answer this we must imagine what the future looks like, he said. Will it be smarter, richer, more globalised, more connected and complex? He went on to explain that universities are here for a purpose. That is, to provide a real impact on the economy. If we look only toward ourselves we will be very disconnected, he said.

Prof Ghazali noted that the three main functions of universities are: creating human capital & talent, knowledge & innovation, and development & growth. They don't need to be all things at once, he said. Finally, he addressed rankings. He said that you need a lot of things to be in the top rankings, and that scholarly activities are not like they were before - they are much more money-focused now, so be different and don't only try to compete.

Prof Tony Downes

Provost & CEO of University of Reading Malaysia

Prof Downes began by asking that we adopt good practice in marketing. He noted that he now spends more time marketing his university in Malaysia to parents than students, because they are the ones paying the bills. He also said that the assumption is that having a broad range of programmes is the way to go. However, he believed that this is not the case. This can be incredibly expensive and not all universities can do this. We shouldn't try to do everything, he said, but rather, be good at what we do and be different.

Prof Downes argued that to deregulate is the most important thing. Let the universities get on with what they are good at, he said. To get them doing new things we need them to be set free from over-regulation. He also said that cultural change is hard in universities and likened it to moving the bodies in a graveyard – “you don't get help from the inhabitants”, he said. In closing, he noted that what we may see in the future is mergers in universities because of the hard times we are currently going through. Lifelong learning is the key, he said, and also equipping students to learn again and again.

Prof Dr Madhulika Kaushik

Deputy VC (Academic for ODL) of Wawasan Open University

Prof Kaushik began by saying that gone are the days of getting educated and entering work and then that is it - we are now in the days of lifelong learning. Learners are increasingly taking care of their own learning, he said, and universities now have non-traditional competitors. This includes industry taking account for its own learning.

Prof Kaushik argued that we have to look at the evolving needs. We need to look beyond what just the students want, to what society and the world will need in five to ten years time. We also have to look at the gaps that will emerge. Prof Kaushik said that she agreed that you cannot be everything to everyone, and that universities will need to find what their core functions are and then separate themselves. In closing, she raised the issues of access and equity. She asked what the people without means should do? Do we believe that in this part of the world university is only for people with means? Are there now barriers to entry here? Should we let cost be a barrier, he asked? She answered that we need to create an educational product that is within reach of most people.

Tan Sri Prof Dr Mohd Amin bin Jalaludin

Vice Chancellor of University of Malaya

Tan Sri Jalaludin began by quoting a TalenCorp survey that found the majority of companies think that graduates are not ready for the workforce. 90% reported that more training should be provided for graduates, while 80% felt that the current curricula does not reflect the current realities of the workforce, and 81% rated communication skills as the major deficit in graduates. He then explained that a new business model is very important in remedying this. It must come not just from the university, but also the industry, he said. In closing, argued that public universities cannot always rely on the government for funding. They will also need to look at other avenues to become financially sustainable.

SESSION TWO: Malaysia as a Regional Education Hub: Challenges, Pitfalls and Opportunities

Moderator: Tim Bulow

CEO of Inti International University & Colleges

Mr. Bulow began with a brief introduction on Malaysia being a growing location for international students and that we are thus well on our way to achieving what has been meted out in the Education Blueprint. However, challenges also exist. He also spoke about how regulations are made with good intentions, but their formation can benefit from considerations at the operations level.

Panellists:

Guy Perring

Director of Client Services Asia of i-graduate International Insight

Malaysia is ideally positioned to be an educational hub because it plays host to a range of conducive factors. At this point of time, it becomes more important that Malaysia take advantages of challenging global circumstances in other countries to be this education hub. Our multicultural setting is thus an important pulling factor for international students and which can contribute to Malaysia's role as educational hub.

Thus, the challenge now for Malaysia is balancing credibility with cost. In the United Kingdom, the high cost is often offset by and equated with higher quality. Almost 94% of international students choose to study in Malaysia simply because of the cost of studying and living. However, due to these expectations of affordability of which rising costs tend to have an effect on, it is all the more important to fulfil these expectations.

Another main factor is safety. Malaysia has a high reputation for safety and security across its universities and streets but the key is maintaining this vigilance otherwise it could impact negatively on Malaysia's brand as a potential education hub. University facilities and general campus environments still lag behind global standards by about 10%. Whilst new campuses as well as public universities in Malaysia are increasing investments in this, more work still has to be done. As such, we also face the challenge of filling those campuses.

Work also has to be done in terms of community outreach. For now, institutions are very good at integrating students into Malaysian student life. But with new students coming from different countries bringing in new norms and cultures, much more has to be done. Perring also noted that press coverage of certain nationalities in Malaysia tend to be equated with negative stereotypes such as drugs and crime. These occurrences need to be balanced by outreach activities organised by higher education institutions themselves.

Importantly, the lack of working opportunities are another major issue. International students do not have places to work while studying because they are not allowed to. Dealing with this will aid flow of students to Malaysia. He gave the example of Canada which saw more students coming in when they changed their policies on working as students.

Further, the process of receiving international student visas needs to be looked into. The implementation of the visa application process overseen by the Education Malaysia Global Services (EMGS) is not ideal. Surveys from i-Graduate International Insight show that there has been an immense drop in satisfaction with the visa application process.

In addition, students who come to Malaysia are constantly broadcasting their experience to their friends via social apps. It is thus important to ensure that every moment is a positive experience to build Malaysia's brand as an education hub. Otherwise, the National Education Blueprint will remain a pipe dream.

Susan Milner

Director Education South East Asia of British Council Malaysia

Milner gave a speech on assessing the motivation for educational hubs and whether those goals are being achieved or not currently. Firstly, she posed the question, "What motivates Malaysia to be an education hub?" She listed some possible motivations for Malaysia such as interests in developing skilled workforces, slowing the brain drain, inviting foreign direct investments as well as geopolitical power. Malaysia has always been an international-minded community that has sent many students overseas for studies. Now, internationalisation is at Malaysia's shores and as such, the country now needs to make a big shift to becoming a knowledge economy. Malaysia also needs to shift to developing bigger and better research capacities within institutions.

Across ASEAN countries, there has been a growing interest to cooperate for the purposes of education from. Milner stated that Malaysia stands to benefit from this. However, the government needs to understand that within the rapid economic growth of ASEAN, education institutions need to stay ahead to compete with the likes of Singapore and Thailand.

The end-to-end student experience needs to be worked on because the whole student experience is important. Looking at the operations of the market is also important and requires concerted efforts in order to brand Malaysia as an education hub.

It is also important to maintain interest and excitement in Malaysia and to further capitalise on that. The ways in which we can capitalise on this is through our culture. For ASEAN countries, Milner stated that there is a 'cultural comfort' for citizens of Southeast Asian countries in coming to Malaysia. As such, Malaysia needs to raise its brand beyond being just an attractive destination. Relevant quality education and extensive research capacities, among other things, need to be offered.

Malaysia can further benefit from this by being able to access both global and local education. It is thus important to market Malaysia's 'glocal' offer to people who may not be able to afford going further overseas. Internationalisation is not merely an end goal but should be a driver for systemic change and quality.

ASEAN is the way forward for Malaysia to increase flow of international students. Lengthy and bureaucratic processes serve as a deterrent to students who need assurance that they are offered a place to study here. Significant reforms in regulation needs to be done. The challenge ultimately is for policy-makers to optimise mobility flows and ensure international education is open to every student at each institution. Finally, she ended her speech by posing this question to the audience, "How do you assure quality across institutions and be recognised in the local labour market?"

Prof Stephen Doughty

President & CEO of Penang Medical College

First, Professor Doughty addressed the question of what an educational hub looks like. An educational hub is designed for an inward and outward flow of students with opportunities for local students to receive a quality international education. Malaysia has had a long history of building up this development.

One of the key factors of an educational hub is diversity which is something Malaysia has already achieved, particularly at the school level. In terms of research, it is improving in the country but ultimately, we need to attract more researchers. Student-staff mobility is also strong and growing in Malaysia. However, concerns regarding compulsory subjects such as Mata Pelajaran Umum (MPU) or General Studies may serve to undermine Malaysia's growth to becoming an education hub. Implementation of EMGS is working relatively well, he noted. Doughty stated that Malaysia may see more students coming in because other countries are now less welcoming to foreigners.

There are however more opportunities to develop short-term mobility and quality assurance jurisdictions. Staff mobility also needs to improve and this can be achieved through the exchange of research.

Further, Doughty highlighted how Act 555 may be able to introduce a level playing field between public and private universities. This could be the chance to redefine the landscape but it can also put in legal barriers for foreign branch campuses. The regulatory framework thus needs to be looked at.

Finally, we have to create an education ecosystem that is responsive and to make sure these regulations are efficient and effective.

Assoc Prof Elajsolan Mohan

President of the National Association of Private Educational Institutions (NAPEI)

Associate Professor Elajsolas Mohan talked about how the government can look into increasing the number of foreign students entering our country and the issues faced at the ground level by the institutions. It is important to consider how much thought the government is looking into education as an economic sector on its own.

Here, he stated that problems begin to arise when we look deeper at the administrative level. Associate Professor Elajsolan listed out various obstacles to the growth of Malaysia as an education hub. For example, the student visas of a few Kenyans were revoked because they were found to be missing from the institutions. Due to such issues, lots of students are not able to enrol into local universities here.

Further, language issues also pose another problem. Previously, international students who did not fulfil the English requirements could still enter Malaysia and continue their studies when they have met those requirements. But now, they are now longer allowed to do so. Associate Professor Mohan stated that this represents a major stumbling block which impacts negatively on the growth of Malaysia as an education hub.

International students who come to Malaysia are mostly from Third World countries due to the low cost. Thus, a lot of them look for employment opportunities but are unable to support themselves because of government regulations. Therefore, there needs to be work opportunities provided to people with education backgrounds. He also brought up some general complaints such as harassment of international students by authorities. There have also been cases where students have been arrested. Social issues thus become a barrier to growing into a vibrant education hub.

Associate Professor Elasmohan further stated that not enough marketing is being conducted to attract international students. The institutions themselves are the ones who are making efforts to attract students. What is the role of the government in supporting this, he asked. More funds are given to industries such as tourism but Associate Professor Elasmohan mentioned here, "Aren't international students considered as tourists as well?"

Another barrier to this is the question of visas for parents. Malaysia is typically chosen for a variety of reasons and therefore, parents enrol their children from early childhood. Naturally, this means the parents require visas as well to visit or care for their children. However, where previously the visas were valid for a year and were easily renewable, now these visas are given for shorter times and approvals are taking too long to be handled.

Tengku Nurul Azian Shariman

Executive Vice President of PEMANDU Associates

In order for Malaysia to remain competitive and move up the rankings, Tengku Nurul Azian said that a game-changer strategy needs to be devised in order to entrench our position as an education hub vis-à-vis other countries such as China, Japan and South Korea. PEMANDU acknowledged the problems brought up regarding the operations of Education Malaysia Global Services (EMGS) and stated that they were working to resolve these problems which it had also brought up to the attention of the Prime Minister using the Problem Solving Meeting platform or "Putrajaya Inquisition".

Tengku Azian noted that the EMGS is a bane for a number of private institutions and schools. The Malaysian Prime Minister has thus said that there is a need to ensure that the end-to-end process for visa processing be shortened to a maximum of 14 days which will be monitored by PEMANDU.

Tengku Azian further posited that EMGS has within its resources of a large amount of good quality data. She said that these should essentially be put to good use through analysis in order to deeply mine the information and impact on how our education is marketed to international students. She mentioned that it shouldn't be the case that we are all fixated on chasing that figure of achieving 200,000 international students in Malaysia by 2020 as stated in the Higher Education Blueprint. We first need to have a knowledge of basic information and demographics such as who our top country students are, which institutions are international students heading to, what programmes are they enrolling for – if they are short-term or high-premium. This information can help us make important decisions in order to process international students' data effectively.

Further, she gave the scenario of compulsory health screenings that Malaysia employs for all its international students. For example, Japanese students were also put through the health screening for drugs which is an issue of considerable weight for them (as drug use is reportedly low in Japan) and this could be the basis for deterrence from studying in Malaysia. She recommended for a risk profile

mechanism to be introduced for education institutions as well as for students based on the country they come from. Risk profiling of our country has been done by other countries. By introducing risk profiling mechanisms, we can ease the visa requirements for institutions with a good track record and be stricter with institutions that have track records of students absconding or who come from high risk countries.

More urgently, job opportunities for international students need to be available. Australia should be an example in this. The Prime Minister and Jack Ma recently announced the Digital Free Trade Zone which is expected to house the KL Internet City with 1,000 internet-related firms. To this, she posed a question to the audience, “are we all ready to produce the talent to set this up?”

Tengku Azian said that perhaps, the focus shouldn't be on bringing back our Malaysian diaspora from overseas, since we are not succeeding in that. With that, she asked if attracting foreign talent might be a more viable solution.

Craig Arden Sherrin

President of Taylor's College

Mr. Sherrin began his speech by stating that when speaking about international education, it is important for it to be treated as a national agenda. As such, the education institutions alone cannot be at the forefront of pursuing this agenda.

In fact, there are many reasons for nations to develop a strong education industry. Mr. Sherrin pointed out however that this cannot happen overnight. For Australia to be ranked the 3rd education hub in the world behind the U.S. and U.K., it had taken almost 40 years. For example, one of the ways in which this was undertaken was through the Colombo Plan which was seen as a long-term investment in which Australia had provided scholarships for students from small Asian countries to further their studies there. Mr. Sherrin further provided the top 4 reasons why people wanted to study in Australia. These were quality of teaching, reputation of qualifications, personal safety and the reputation of the institution.

Thus, the focus should be on building a sustainable education. However, as mentioned, this will take decades to build and it is something we should aspire to for many years. This depends ultimately on government action. The government is a key player in education and it needs to recognise this as an industry in its own right which deserves as much attention as other industries receive. Mr. Sherrin stated that actions such as legislation to enforce minimum standards on tuition and managing of educational agents can protect Malaysia's position as education hub. It is important that such actions be taken so people can make informed decisions based on good quality information.

Mr. Sherrin also highlighted that it is vital to have a streamlined visa processing system. He put forth that student admissions in Australia spiked when the government streamlined the visa process. Further, he posited that Malaysia's multicultural society, like Australia, is an important factor which can make the student experience that much richer. It is a fundamental that can be a good basis to market our education services overseas.

Prof Khong Kim Hoong

Deputy Vice-Chancellor (Academic) of HELP University

Professor Khong began his speech by intending to paint a more positive picture on the state of education in Malaysia. He stated that Malaysia has achieved much and that it was the first to start getting international students to come to Southeast Asia. It is not worsening but instead improving. He stated that soon Asia will represent 70% of the demand for education, characterised by great demand and great competition, especially from the likes of China, Taiwan, Korea and Singapore. While we have been relatively successful, we should however endeavour to be better.

Professor Khong stated that education is a significant economic sector for Malaysia. Aiming to achieve 250,000 international students by 2025 will result in a tremendous economic impact as well as hidden economic benefits which were not initially considered for the country. Professor Khong stated that Malaysia has been successful but it needs to get its act together.

He cited a few problems Malaysia needs to address among which included the issue of student visas. He advised that it is unwise for international student visas to have to be renewed every year. He also posited the issue of there being many more foreign students in private institutions than there are in public institutions. The government's job thus should be to promote public institutions as well. He also suggested that the public university facilities such as libraries and fields should be open for general public use as well when they are not in use.

Further, he also cited that Malaysia's diversity is a great pulling factor for international students. Very few countries in Southeast Asia provide the options to study for either a U.S. degree, U.K. degree and an Australian degree. Malaysia could stand to profit extensively from this diversity and variety. Ultimately, there is a need to make good use of this diversity and properly promote it.

- Malaysia was the first in getting int students in SE Asia. Still one of the best. Not sliding down, moving up.
- Asia will represent 70% of the demand for education. Great demand and great competition. China wants half a million students. Taiwan, Korea, Singapore.
- While we have been successful, shouldn't rest on our laurels. Endeavour to be better.
- Govt initially played a major role to ensure/facilitate foreign investments in the country – MIDA (successful). Same as tourism.
- Education is a significant economic factor. Malaysia 250,000 students by 2025 then can see the tremendous economic impact. Lots of indirect impacts as well. Hidden economic benefits which have not been considered.
- Successful but get act together.
- Problems w foreign student ID – required to carry passports. If don't bring, can get locked-up.
- Problems w visa: must renew every year. Not a wise thing to do.
- Many more foreign students in private institutions than there are in public institutions. Government's job is to promote private institutions as well so that the experience of int students can be positive.
- Facilities of public universities should be open as well – libraries, fields etc. Why not let private institutions use these facilities? To make good use of what we already have.
- Final point: great diversity in the country. Very few countries in SE Asia where you can study for a US degree, Australian degree etc, great profit diversity and variety, make use of it, promote it properly to continue to be a strong educational hub in SE Asia and the world. .

SESSION THREE: In Conversation with Rahayu Ramli on Google for Education

Moderator: Freda Liu

BFM 89.9 Producer

Ms Ramli began by sharing that she had a two month stint in teaching at the start of her career, and that it was one of the hardest things she had done in my life. She then went on to say that in her presentation she wanted to talk about why technology is so important in today's world. She also shared an anecdote from her own life in which her father asked if there was a group of people that work at Google that bring up the information for you when you search. She said that she had to tell him that this was actually done through machine learning and AI. This is the technology that you would use in your Android or iPhone assistant that would have required a computer with a large processor only years ago, she said.

Ms Ramli went on to briefly talk about Google's self driving car. She said that because it is self-driving, there are certain things that don't need to be there, for example, a steering wheel. Therefore, the design can be different. She shared that when she presented this to a school, a child asked if that meant he could not be a taxi driver when he grew up. There is a very real chance for this to be true, she said. She also explained the profound change that this will have for the logistics and supply chain.

Ms Ramli noted a Google algorithm (Alphago) recently beat one of the best Go player in the world. It beat him four to one and its AI can learn from its mistakes and make decisions on the go, she explained. It is technology like this that mean 60% of students now will be working in jobs that don't yet exists and have six to eight different jobs in their career.

Problem solving, teamwork, communication, critical thinking and creativity are the main skills that employers will need in the future rather than specific subject skills, Ms Ramli noted. While, human beings at the core are the storytellers, we need to look at changing the mould of the one size fits all learning to fitting this to what each student needs. One of Google's core goals is to be able to make sense of all the info online and make it accessible for everyone, she noted.

Ms Ramli explained that what we are seeing more and more is Education 2.0. This includes problem based learning (PBL), collaborative and interactive learning, web tools and wikis. What we aim to do is get to education 3.0, she said. This is full personalised learning to be able to use all the tools around you to get the information that you need. She also argued that coding helps a child to learn problem solving. Made in Code is a program that is specifically designed for female students to help them realise that STEM is a viable career for them in the future, she noted.

In closing, Ms Ramli said that Google wanted to build a community of learners. Teachers are the cornerstones of this, in that they are the pivot point of what the students are learning, she said. Countries are on different readiness levels, and need an understanding on how to shift the curriculum and shift the ecosystem in this direction. There is a race to get everyone online already. Kids are already using smart phones and tablets, so the trajectory is about creating better access turning this into better learning tools, she noted.

SESSION FOUR: A Shift Towards International Syllabus

Moderator: Daniel Chian

Chairman/Council of Governors of Fairview International School

It is time to review the current school education syllabus to meet the demand of the 21st century. The world has changed which puts an equal demand for the means of teaching to change to keep students engaged. There is also a need to keep pace and stay relevant.

Panellists:

Dr Tan Khun

Principal of Sri Kuala Lumpur International Primary School

In the past several years we have witnessed the rapid increase of private schools in Klang Valley and other parts of the country. Most of these schools are international schools that have adopted syllabi from the United Kingdom, United States, Canada, and Australia where the English language is the medium of instruction. This has led to certain tunes of discourse.

The medium of instruction is important as there must be means of accessibility to knowledge through a language that is used widely, thus becoming a language vehicle. The content of knowledge embedded in a language vehicle must be wide, deep and well organised over a period of time. This language vehicle must have the capacity to manage the knowledge extension which is happening at an exponential rate. The key question is - can the public education system be based on Bahasa Malaysia as a language vehicle effectively?

This has resulted in policy constraints experienced by the Malaysian public school system. One such constraint is in the form of human resource, an important resource which is a product of a system that began over 40 years ago, has resulted in a generation of education having their ability to access knowledge being curtailed. The knowledge content in the language vehicle used is inadequate for additional purposes, which then becomes a disadvantage to the teacher and students, limiting them to only have textbooks with no additional books to add enrichment. There is also a lack of a national-level translation machinery to mitigate knowledge content effectively which is not due to the lack of attempts of effort, but due to inadequate human resources to conduct these translations and potential translators are put off by the lack of incentives and a small market size.

There are no shortcuts to the solution to improve delivery capacity of our public education system, but it has to begin as soon as possible as the gap between the educationally developed communities and the less developed are widening exponentially. Hence, we are facing an explosion in knowledge but we are not adequately prepared for it. Can we move towards an education system where we can ride on an international language vehicle which is not at the expense of our national language and cultural heritage? Tun Mahathir attempted this in 2001, but after he retired the plan was shelved in 2008. This is unfortunate situation we now face ourselves in.

Bill Ironside

Principal of Sunway International School

What Malaysian parents want in international schools is the English medium. There are social complexities to which parents want their children to be more exposed to in order to prepare them for business and other opportunities. Though Sunway International School has a Canadian curriculum, only 10 percent of his graduates end up going to universities in Canada. What the curriculum does is that it prepares them for university in Western and European countries. The scope the school's internationality features are intentional as each classroom is intercultural, diverse, and have students from several different nationalities. In such a setting, interactions and conversation has context.

The Programme for International Student Assessment (PISA) has Canada ranked 7th in the 2015 results which was published in late 2016. Canada has consistently found itself in the top 10. This is indicative of a solid curriculum and well ahead of other traditionally English nations which are fruits of strong policy. Its school are well staff with highly resourced teachers. Despite being behind Singapore in first place, as well as Hong Kong and Japan which complete the top 3, Canada is well ahead of other western countries and amongst 72 countries that participate in the PISA

The Canadian programme has an ongoing assessment with a 70 percent assessment and 30 percent exam allocation. This implies that students are constantly assessed with ongoing test, presentations, assignments, and labs. This way, students have multiple opportunities to do well within that 70 percent allocation. The programme is also well rounded with extra-curricular programmes and character education which is embedded into the curriculum.

Competition between the various international schools and curriculum is good and healthy as parents are presented with options to allow them find the best fit for their children.

Datuk Dr Chiam Heng Keng

Founding President of Early Childhood Care and Education (ECCE) Council

There has not only has there been an increase in preference towards homeschool's and international schools, but the same increase has been observed with the Chinese-medium schools, even from the non-Chinese. In fact, during a PEMANDU lab in 2015, it was shared that the Tamil-medium schools have also increased in enrolment. This implies that many parents who cannot afford the fees of private schools are opting for medium schools or homeschool's, particularly parents who see the former to be too demanding and punitive in their treatment.

Some parents are reluctant to place their children in national schools despite not needing to pay fees because they are not giving sufficient attention to English, a language which is critical for children to be proficient in. It has also been perceived that the English language is not well taught in the national schools as the teachers themselves are not proficient in the language. However, it is questionable on whether English is taught well in Chinese-medium schools. There is also a fear of Islamisation of their children getting converted as well as fears of discrimination and victimisations, but it is uncertain of how much of this is imagination or peer perception or if are some truths.

The National Key Economic Areas (NKEA) in 2010 targeted to increase the GNI of Malaysia to the levels of an industrial nation by 2020. One of the initiatives is to liberalise international schools so

that restrictions of the number of Malaysian students are removed. This led to the mushroom of private and international schools due to high demand.

It is not necessarily the case that parents and families sending their children to international schools are uprooting to go overseas, though some may be sending their child to these schools for this reason, but these numbers are small. Instead, parents who send their children to these schools must be financially able. In fact, some of those who migrated have sent their children to Chinese-medium schools.

Private and international schools have to be of superior quality compared to public schools considering the high amounts of tuition fees parents have to pay. However, it is highly possible that some of the top public schools can rival private schools in quality. Hence, the cost may not necessarily reflect the quality of schooling. The quality of an education in any school depends on the quality of leadership of the principal and teachers. If a school offers an international curriculum, but the teachers are of bad quality, it might not be worth the parent's money. Parents must select a school not based on hearsay but invest in the quality of school before sending their children there.

Though international schools are expected to have a number of foreign teachers some of these teachers working on contract transfer from one school to another in pursuit of higher pay. If this is the case it makes the quality of the teacher questionable.

A limitation of homeschool's and international schools is the issue of socialisation. Home school student do not have the range of peers who differ in socioeconomic status, ethnicity, culture, and religious belief. They also may have an unrealistic view of society. Such students also may face a problem in subjects like history and geography, as they may not know much about their own country, while knowing better about the rest of the world, unless this has deliberately been included into the curriculum.

There is also the emphasis on language as the main reason why parents send their children to international schools is to ensure that their children are proficient in English, while learning Bahasa Malaysia is not a priority. It is questionable if such a phenomena is good for Malaysia as there would be an increasing divide as children who can go to international school are from parents who can afford it while those financial less able will send their children to national schools. This could lead to a widening racial and sociocultural divide.

Roger Schultz

Head of School of The Alice Smith School

Alice Smith offers British education but has students from various parts of the world. There is an equal percentage of 35 percent Malaysian, 35 percent British, 12 percent Austra-Asian, 10 percent Singaporean, and altogether have almost 50 nations represented in a population of 1,600 students.

The reason people decide to go for an international school is that it provides a balanced and holistic approach to education. It is important to ask why - "why are we educating children?". This allows us to consider the sort of qualities children need for the 21st century in a rapidly changing world. The need for children to be successful, confident, and responsible as core qualities which form the basis of a curriculum. Hence, it is not so much of where a curriculum originates from, but it is about the child themselves and what they will draw from their experiences in a schooling environment. International

schools offer an engaging, enriching, and challenging environment which gives students opportunities to broaden their life experience to learn from others who come from different backgrounds and work with teachers with a broad range of experiences themselves. Parents may pay a high fee, but it is well invested into resources like good teachers and facilities provided. Such experiences are vital to meet the expectations of parents.

Using the English medium is one of the main reason an international school is selected as it opens other opportunities later on in life. Teacher quality is also a main reason. On top of that, they offer enrichment with the broadness of what can be offered and the high levels of experiences to obtain high levels of achievement, not only in terms of academic achievement, but what they can achieve in their personal lives. To enter top universities in the world, one looks into much more than academic attainment as there are so many students getting high grades. This applies not only to universities, but also in terms of what businesses will look for. Achievement in all aspects of life is important in international education.

An international school is also community-focused with a community environment that gets their parents heavily involved in the day-to-day processes of education by working closely with teachers. Hence, this is a very holistic approach in developing not only the academic abilities of students, but also socially, physically, and emotionally. Having experience and opportunities are things that can make a difference in children in terms of how they develop their character, the way they learn to grow, the way they mature, gaining self-confidence, the ability to persevere, be persistent, and be risk takers – all of which come from experience and opportunities provided in an education environment.

It is important that children in schools are not just learners, but are also leaders and ambassadors, which are qualities that help students to become better people. The world needs better people and it is the good people that make the changes in the world for the betterment for all in society. While we should be striving for academic attainment, there is also a need to strive more and more to develop good young people, people who have a strong sense of values and morals to make good decisions for future generations. Hence, character development of the highest quality is offered in international schools where students learn to develop themselves and learn to be team players, to have empathy, and value each other, which are all qualities to success.

Teachers make the school what it is and it is important that high quality schools have high capacity building for the development of staff by giving them opportunities to learn from one another on how to be better educators.

Alice Smith has great heritage in Malaysia and has built many partnerships over its 70 years of existence. It is member to several international school associations which is important to developing networks to learn from other international schools and educators worldwide to create the right experiences for the children under their care.

Good education is one that offers a culture of nurturing and the developing of good attributes that young people need to be successful in life and become good people. It is one that commits resources to the school's development and about providing depth, scope, challenge, and a programme that goes beyond the classroom. Most importantly, it is about the care and attention given towards the positive wellbeing of individuals in school, not just the students, but also the staff and parents.

Dr Paul Rogers

Headmaster of Kolej Yayasan UEM

Kolej Yayasan is a not-for-profit school of which 70 percent of students are sponsored and frequently come from humble backgrounds. All their students are very bright, driven, and motivated. They are all Malaysian and are out to obtain overseas qualifications. They specialise in sending their students to the best universities in the world.

Thus far in 2017, they have had eleven offers from Oxford and Cambridge, three from Princeton and Yale, one from MIT and several from Australian Group of Eight, and the rest come from the Russell Group in the United Kingdom.

The source of a desire for an international curriculum rather than a Malaysian curriculum is the same reason why people use Microsoft, Google, enjoy Starbucks, and so on. British or other forms of international education is a global brand that carries a kudos which is very desirable. There is no notion that international schools are trying to undermine the Malaysian-ness of students, but instead they only want to prepare students to become citizens of the world. Kolej Yayasan would never let their Malaysian identity go to waste. They organise many activities, including an annual Bangsawan Competition and nights dedicated to the various ethnic communities. All their students also need to take lessons in Bahasa Malaysia, moral studies, cultural awareness, Malaysian history, and so on.

Their main desire is for their students to learn to be able to hold their own with the best young people from all over the world. Sometimes, the pressures on them are great to obtain offers from prestige's universities. This is possible because of the competitive environment they provide in order to prepare them to cope with the finest brains in the world. Because so many students are sponsored and bonded, they come back to give back to the country from which they came. There is nothing wrong with having an international syllabus that can guarantee a job with a good degree anywhere in the world.

Q&A

Datin Azimah, Chairman, Parents Action Group for Education (PAGE) believes that a large majority of students that go to Kolej Yayasan comes from national students. Does this mean that national schools work? **Dr Paul Rogers** Acknowledged that they take in students whom have complete SPM and IGCSE -as many have in fact come from national schools and they have proven themselves to have done successfully there. They are very selective and are determined to have the very best students so most of their students are top students in their schools. Put together, their students must get used to the idea that everyone is as good as them, or even better. This prepares them before university to compete with the best students overseas.

Ms Satinah SyedSaleh, Education Advisor, Khazanah is supportive of public schools and agrees that there is nothing wrong with the them as there are many products from these schools. The issue is that there is the use of languages in the curriculum. The government has commissioned the Education Blueprint, but this process takes time. Therefore, the government has allowed public-private partnerships to form in schools in the form of Trust Schools which Khazanah is a participant. She also pointed out that there are 122 international schools at the moment, with 20 more in the pipeline. There also many homeschools and tuition centres offering IGCSE. She asked if this will be a threat to the quality of international education due to cost? **Datuk Dr Chiam** pointed out that the quality of education is dependent on the demand of the parents. There is always the glamour of being in an international school and those who can afford it would still want to send their children there. Those

who send to homeschool centres could be due to the matter of affordability. **Dr Tan Khun** shared that all his teachers are local despite using the ICGSE syllabus. Yet, they are able to teach a very high standard of English. He also revealed that there are only 3 core subjects under the ICGSE programme; English Science and Mathematics. Beyond that one is free to customise your curriculum. **Mr Bill Ironside** is uncertain if home school programme will threaten the quantity and quality international school in Malaysia, but international schools definitely have to respond in a healthy way and to become more marketable and more importantly ensure that they are providing value to students who attend their schools. **Mr. Roger Schultz** agreed that parents not only want affordability, but also want value for money. Hence, it is market driven and depend on what suits them best. However, he was concerned with whether or not if home schools are regulated to ensure quality. **Dr. Paul Rogers** shared that his college will accept anyone who has the entry requirements, be it ICGSE or SPM. Therefore, a student who has homeschooled who has good grades will face no problems to be admitted. However, on the issue of regulation which home schools may not be subject to, there could be certain limitations. For instance, most A-levels will be applying to study in the United Kingdom. This process requires UCAS and cannot be done from home schools.

Mr. Daniel Chian pointed out that in the past, people who do home schooling are those who have no access to public schools as they are in geographically remote areas. In Malaysia, is it a different reason. Though home schoolers go well in terms of knowledge and content, they struggle when it comes to social interaction. Newer versions of home schooling centres are coming up with solutions for this deficit and improving their quality. This is perhaps where the Ministry can regulate. Recently, a large home school centre in Kuala Lumpur with 300 students was raided. This school charged MYR20,000 worth of school fees per annum, almost the same rates as international schools. He cautioned parents to be take precautions.

Mr. Vincent Chian, Principal, Fairview International School opined that the education market is often segmented by the national affiliation of their respective curricula. If the future of society is to be increasingly connected due to globalisation, and while our national affiliation through culturally important become less of a determinant of our future, how relevant is it for us to continue labelling education systems on lines that divide us? **Dr. Paul Rogers** stressed that the fact that all international schools that exist are representative of quality institutions and care about teaching. Anyone who does not, do not deserve to be credited in this profession. **Mr. Roger Schultz** pointed out that the internationalisation of curriculum is becoming stronger. There are key qualities we look into when developing young people which is consistent across any curriculum. More and more, there will be a merging of national curriculum towards an international approach in the future due to the globalisation of education. **Dr. Tan Khun** reminded participants that the working languages of the United Nations Mandarin, Arabic, French, Spanish, and English. Any school that uses these languages as the medium of instruction can be defined as an international school. Therefore, there is no need to work hard to blur the divisions that exist. Perhaps in the distant future, there will be no longer any lines or demarcation. **Datuk Dr Chiam** questioned if there are sufficient opportunities given to students to interact with people from different economic strata of society. A wedge will deepen between education and mutual understanding between the national and international school trained students. This issues need to be considered.

Mr. Daniel Chian concluded the session putting the point that the Malaysian government has launched a fusion of the Malaysian curriculum and international syllabus with ten selected national secondary schools three years ago, with 20 more schools soon embracing this method using the Malaysian curriculum. Therefore, the lines are becoming blurred and there is no such thing as an inferior form of education, but it is a question of adapting to the changing world. Illiterates are not

those who cannot read, but those who are unwilling to unlearn and relearn to adapt. Children need to embrace change by conquering fear and coming out of their comfort zones. These values come from our teachers and family members. Our challenge then is to make learning relevant for the 21st century.

DAY 2

SESSION FIVE: Strengthening Gender Diversity in Science, Technology, Engineering & Mathematics (STEM)

Moderator: Law King Hui, Group Managing Director of Sasbadi Holdings

The world is changing at a very rapid pace, to a point things which are in trend today very quickly become obsolete, not even having sufficient time to really take off. In a second, 60,000 Google searches take place, 70,000 YouTube videos are being viewed, about 2.5 million emails are being sent, and 44,000GB of internet traffic shuffles. Such is the pace of things. At this rate, it is very difficult to predict the future. To be ready for the uncertain future, governments across the world are stepping up efforts to strengthen their STEM education. In September 2014, the Prime Minister mentioned the goal of having 60 percent of students doing STEM by year 2020. This is a major challenge, which Malaysia has yet to realise. While needing to address the challenges to increase STEM enrolment, there is also a need to address the issue of the gender gap. Approximately 60 percent of university enrolment comprise of females. Despite this, we still see fewer women in STEM compared to male students. Identifying the cause of this is important. There is still a huge imbalance in the participation of women in STEM areas, particularly in more advanced career levels. In Malaysia, despite faring better compared to many other countries in terms of female incentives, the number of women for level above associate professor are still far from satisfactory.

Panellists:

Assoc Prof Dr Shanthi Thambiah

Deputy Dean Faculty of Arts & Social Sciences of University of Malaya

Malaysia has set a national target for science and arts enrolment ratio of 60:40. However, it has been a struggle to achieve this target since the 1970s. The Academy of Sciences Malaysia has recently launched a report on the state of science and technology in the country. One of the concerns is the enrolment of science, technology, engineering, and mathematics fields at the upper secondary level. There have been some national studies on the human capital needs in science and technology which states that one million workers are needed in this field by 2020. However, it is not possible to meet this number by 2020 when Malaysia has not even achieved the 60:40 ratio. Malaysia's low level of innovation is also due to a dire shortage of STEM human capital. We cannot only rely on male students to achieve this target and the girls too need to be accounted for to reach the national target of one million STEM workers by 2020.

Much has been argued about this conundrum from teaching approaches to the lack of learning infrastructure. In addition, some students perceived STEM to be a challenging field of study. There is a perception that STEM is only for high achievers, which is quite pronounced during the transition between lower and upper secondary school. High achievers are sent to STEM fields in elite boarding

schools while the less academically inclined are led into technical and vocational educational and training (TVET) colleges. This mindset needs to be changed. We cannot only focus on the high achievers and leave out the less academically inclined. This is the problem of our education system which only focuses on the high achievers with many of these students often ending up in the STEM fields and professional courses. However, STEM is not only for those getting straight As and should also be for the average performers. If STEM is gender biased, this presents an additional hurdle. Such barriers must be addressed in a realistic way. In a society that is fixated on exam performance and university entrance, students who are not confident in doing well in science subjects will choose not to enrol in STEM to maintain their grades. When the transition takes place, between the ages of 15-16 years old, a large drop out of female students occur. This needs to be arrested so that they can encourage girls to go into the STEM fields. However, this can only happen when we move ourselves out from our fixation on exam performance.

At present, high achieving schools are rewarded based on the number of straight-A students they can produce. The side effect of such a policy is that only high achievers are streamed into the sciences while less academically performing students are channelled to the arts to increase the likelihood of these students obtaining a better grade. The educational policy framework and landscape needs to be reviewed. Some countries are already doing away with schools and textbook, but Malaysia is still fixated on exam results. However, since the recent UPSR and SPM results, people are slowly moving out of that mind frame.

There is also a need to breakdown stereotypes at both ends of the spectrum that only the high achievers doing the STEM fields while the low achievers are sent to TVET. STEM education also need to be democratised to be made appealing and available to all, not just towards the straight A students. As a certain level of maths and science proficiency is required of students to cope in the STEM streams, issues of low proficiency in these subjects must be addressed. Problem-solving and thinking skills need to be improved in students. Attitudes need to change as one should not equate good results to being a good student or good human capital.

A UNESCO report has identified two problematic areas in terms of psychosocial factors and labour market factors. This implies that many girls are being discouraged from moving into the STEM fields by parents, community, culture, society, and schools. There is also a lack of role models and targeted educational policy towards girls and women. Student, parents, and teacher attitudes need to change. Subtle biases need to be removed if the ratio is to be realised. Labour market factors are very important and society must not push our girls into fields and a situation where they are unemployable. Therefore, the labour market needs to be more gender-sensitive.

Prof Dato' Dr Aishah Bidin

SUHAKAM Commissioner & Professor of Law of Academy of Sciences Malaysia

When one talks about gender diversity, one must consider if there is an adequate legal and governance framework to support it and whether or not the law, regulations, or the working environment is supportive of women working in certain sectors that are dominated by men. Should this not be the case, then it is a contributory factor to the attrition rate as to why women drop out from work after graduation.

The Federal Constitutions provides for equality under law in terms of equal treatment, equal protection, and prohibition against discrimination, which is provided in Article 8 of the Federal Constitution. There is emphasis on prohibition against discrimination on religion, race, place of birth,

and gender. In 2001, the Constitution was amended to include gender, clearly making provision on vocation, profession and employment. Article 12 provides equal right in respect of education giving students the right to choose their pathways and discipline.

In 2010 the government conducted a study looking into gender equality law, but discussions have since fizzled out. Malaysia's domestic framework has plans such as the National Policy on Women and the Women Development Action Plan. Another supportive framework would be benchmark and standards in terms of international standards and norms. Malaysia has rectified several international human rights instruments, which includes the protection of women; the Convention of Elimination and Discrimination Against Women (CEDAW); Convention of the Rights of the Child (CRC); and the Convention on the Rights of Disabled Persons. In addition to this, there are several international labour organisation conventions that refer to equal remuneration and prohibition against forced labour, which has been rectified by the government. In terms of the SDGs, Goal 5 clearly talks about the elimination of all forms of violence against women and girl in public and private spheres which include human trafficking and sexual exploitation. This SDG is the first global gender framework for which progress and development has been adopted based on human rights issue. On the regional basis, there is the regional ASEAN Commission on the Promotion and Protection of the Rights of Women and Children (ACWC). Therefore, there are quite a number of platforms which prevent discrimination against women from choosing their career pathways and employment opportunities.

Despite existing protections, there are still problem in the working environment. In terms of employment law, the Employment Act 1955 has several issues in relation to the rights of working mothers, which include concerns with the possibility for women to go further up or to be retained in their positions. The Employment Act fails to prevent prevailing discriminatory practices in the as the Act does not provide adequate protection for employees in the private sector. For instance, there was a High Court case involving Noorfadilla Ahmad Saikin in 2012 where the courts conferred compensation towards the unlawful dismissal of a teacher who was three months pregnant. There was also the case of Beatrice Fernandez vs Malaysian Airline System in 2004 and the Court of Appeal between Rafizah Shima and AirAsia in 2014 which were cases of elimination of discrimination.

It is questionable if the working environment is conducive enough for women in a highly male dominated environment. There are insufficient supportive rights such as maternity rights. For instance, the law provides rights, but not during pregnancies. However, there have been forthcoming news that some companies have decided to give maternity leaves extended up to six months.

Another concern is the area of sexual harassment in a particular environment which is dominated by men. In 2012, the provision against sexual harassment was integrated into the Employment Act to provide some protection towards women. However, instances of sexual harassment still exist. To resolve this issue, there is a need to review some of the provisions in the law to provide for working mothers. Smart partnership between public and private entities will provide some mobility in terms of resources and expertise. Young girls and women must be empowered in terms of capacity building and training which can be assisted by various professional bodies and agencies. A holistic approach is required to resolve this situation and we cannot just rely on one particular institution to resolve this issue as this is a matter that concerns all stakeholders.

Hajah Mahuran Saro binti Dato' Hj Sariki,
Head of Research CEO Office of Talent Corp Malaysia

The Minister of Higher Education stressed in the Higher Education Blueprint targets for 30 percent of lecturers becoming active practitioners of the industry. This is to ensure that educators retain relevant industrial experience to strengthen higher education. This is important because working with industrial players cannot be realised in full if lecturers cannot relate to the industries needs.

According to the World Economic Forum (WEF), due to digital phenomena industries are forced to transform their skillsets as required to carry out their work. From this, two types of jobs stand out - data analysis and specialised sales representatives. Data analysts are needed to study big data and analytics which are related to the ICT and telecommunication skillsets. Specialised sales representative need to be able to perform well in, say, sales for engineering where one needs the knowledge and experiences in engineering, otherwise it will be difficult to sell the product without the technical knowledge. Such talents are needed globally as well as in Malaysia.

Top 10 critical occupations identified by Talent Corp and the Ministry of Human Resources in an effort to address existing skill mismatches were highlighted. There are projections of the number of labourers required in a specific field at a given period of time. However, though the industries have a matching number of projections, what is lacking is the correct skillsets.

There are four fields of study - Science, Engineering, Technology, and Mathematics. For science, in 2010-2015 there were high number of females in the field of study compared to males, while engineering and technology was equal, and mathematics had more women than men. However, the number of women who end up working in STEM related fields are still low.

Several suggestions were made for women to remain in STEM-related subjects:

- Teacher education and policy on recruitment. This ensures that recruitment is conducted, there must be a balanced diversity. This is important to groom role models for the young
- Support programmes and initiatives for female STEM professionals. This can be done through more workshops and focus groups so that young professionals in the STEM working environment know what to do next
- More scholarships from the government to enter STEM
- Have more gender diversity in the committees which design the curriculum or modules in university as men and women have different thoughts
- Promote more female role models in STEM-related areas

TalentCorp's strategy to achieve this is to:

- Promote industry collaborations by sending students for industry attachments or internships
- Participate in career comeback programmes by encouraging women formerly in STEM fields to return to their careers
- Promote flexible working arrangements for both males and females
- Train more quality female teachers in STEM
- Encourage continuous effort to encourage to have equal gender representation in the curriculum development

Dr Lyana Khairuddin

Research Fellow of Penang Institute Kuala Lumpur

Dr Lyana agreed with previous panellists that there were not enough role models when she was young to inspire her towards the sciences, despite her interest at a young age. She shared that upon graduating from school, she was given the options to pursue law, accountancy or medicine – all of which she had no interest in pursuing. She also has the added problem as a Muslim women living under the patriarchal society that expect women to be restricted to family and home. Therefore, it appear that not many role models are highlighted, such as scientist being women.

However, looking at history, this is actually the opposite as there have been many Muslim women in the forefront of medicine, mathematics, and astronomy. Today, there are many pioneering women scientist, though it is interesting to note that most of them went overseas. Dr Lyana shared that she faced many challenges when she returned to Malaysia, having lived in a culture where one can speak

their mind and discuss matters openly, she found the system here to be rather discouraging. The higher up one goes, the less women there are. When there are less women, other women will feel that there is a glass ceiling that they need to break. For instance, there is a huge gap of Nobel Prize achievers with very few women achievers under STEM.

A Microsoft survey found that young girls in Europe become interested in STEM subjects around the age of 11 but lose interest by 15. Dr Lyana then shared that she had a personal experience which led her to pursue the sciences as she had an aunt who was suffering from cancer. This caused her to be driven to know more about science as wanted to help in more direct as a medical researcher. Therefore, it is not simply about getting more women graduates in STEM but developing interest in research for these subjects. There needs to be a shift in mindset from just fulfilling the numbers to cultivating genuine interest. Women should also be encouraged to speak out more and cultivate an interest in children and to show that there is no gender gap, and anyone can pursue whatever they want.

Prof Dr Hj Khudzir bin Hj Ismail

Dean Faculty of Applied Science of Universiti Teknologi MARA (UiTM)

In Malaysia, there are three perspective regarding STEM:

1. *The Field*. This traditionally includes medicine, engineering, technology, physics, chemistry, mathematics, statistics, biology, astrophysics, biochemistry, genetic engineering and so on
2. *STEM Streaming*. Where students enrolling into science streams in upper secondary schools
3. *STEM Approach*. Determines the strategy on how to teach STEM in schools

The Malaysian Higher Education Blueprint targets for 500,000 STEM graduates by 2020 but at present only an approximate 90,000 science stream students from SPM. This is much less than the amount required. This implies that if the numbers continue to drop, Malaysia will be moving towards becoming a developing country that has not enough scientist. The issue of why there are lesser STEM students in school need to be addressed.

There are two forms of learning activities. First, there is active learning where students are involved and participating in the process of learning. The other is tactile learning using physical activities rather than just listening to teachers teach. These types of learning are important because there are two types of genders. They are different in terms of chemistry and brain development. Studies show that males are seven time more in grey matter activates, while the girls have ten times more in white matter. The grey matter are action processing centres, which is why boys are more focused when they are doing things and less affected by their surroundings. Females on the other hand are more multitaskers, while boys excel in highly focused projects. There are also differences in terms of chemistry. Serotonin which helps us to sit still. This is evident between a son and daughter as it is apparent that boys are more active compared to girls.

When designing a curriculum, these differences must be taken into account. For instance, when teaching in school, if there are lack of hands-on modes of learning and there is only reading, it is an advantage for the girls. Unfortunately, not all schools around the country are well-equipped with labs and learning aids to allow for hands on learning. If we maintain the current curriculum, then it is difficult to cultivate interest of students. There is a need to relook at how the curriculum is designed from the primary school levels.

How teachers teach the sciences is also important to garner interest in the subject. Teachers need to be competent and be able to teach in a more interesting way or risk students being bored.

Despite much emphasis on gender parity in university, there is still a lack of science workers compared to the non-sciences. One of the reason is due to salaries, which are unattractive as they do not match up to the level of difficulty. The reason why many parents hope their children become

doctors is because medicine pays well in comparison to other fields. However, some graduates in other science fields are paid poorly, further discouraging students from going into the STEM areas.

The corporate sector can help improve this situation by giving more generously through their CSR programmes to improve science labs in schools. This will help encourage more students to be interested in STEM and help Malaysia achieve its 60:40 ratio.

Q&A

Datin Azimah pointed out that the culprit as to why there is a lack of interest in STEM is due to the counsellors in schools as they do not emphasise the importance of science for the nation. They take the easy way out, advising students to go for what is simpler. Parents are also not exposed and informed of the array of jobs under science.

Mr. Khor Hong Yin, Methodist Council of Education mentioned that under technical and vocational education, technic subjects are considered technology. There should be also an emphasis in this area which also has much demand, rather than only focusing on the sciences.

A delegate shared that parents no longer have that much influence on teenagers and STEM is not attractive enough due to the lack of marketing.

Assoc Prof Dr Shanthi Thambiah expressed that schools must give more focus on career counsellors who must be more informed and knowledgeable to give good advice to students. TVET must not be a second choice and people must know that being in this field is highly employable. Stereotypes must be broken that TVET is only for low achievers. She also pointed out that though there are more female graduates compared to men, but the reality after graduation is disheartening. This becomes a waste of resources if they are not employed by the labour market. There is a huge imbalance on the proportion of female's in the science fields who are heavily outnumbered by their male colleagues in the workplace. There need to be ways to ensure that the labour market employs women. The paying scales in STEM also need to be relooked. Otherwise, the salary differences will cause graduates from the sciences to drop out from these areas when they are not paid what they are worth. This becomes a waste of their capacity to innovate for the country. Both the industry and government need to work together to resolve this issue.

Dr Lyana Khairuddin does not agree that science is considered unattractive. She argues that cultivating of interest in science is not being done and more focused on getting good results rather than genuine interest. There is a need to change the way we educate to bring back more intrigue and mystery to learning.

Prof Dato' Dr Aishah Bidin stressed that it is important to ensure that students retain the same discipline after school when they join the labour market. The legal professional also loses their graduates to other areas, as they believe other areas to be more profitable. To ensure that students are retained in the same discipline is a challenge and responsibility that needs to be shared by all levels of stakeholders.

Hajah Mahuran Saro pointed out that career counsellors in secondary schools need to be more exposed to industry needs. In terms of TVET, she agreed that this cannot be seen as a second choice, but students need to be informed of the subjects they need to undertake to help them progress to the careers of their choice.

SESSION SIX: Education Transformation in a Time of Austerity

Moderator: Tan Sri Michael Yeoh, CEO/Director of ASLI

Tan Sri Michael Yeoh talked about achieving more with less in education. These times of austerity have seen numerous budget cuts but despite that, we still need to keep achieving excellence in our programs. He provided the agenda for the discussion which was how austerity measures can be implemented and how those measures can be prevented from impeding the growth of Malaysian universities.

Panellists:

Senior Prof Dato Dr Khalid Yusoff,

Vice Chancellor & President of UCSI University

Prof Dato Dr Khalid first began his speech by expressing that it would be interesting to hear the opinions from public universities and regulatory bodies on this issue so that a cohesive conclusion could be arrived at.

He began to talk about austerity measures which he noted were essentially not unique to Malaysia. He stated that these austerity measures had the ability to affect the quality of education, access to education, adequate student support and the like. Further, we also need to take a more measured approach to issues such as ranking.

He also touched on issues of technology. He questioned if technology should be incorporated into our delivery of higher education and implementation. To that, Prof Dato Dr Khalid said that no amount of googling or Ted Talks on the internet can replace the educator's role. Teachers contextualise knowledge and this allows the sharing of experience for further deciphering. He also recommended the Complimentary Curriculum Programmes (CCP) as it would not be too expensive but will also put our education on level that is best positioned to mold graduates to handle real-life problems.

He stated that there is a need for public and private institutions of higher education to work together with policy-makers in order to make Malaysia a proper education hub. The delivery of higher education was also addressed as Prof Dato Dr Khalid said that there is a need to transform it. Once we address issues such as the National Education Blueprint and industrial engagement, only then we expect the 4th Industrial Revolution at our doorstep.

He urged for close synergy between universities, industries and authorities. He also suggested that a research management agency be established in order to form a proper local research ecosystem. We need to also look at how our courses are designed in line with other institutions because as financial constraints rise, so do student expectations. Higher education also need to teach commercial skills. Ultimately, the idea that higher education here is only for Malaysians needs to be debunked. Malaysia needs to look further, particularly to ASEAN countries. We can compete with them but we also need to collaborate. These efforts should continue even during times of austerity measures.

Nik Ariff Nik Omar,

General Manager, Public Sector Group of Microsoft Malaysia

Mr. Nik Ariff began his speech by saying that education is changing. At this point of time, the government has a limited ability to invest. Herein, Microsoft helps the government to transform learning. He put forth the 4 pillars of digital transformation that Microsoft is involved in.

The first pillar is that of engaging diverse learners. Digital natives help keep children engaged in the classroom. STEM and coding allows students to develop the skills to get jobs. The next pillar is that of empowering educators through the setting up of conducive environments with the help of tools, resources and an establishing of community. Microsoft intends to introduce educators to technology that can shape the future of learning and intend to make the tools available to all teachers for free. Mr. Nik Ariff said that this makes it accessible for teachers to adopt these technologies and make the classroom a more engaging environment.

The other pillar is to optimise institutions to adapt to advanced learning capabilities. He provided an example of a case study in which a higher education institution had overcome budget cuts with technology. Universiti Sains Malaysia (USM) used Microsoft technology such as the Active Directory which had the ability to reduce password reset service tickets by 95% and save RM400,00 by using a single email platform. He also talked about transforming learnings through digital transformation which allowed for exploring beyond the classroom and educational leadership.

Prof Abdul Aziz Baba,

Vice Chancellor of International Medical University

Prof Abdul Aziz first began by saying that the issue of austerity requires a more cohesive discussion involving policy-makers, members of the community and the like. He asked, “what can we do within the Malaysian context to ensure that higher education remains accessible and that the needs of the students are fulfilled in a time of financial constraints?”. Prof Abdul Aziz thus asserts that we need to prioritise. He urged to look at the economics of universities especially in the context of having more than one world-class university in the country. Can the returns justify these kinds of aspirations, he asked.

Further, he said that the private market of Malaysia needs to be considered. There needs to be efforts to maintain strategies particularly in challenging economic times. He said that it is important to leverage on new technologies to ensure student learning experience is optimised. We need to ensure that the product is work-ready and can perform based on the expectations of the industry.

Prof Abdul Aziz put forth some key strategies:

- Customer self-funding can enhance product offering.
- Strategic partnerships can retain or increase funding as well as enhance engagement with industries.
- Internal funding will improve operational efficiency.

He went on to ask, “How do we ensure technology can transform education and provide adapted learning to students?”. The answer provided was for a more personalised environment which is befitting of and suitable for the needs of Gen Y students. These can be achieved through adaptive learning and challenge-based learning. He also highlighted competency-based education. He noted that the healthcare industry was all about competency. However, it is important to implement

competency-based education in collaboration with the industries because this is where the integration of knowledge occurs.

He concluded his speech by putting forth some key takeaways from partnerships and close rapport with the industries.

- There has to be clear deliverables and expectations from both sides.
- We need to think about consolidating universities as there are now too many universities.

Prof Dato Dr Raman Narayanasamy,

Vice Chancellor of Quest International University Perak

Prof Dato Dr Raman began by saying that if austerity is taken to its extreme, progress cannot be maintained simply by loss of human capital. What is really needed here is essentially a change in mindset. Sustained progress only works until it reaches a certain limit. As such, he said that it is important that we come away from conventional thinking when talking about education in times of austerity.

He highlighted that public and private universities should first prioritise efforts to maintain high standards of education and the employability of students. In private enterprises, positive cash flow is highly important but benefit must ultimately be derived by the student from the education provided. Courses should thus be market-driven in order to ensure that the employability of graduates are at a maximum. Universities can also strengthen their relationships with large companies.

Prof Dato Dr Raman suggested setting up research labs in universities and organising joint ventures with the industries. These can be useful as it can expedite the commercialisation of research and development. He attributes the lack of collaborations between both private and public universities as the fear of unethical bias in joint research.

SESSION SEVEN: Educational Technology, a Key to Unlocking the Fourth Industrial Revolution

Moderator: Prof Dr Ali bin Selamat,

Director/Chief Information Officer of Universiti Teknologi Malaysia

Prof Selamat began by saying that the session would look at ways to unlock the 4th Industrial Revolution. It would also explore the transition to open classrooms and the technologies that will support this. Before handing over to the speakers, he asked how we can look forward to bringing educators and policy makers to see the challenges that are present and enhance the student learning experience.

Panellists:

Hasnul Nadzrin Shah

Director Government and Regulatory Affairs of IBM Malaysia

Mr. Hasnul began by setting the context of how IBM sees the issue of education and how education essentially prepares their client base for the 4th Industrial Revolution. Education fundamentally transforms industry, changes how countries relate with its competitors. According to a survey conducted by IBM, technology is not just disrupting the supply side but also doing the same for how education is delivered on the demand side.

He posed the question of how policy-makers are able to prepare coming generations to be competitive within this. He thus mentioned that we must look at the 4th Industrial Revolution within the context of a larger industrial system. Currently, our circumstances are characterised by aging populations, disruptions to economies caused by climate change and a need for sustainable resource arrangement within the economic contexts. Based on this, the question is ultimately one on how we can get our future generation employed.

He listed a few key strategies.

- Prioritise more practical and applied curricula. Technology can help facilitate this through collaborations on open platforms.
- Embracing new technologies in order to increase educational outcomes and expand educational varieties. To this, Mr. Hasnul added that several dimensions impact on the learning experience of millennials. Technology is thus complementary to the educational experience but this unfortunately runs up against policy and funding issues.
- Integrating industry into the entire process of education. Here, Mr. Hasnul cited the knowledge-transfer programmes started by the Ministry of Education in the 90s which was essentially enforcing the embeddedness of industry into education. Thus, we need to look at different levels of success, within the context of different demographics and the issues of addressing the challenge of people living in rural areas.
- Allowing teachers to choose the kinds of technology they want to utilise.

He stated that educational management has not been pointed out as one of the key factors of the 4th Industrial Revolution. There should be a more efficient way of managing student data, he urged. Education technology is the key to unlocking the 4th revolution. Thus, we need to be investing the money in education and ensuring key policy changes take place in the educating of specific target markets.

Albert Chai

Managing Director of CISCO Systems Malaysia

Mr Chai shared that Cisco was born 24 years ago out of Stanford, and has now become one of the largest pseudo universities in the world. It has over 1 million students and 10,000 academies involved. In Malaysia alone, there are 14,000 students enrolled. He then went on to explain that the way we connect and learn has changed so much over the past few years. Sharing that his own children now use their phones to help with their homework.

Mr Chai said that when he was at university in the 1980's, the classrooms were pretty much the same as they are now. We still treat all the students the same regardless of their skill set, age, work experience, and other factors, he said. However, at Cisco we try to make this a more personal experience. The workforce of the future will be a virtual workplace, so how do we scale our education system in line with this, he asked.

In closing, Mr Chai asked whether we can make the classroom more like the workplace of tomorrow? Can we take the best of the current pedagogy and replace with the new? Disrupt as we go? Can we

use technology to make education truly immersive? And use technology to help teachers be more effective?

Fitri Abdullah

Country Managing Director, Oracle Corporation Malaysia

Mr Abdullah began by explaining that Oracle is forty years old and the second largest software company in the world. He explained that the biggest recent change in the tech industry had been the proliferation of cloud computing. This is a big disruption at the moment, he said. However, Oracle is adapting here and trying to be the number one cloud company going forward, he explained. He noted that 20% of revenues today are from cloud and this is growing 80% YOY.

Mr Abdullah also said keeping up with changes in the industry is all about competitiveness. How do you compete in the market place, he asked. At Oracle, we have two education organisations, he explained. The first is the Oracle Academy, which provides training in computer science for students and teachers for free. The second is the Oracle University. He also noted that there has been a shift from the classroom to E-learning. One of the reasons for this digital transformation is the pervasiveness of the Internet, he explained. This is unlocking everything. With strong Internet connectivity the game has changed and advancements in tech have a big impact, which will affect all the education industries, he noted.

Teoh Boon Hai

Deputy Director, Education Technology Department, Ministry of Education

Represented by Tuan Mohd Haliza

Tuan Haliza began by noting that every government and education organisation are talking about how to prepare children for the next industrial revolution. He said that we should be looking toward education technology and using any method or tool to allow good learning to happen. He also noted that new technological advancements are one of many ways to facilitate the learning of our children. Whoever is in front of us have different ways and meanings of learning, he said. Some can only learn through immersion, so a one size fits all learning will deprive some students.

Tuan Haliza went on to note that what our children go through daily is formal education. There are more forms that they are learning outside of school that we can look at incorporating into learning, he said. He went on to explain that based on experiences and looking at best practices from other countries, formal learning is very traditional. What's different will be what is beyond formal learning. From a government point of view this could be balanced so that the formal can be supplemented by the informal, he argued.

In closing, Tuan Haliza said that incorporating all this will help our children to survive in the 4th Industrial Revolution. We need to put the basics in place and allow the child to grow in the manner that they are supposed to grow, and at their respective pace. New forms of technology could help to play a role here, he said.

CLOSING ADDRESS

YB Datuk Dr. Mary Yap

Deputy Minister of Higher Education

YB Datuk Yap began by recounting some of the topics explored over the two days. She noted that focus had been placed on how technology is changing the way universities teach, research, support students, as well as administer themselves. This also looked into how digital technologies will transform the way value is created within tertiary education, she said. From here, she went on to talk of Malaysia as a hub of higher education, as shown by increased international student enrolments. She shared that there were over 135,000, from China, South Asia, Indonesia and Nigeria, as well as the establishment of 11 foreign branch campuses from countries as wide ranging as the UK and Australia, to India and China.

YB Datuk Yap then noted that these two issues, however, do not tell the full story. We cannot shy away from the challenges we are currently facing in the sector, she said. Private institutions face ongoing funding difficulties and our university rankings have been slipping in recent years. We have to make our places of education more internationalist in their outlook, she argued. In a globalised world and a 24-hour economy, we can no longer afford to be insular. We have to also look outside ourselves for the best practices available. However, to compliment this, not only is a greater technical know-how essential, but a better representation of our diverse society – especially in regards to female participation.

YB Datuk Yap made a point of addressing the topic of Strengthening Gender Diversity in Science, Technology, and Engineering & Mathematics (STEM). She noted that there is a current deficit in the participation of women in science, technology, engineering and mathematics – especially at the higher, or management levels. This cannot be remedied on meritocracy alone, she said. Specific policies that address the different and unique needs of men and women need to be incorporated into the legislation and policies frameworks.

On what the government is doing to improve education, YB Datuk Yap shared that the Ministry of Education has also launched the Education Blueprint in the last few years, and more recently the Higher Education Blueprint. The objective of the two blueprints is to improve the quality of education and improve the service delivery of our teachers, not only for the urban areas but the rural parts of Malaysia as well. It is also to provide a more effective means of assessment. The Higher Education Blueprint will run from 2015 to 2025. The plan aims to increase international enrolment and boost Malaysia's image as a leader in higher education, she said.

In closing, YB Datuk Yap said that it is important to remind ourselves why we are doing all of this. What is the reason why we became educationist, or sought careers in this sector? Along the way we must be passionate and driven to be part of shaping the future of Malaysia, she said. Finally, she noted that whatever our plans, they cannot be realised without proper engagement with all stakeholders.