ISI INTERNATIONAL STRATEGY INSTITUTE

DISRUPTIVE EDUCATION ROUNDTABLE

THRIVING IN A TRANSFORMING WORLD

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TPC KUALA LUMPUR

About ISI

The International Strategy Institute (ISI) is a not-for-profit organisation that helps connect governments and businesses across Asia. We stand for universal ethical business values such as: equality, transparency, fair trade, and sustainable development.

Our dialogues, research and networking platforms, are designed to drive economic growth in the region. We aim to,

1. Build platforms for regional dialogue and networking opportunities that allow businesses, industry captains and governments to come together to drive economic growth of the region;

2. Provide timely research to keep our members and governments informed and updated on global trade and political issues that may have an impact on their operations;

3. Match businesses to the right investors - to ensure that the companies are paired with the right strategic investment partner

About Disruptive Education Roundtable

Cyber-physical systems, the Internet of Things and the Internet of Systems are all central features of the 4th Industrial Revolution. They continue to drastically change how we work, how we live and how we do things.

We live in exponential times. Science and technology have indeed surpassed our institutions and our education framework. While we work hard to get a graduate degree, the world around us has changed so much and will change even further, that those paper qualifications might be worth nothing in the new marketplace.

While this revolution breeds exciting new possibilities, it is bound to create massive unemployment due to our archaic education system borne out of the post-world war. To adapt to the new normal, we must change what and how we learn. Parents, educators and governments must ask the question on how they can prepare present and future generations to thrive in this transforming digital world.

However despite its merits, technology has driven us apart instead of bringing us closer together. We are at the cusp of a technological revolution but falling behind in spiritual and communal growth. We need an urgent realignment of our education system to bring back the community to our citizens.

Disruptive Education Roundtable is a half-day event bringing together policymakers, enthusiasts and practitioners in the education industry to fuse and brainstorm ideas, towards the formulation and implementation of new national educational policies in response to the new realities that confronts us today and tomorrow.

About ISI Disruptive Education Roundtable

The International Strategy Institute (ISI) established the ISI Disruptive Education Roundtable; Thriving in a transforming world, as aid to bring together to fuse and brainstorm ideas towards the formulation and implementation of new national educational policies in response to the new realities that confronts us today and tomorrow.

Moderator:

Assoc. Prof. Dr. Noor Sulastry Yurni Dato' Ahmad, Academic Director, Othman Yeop Abdullah Graduate School of Business Kuala Lumpur (OYAGSB KL), University Utara Malaysia

Organiser:

International Strategy Institute (ISI)

Abstract.

53 participants from various backgrounds; Policymakers, Enthusiasts and Practitioners in the Education Industry, Agencies, and Academician took part in the ISI Disruptive Education Roundtable, focused on the best solutions for our education system in the context of rapidly changing world as a results of disruptive advanced technology.

Introduction.

Opening Speech by **Fazil Irwan Som,**

Executive Director, International Strategy Institute (ISI)

Mr. Fazil Irwan Som touches on the act of pondering upon our principle of leaving a better planet for our children, instead leaving better children for the planet. Education is a strong mechanism in making the latter an achievable dream, with education as a tool we are supposed to be better human beings that contributes to society in building better nations.

He added desolately we have become our most selfish version of ourselves in the society, as all we care about is how to maximize our industry world through education. we need to put this idea of every man for himself aside as it has been carried out since the world war era.

We are entering the digital age, the age of shared economy, where the only way to survive now is to collaborate, working together and live in community and going back to the pristine understanding on how society should work together to develop progressively.

Analytical Queries:

Readiness.

i. Is our education system ready for the 4.0 Industrial Revolution?

ii. What new studies should be considered or highlighted in replacing the old ones with those new studies that are in the context of this digital revolution?

TVET.

i. Will TVET still relevance in the near future as industrial jobs are threaten by the emergences of AI machines and IoT?

ii. What are the next reformation move for TVET in coping with these realities?

Social Interactions.

i. Should industrial internship or regional university exchange be compulsory during the sophomore year for greater connectivity?

ii. Possibilities of community centres, mosque, churches, and temples be part of the education system by taking a chunk of the education syllabus with structured rules and regulations?

iii. Will the influences of community centres instil the senses of community in the next generation?

Salient Points by the Role – Players'.

a) Dr. Mohamed bin Abu Bakar,

Director, Curricular Development Division (BPK), Ministry of Education Malaysia.

Dr. Mohamed bin Abu Bakar started by addressing that when it comes to education, it is a big business concerning everybody's interests and everybody have got a share in it consisting of parents, educators, academicians, business owners, publics and even politicians. After multiple sessions of brainstorming The Curricular Division in the Ministry of Education conceptualize the curricular framework based on the needs of people from different backgrounds and as a result, the outcome based curricular that we have been using in the past.

He added that we have surpass that phase and are now moving into the standard based curricular. We are currently looking into 3 standards and they are learning standards, content standards, and assessment standards. While putting this curricular into practice we are also working on future curricular, making an allowance for competence based curricular framework that focus more on the acceptance level of student in learning.

Besides the compulsory subjects, they are also looking into curricular elements in school to catch up with the 4.0 Industrial Revolution. Subjects like Design and Technology, Basic Computer Sciences, and elective subjects must be given priority.

He concluded by underlining for the way forward, talking for future conceptual framework the 4 areas that needed to be looked upon without forgetting the values in education are as follows:

i. **Autonomous Lifelong Learning** (habits of the mind) that focuses on the development of student's cognitive skills;

ii. **Intergrated Multiliteracy** (Multi-Displinary, Multi-Skilled, Transdisplinary Connections.);

iii. **Towering Personality** focuses on student's development of realisation, appreciation and actions; and

iv. **Skilled Communications and Collaborations** focuses on students socio-emotional skills.

b) Dr. Ihsan Ismail,
Head of National STEM Centre, Ministry of Education, Malaysia

Dr. Ihsan Ismail highlighted that our education system has been focusing on science stream since 1967 and finally implemented it in 1970. Sullenly, ever since then we have not once manage to reach our 60% target. This is due to the deficiency of faith in the future comings.

He issued the normal practices of teachers that tend to speed up on concluding syllabus by mid-year and later proceed with drilling activities. This resulted in the trend of teaching for the sake's of passing exams. Thus, their teachings are lack in values and students are not learning much in the process.

STEM is denoting the method of inquiry in its teachings as one of the main objective, emphases on student centred learning instead of teacher centred as it is in line with its aim of producing technological manner thinking students.

In addition, STEM also aims to produces students who are capable of thinking in logical manner using technology, creating new ideas, designing, inventing new products, and solving problems creatively in the real world conducts.

He stressed on STEM's 3 objectives under its initiative;

i. Stimulate students' interest through Enhanced Curricular;

ii. Sharpen teachers' skills and abilities to teach and facilitate in subjects and activities; and

iii. Established public awareness and understanding.

c) Sato,
Founder, Owlnext Generation Technology

Sato addressed the big shifts in technology that are shaping our future world requires us to develop in mix varieties of Artificial Intelligences (AI) including Quantum Computers and Virtual Realities.

His company aims to develop digital literacy skills of tomorrow's workforce for our children. He feels tha we need to equip them with essential sets of skills to survive in the new age era or commonly known as digital era.

He then emphasized on few basic fundamentals of thriving in the digital era and they can be listed as follows;

• **Generation gap:** The generation gap of education revolves in different type of era. Technology is the new generation's environment and we have no power to separate these two apart but as an alternative we could embrace it and apply in our education system.

• **Digital Literacy:** He believe that digital literacy skills are crucial to becoming a successful key player in tomorrow's workforce. This is due to fact that the

phenomena of digitalization that would eventually be a common thing to us all. Digital literacy includes skills like coding, virtual reality and augmented reality.

• **Critical Thinking:** Shaping the mind-set of both learners and educators are important. He enforced the importance of developing critical thinkers and creative problem solving students in accommodating future society needs. His company currently focuses on absorbing Virtual Reality into its education system in effort of unleashing students' creativity, imagination and potential talents.

d) Cheryl Ann Fernando,
Country Director, Global School Leaders Malaysia

Cheryl Ann Fernando shared her personal experiences of facing students who are struggling with the basic education and suggested that we should have a more inclusive education framework. Our education system should be more inclusive and acquirable instead of having a "one size fits all" curricular.

She emphasizes that in order to prepare the child for the future we need to have quality teachers and also quality education, these are all co-related. We should not aim to be the best school in Malaysia but the best school for Malaysia. in order to achieve that we should not just focus on the content itself but also the way the content is being delivered.

Changes need to be done, as we look forward for every child, every day, every classroom will get the best quality of education.

e) Dato' Freida Pilus,
Founder, Cempaka Group of Schools

Dato' Freida Pilus stated that children are like sponges, they absorb everything but even with that being said we should not be afraid on exposing them to technologies. We should learn to make the best out of it, the main point is how you manage and handle it.

Embrace learning as it is now borderless. Encourage the children on learning how to use technology, this will help them to be individual learners.

It is important for a child to engage in the learning process as it develops them into critical thinkers. They should be educated on how to use technology to solve problems. It is very crucial that a child loves learning.

She reminded teachers that they too have to be learners and students should also have been allowed to be teachers.

f) Dr. Hamidin Abd Hamid,
Assoc. Prof., Department of History, Faculty of Arts and Social Sciences, University of Malaya

Dr. Hamidin Abd Hamid questioned the quality of our education as we often divert our attentions to the students, we tend to overlook the educators. The mentality of discussing matters related to the educators are considered as taboo in our society need to be changed.

He listed 3 tiers to look into; first parents, second educators and third policy makers. Each carries important role in shaping better education system in coping with future changes.

We need to look into the key person in producing well-rounded students. Few aspects to look into, the abilities of the educators, content delivery, qualifications and lastly quality. In order to move forward in this technological era, we need to restructure our education system.

Discussion.

Several participants underlined important remarks on Transformation Plans in the learning approach itself. Shifting from an outcome based learning to standards based learning gives us sufficient room for improvements. Educational technology will end up as sustaining technology is we use it just to provide better, faster, and cheaper education the same old way.

Mr Haissazc Shuqkin Hisham from AMK Wilayah Persekutuan questions our readiness in facing the 4.0 Industrial Revolution, in the sense of preparing the students and educators with the right knowledge. He also suggested that the government be less obstinate when it comes to the education system in order for knowledge and resources to reach everyone accordingly.

Prof Madya Dr. Nurfadhlina Mohd Sharef from Innovation in Teaching and Learning at the Centre for Academic Development (CADe), Universiti Putra Malaysia, pointed out the readiness (e.g. training program) for ability to balance attainment of knowledge as much as the excitement from the engaging usage of mobile has not been properly instilled. Educators are expected to transform by default, which is a huge challenge on top of the current overload. This indicates proper transformation plan should be in place. For example, pedagogical knowledge for technology implementation that ensures learning outcome to be accomplished need structured scaffolding. The said competency based evolution of learners should also mirror the educators'. Therefore, the disruption for Malaysia education context could be defined and scoped, besides staged so we could monitor our progress and take pre-emptive action when needed.

Another participant, Mr. Taufiqurrahman Shamsuddin from AMANRATA expressed that our method of teaching is lacking in values and meaning. This is due to the excessive requirements that needed to be fulfilled by the students that is viewed as burdensome. Ms Cheryl Ann Fernando from Global School Leaders Malaysia agrees with Mr. Taufiqurraham and added that we should not twinge everything in the curricular that would add more weight to the learners.

Besides the transformation plan, focus was then shifted to Government and Policy Makers' roles in Disruptive Education. Dr. Hajah Roziah binti Abdullah from Jemaah Nazir dan Jaminan Kualiti, Kementerian Pendidikan Malaysia enlightened us on the government's new initiative; no more exams for primary 1-3 students.

This is one of the effort done in moving swiftly with the 4.0 industrial revolution however there are many more areas that we can work on improving.

One issue that she stressed upon was the drastic changes in implementation of policies in the system that comes along after every election.Every time the government or minister changes, so does our policies in education system and this action affects the progress and direction.

Her statement was supported by Mr. Mark Parkinson from Tenby Schools Malaysia, he added a 5-year plan does not go hand in hand with the concept of disruptive education. The constant change in policies would also interfere with the effort of preparing students to be lifelong learners. Disruptive education is a global issue effecting everyone worldwide and an education system should practice collectivism rather than individualism.

As addition by Ms Cheryl, she feels the need for government to remove unnecessary process and administrative structures and be less rigid, after all an institution that is micromanage will not flourish.

Puan Azealea Dzulkefflee from ANSARA further on touches the issue of cultural barriers. She mentioned that she comes from the B40 group and was lucky enough to get a placing in MRSM during her younger days and that opportunity gave her the chance to carry herself out of the B4 group. Our curricular system and policies should be constructed based on different groups and we should break the cultural boundaries when it comes to education especially among the B4 group. Education is a basic necessity that everyone should get.

Moving on to the next raised matter, another participant Mr. Hanif Marzuki bin Mohd Saupi from Youth Ventures queries on learners' necessities. He concluded that the system we have now does not pay much attention on the student's interest, we tend to assign them with what we consider good without giving them privilege to think of what they really wanted to do. By doing so we are actually putting barriers and killing their creativity. He shared his experience of encountering a situation where a young student, coming from a troubled family background as the father is a convict but managed to developed a mobile application in just two days as his example. Being a child from such background does not limit his abilities to perform well.

Dr. Sow Harouna from 21st Century Commodity Trading Sdn. Bhd. who is a ''Reading Specialist'' added on that students with special needs (dyslexia, and autism) should not be left behind because they too have contribution for the society. These students' manner of learning differs from normal students; they need a specific curricular to help them with learning. Besides the students themselves, educators too have to be prepared with different set of modules and methods to teach. A set of curricular system should be made available to meet their needs. She emphasized that special needs students are good workers provided they are equipped with proper teachings and guidance.

TAnother participant Mohd Aniq Anrez bin Mohd Azamin from Youth Academy queries on the effort and plans by the government to promote entrepreneurship among schools and universities. Students who wanted to pursue entrepreneurship are cap to limitation as there is not much support from the government in the sense of "start-up". Taking neighbouring countries as examples, he mentioned that the young entrepreneurs are encouraged and nurtured by their government and this helps in creating better trained entrepreneurs. This effort benefit both the students and government and it is best if we take this into consideration.

Last but not least, another issue raised was the content of our syllabus. Mr. Ismil Radzi from Astra Nine Sdn Bhd addresses that the need of basic computer skills such as 'Microsoft Excel', 'Microsoft Word' and 'Microsoft PowerPoints' ought to be given serious attention. This is important in preparing students for the working world that they would eventually come across, instead of just looking into futuristic technologies we should initially master the basic knowledge on it.

Prof. Madya Nurfadhlina Mohd Sharef suggest "future learning ecosystem" that balances human, technology, co-curation of learning as the evolving & flexible curriculum could be discussed deeper. AI solutions such as chatbot and learning analytic which could be combined with IoT, VR, AR and MR sound promising but if one were to conduct a review on these, it can be seen that limited success story is available, similar to other sophisticated tech hype. The IOT implementation for learning has been currently limited to sensing, monitoring and controlling the conduciveness of environment. A separate array of tools are available to encourage collaboration while skills to empower online tools for highly challenging problem solving is still sparse. The impact of the technology that is said to play a big role because the current learner generation is "gadget-bornt" is still unknown.

Observations.

The advances of the digital era have touched nearly every aspect of modern life. So many industries have been disrupted by new IT technologies to the point that they are almost unrecognizable and a number of perspectives emerged in this Disruptive Education Roundtable.

Technological impact on learning changes how the student learn, most importantly are the steps to be taken towards ensuring the future generations are equipped with the future proof characteristics/life skills required to sustain in the challenging environment. We must first be operational before we can be transformational.

Few of the major aspects mentioned by the partakers to take into deliberation are as follow;

1. Devise strategies and be agile.

In order to see more meaningful changes in our education system, we need to do a better job of helping and resourcing educators. For systemic change to take place, government have to spearhead new innovations.

2. Focus on core competencies and outsourced where is practical.

Most "classroom teachers" are integrating digital learning tools in ways that primarily replicate traditional analogue pedagogies. The number of educators in any education system that are using digital technologies and online environment in more transformative way is still low.

3. Implementation of changes in the system.

The best professional learning occurs when they venture out of their local, geographical-conscried circles of practices into more informal, online, global communities of role-alike peers. The more that we can get excellent educators worldwide in front of our local classroom practitioners, the greater likelihood there is of innovation and change to the current models of schooling.