

pulse@UM

Medical Education

- Utilising ACTIONS Model for Exigent Development of a Virtual Learning Environment
- Hawks and Doves in Assessment
- Surgical Simulation in Paediatric Surgery: a Valuable Resource for Teaching, Research and Innovation
- Simulation in Education Research: 8 Lessons in 8 Years of Trial and Error
- A Competency Framework for Ethics Education in Health Research

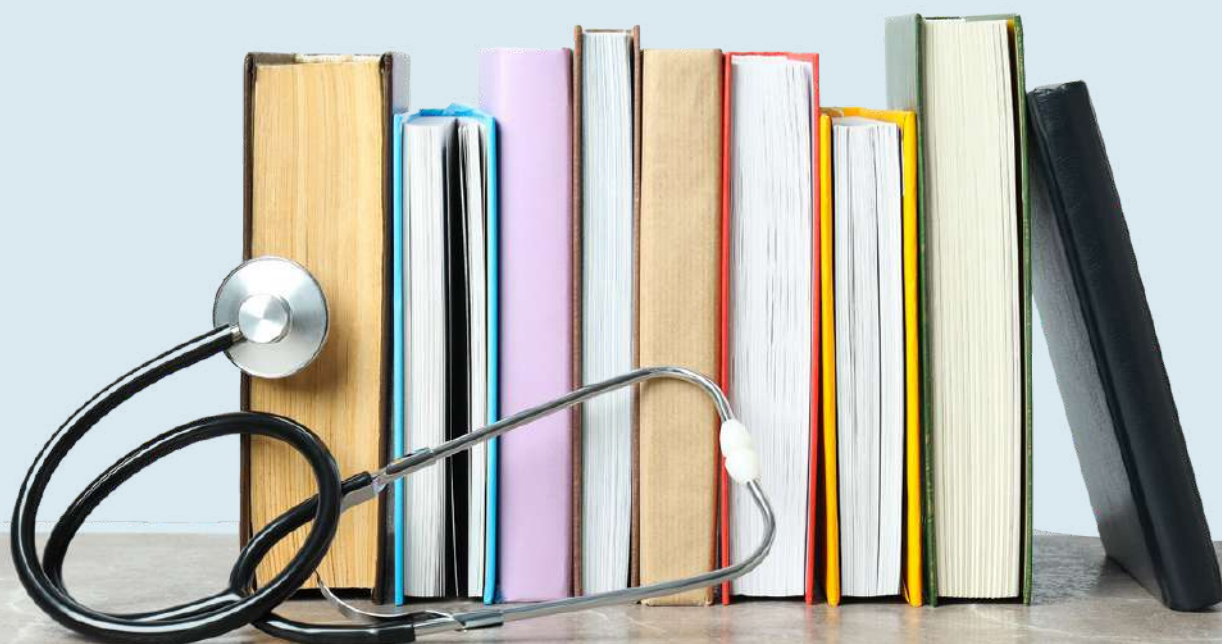
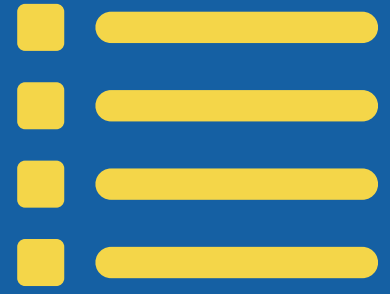


TABLE OF CONTENTS



Picture by Suzanna Edgar
(PhD candidate, Department of Biomedical Sciences)

04 FOREWORD FROM THE
DEPUTY DEAN OF RESEARCH

05 EDITORIAL BOARD

06 COVER STORIES

Utilising ACTIONS Model for Exigent
Development of a Virtual Learning Environment

Hawks and Doves in Assessment

Surgical Simulation in Paediatric Surgery:
a Valuable Resource for Teaching, Research
and Innovation

Simulation in Education Research: 8 Lessons in 8
Years of Trial and Error

A Competency Framework for Ethics Education
in Health Research

16 SPECIAL HIGHLIGHTS

MIST Summer Bootcamp – 2023

The UM-NUS Joint Symposium on Infectious Diseases
and Translational Program

A Collection of Essays: My Journey, My Words

27 ACHIEVEMENTS

28 READ TIPS

Foreword from the Deputy Dean of Research

Welcome to the latest issue of the Pulse magazine!

The field of medicine is undergoing an unprecedented transformation. Advancements in technology, evolving patient needs, and shifting healthcare paradigms demand re-evaluating how we train the next generation of healthcare professionals. In this context, research in medical education has emerged as a cornerstone for enhancing the quality of healthcare delivery and promoting general well-being.

Traditionally rooted in centuries-old practices, medical education is now at the crossroads of innovation and adaptation. Research in medical education ensures that future medical professionals are technically proficient and well-equipped to meet the complex healthcare demands of the 21st century. One of the central tenets of research in medical education is the pursuit of evidence-based teaching and learning methods. This current issue presents important research endeavours that pave the way for further optimization of learning processes in our faculty.

Educators and students had to rapidly adapt to new teaching and learning methods during the COVID-19 pandemic. The increasing prominence of virtual learning underscores the urgency for transforming medical education. For this reason, we are pleased to feature researchers who have explored simulation-based assessments, virtual learning, and the digitalization of medical education.

This issue also highlights a few of the many events organized by our academics, such as the UM-NUS Joint Symposium and the Malaysian Implementation Science Training bootcamp 2023. We are also pleased to introduce the Faculty's Top 2% of Scientists in the World in their respective fields. Their unwavering dedication to advancing knowledge and pushing the boundaries of human understanding is truly commendable!

Research in medical education helps us generate, translate, and implement new methods to train the next generation of healthcare professionals.

As we continue our research journey, let us remember that the true beneficiaries of our endeavours are the people in our communities.

Happy reading!

PROF. DR. SANJAY RAMPAL A/L LEKHRAJ RAMPAL
*Deputy Dean of Research,
Faculty of Medicine*

Editorial Board

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Utilising **ACTIONS** Model for Exigent Development of a **VIRTUAL LEARNING ENVIRONMENT**



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The problem

The COVID-19 outbreak and the subsequent events of enforced changes required higher education institutions worldwide to embark on emergency remote learning. The Universiti Malaya utilised a Moodle-based learning management system (LMS) called SPeCTRUM to support e-learning. Although this LMS has a broad ability to support learning, it fell short in providing the experiences of real-time communication and collaboration in a cohesive and all-encompassing Virtual Learning Environment (VLE). Thus, there was an exigent requirement for a VLE which simulates a physical learning environment as closely as possible and also an opportunity to ensure the development of a sustainable VLE.

The solution

A pragmatic framework selected for the development process was the Access, Costs, Teaching and learning, Interaction and user-friendliness, Organisational issues, Novelty and Speed (ACTIONS) model by Tony Bates (1).

1. Access and Costs: Comprehensive and cost-effective operational access to all software features was essential for sustainability. Integrating existing Moodle-based LMS and Microsoft Teams was the best solution since the faculty was provided access to these through a University enterprise subscription.

2. Teaching and learning, and Interaction and user-friendliness: A careful deconstruction of the demands of the curriculum was done to detail the design requirements of VLE. This step was critical in determining the ability of the software solution selected to meet the demands of

the curriculum in terms of number of students and faculty members to be enrolled, security features, options for creation of large and small group learning spaces, ability to support all learning opportunities, ease of use and ability to integrate with additional learning resources. By amalgamating the capabilities of Moodle and Microsoft Teams through deep linking, the VLE created could support all teaching-learning and assessment activities of the existing integrated curriculum.

3. Organisational issues, Novelty and Speed: The solution selection also considered the ability of existing organisational infrastructure to support the implementation, reliability of the platforms and ease or speed with which the VLE could be created and utilised. Additional e-resources could be easily integrated into this VLE to provide a single access portal to all teaching-learning needs. Detailed user guidelines were prepared, and end users were provided training through the same VLE.

Lessons learned

Creating a VLE could be perceived as a costly and time-consuming activity. Our experience indicated that a comprehensive idea about the needs of curriculum coupled with appropriate design thinking would ensure the creation of a VLE which provides a constructivist environment with essential features, including end-user management, communication and collaboration, resource integration, ability to perform assessment and evaluation, and ability to support innovations in teaching and learning. End-user training through the same VLE will enable troubleshooting and optimal usage. The integrated Moodle-Microsoft Teams platform is a cost-effective, time-efficient solution to a sustainable and robust VLE.

Reference:

1. Boettcher, J. V., & Conrad, R. (2004) *Faculty Guide for Moving Teaching and Learning to the Web*.



HAWKS AND DOVES IN ASSESSMENT



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Mary Joseph Marret
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An essential component of any medical curriculum is the conduct of assessments to ensure clinical competence of graduating students. Medical education which remains relevant over time requires co-alignment of assessments and the curriculum and reference to the healthcare needs of the local community. Periodic assessments conducted throughout a medical programme are important to monitor student progression. Exit assessments certify a level of achievement marking successful completion of the programme.

A number of good assessment practices are already in place to ensure maintenance of standards. They include application of criteria for sound assessment, blueprinting of the curricular content, question vetting, standard setting, and the use of moderators or external examiners. Strategies to ensure that assessments reflect actual clinical competence include using a range of assessment methods as well as designing good quality assessments for reliable and valid measurements of student performance.

In the context of clinical assessments, an often neglected aspect crucial to ensure consistency and impartiality is the conduct of examiners. There is much anecdotal evidence from observations that examiner behaviour and perceived bias may impact significantly on student performance in practical and clinical assessments. Examiners may range from the “metallic”, or stringent, to “molluscoid”, or lenient, in the century-old words of Sir William Osler or as “hawks” and “doves” in the current day.

A number of measures have to be put in place to minimise variations in assessment related to examiner behaviour and bias. The first is to increase examiner awareness of their behaviour and the need for consistency in the way they examine.

Secondly, all examiners should be briefed prior to the start of any practical and clinical assessments. Prior briefing to provide an orientation regarding marksheets and accompanying descriptive rubrics for grading contribute to reducing subjectivity when making judgements about the observed clinical competence demonstrated by the students. Such orientation is essential for all examiners regardless of their level of experience, as it provides an opportunity for examiners to understand the level at which they are required to examine.

Thirdly, prior review by examiners of patients used in the assessment of clinical competence, enables verification of clinical signs, with patient calibration to provide a reference guideline for the level of competence expected. All these measures should be conducted regularly on a routine basis before any assessment.

Medical schools have a responsibility to ensure and demonstrate that a certain level of competence has been achieved in their graduating doctors, as this is central to public accountability. They are also increasingly being challenged to provide evidence that assessments discriminate between the sufficiently and “minimally competent” at all levels of medical training and education. As exit-level assessments are used for licensing and certification purposes, they are regarded as “high-stakes” in nature, with significant implications for the student, the curriculum, the institution and the public.

Fairness and transparency in the examining process together with sound and defensible assessment practices are vital in safeguarding standards. As medical teachers this should be our guiding principle.

[This article forms part of a presentation delivered at the 12th ASEAN Medical Deans' Summit in Kuala Lumpur, Malaysia, on 28th July 2023]

Surgical Simulation in Paediatric Surgery:

A Valuable Resource for Teaching, Research and Innovation



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Simulation Training in Paediatric Surgery

The mantra based on Halsted's model of 'see one, do one, teach one' (1) has been challenged due to increasing clinical governance. Some procedures are regarded to require an additional learning step of 'do one on the simulator' before being carried out on patients (2). The impetus for simulation is even greater in Paediatric Surgery since the case volume is generally smaller compared to other surgical specialties. The Division of Paediatric Surgery has adopted several do-it-yourself simulation models to help trainees develop necessary technical skills prior to operating on patients.

Central venous access using the dynamic needle tip positioning technique

Percutaneous central venous access (CVA) in children is a demanding skill to acquire because of the anatomical factors associated with small calibre vessels and a highly stretchable vascular tunica intima. Dynamic needle tip positioning (DNTP) is an essential technique, involving ultrasound-guided adjustments of the needle tip's trajectory toward the targeted vessel, to ensure an optimal level of safety and a high rate of success. Therefore, DNTP has been the focus of training in many centres worldwide (3). We conducted several workshops to teach the theory and practical aspects of DNTP, using a simple and cheap (RM 50) model consisting of an elongated balloon filled with red fluid (mimicking blood) sandwiched between two pieces of chicken breast (Figure 1). Successfully trained participants were able to apply the skills in routine elective CVA lists.



Figure 1: A simple model using two pieces of chicken breast

Endorectal pull-through surgery for Hirschsprung's disease

Hirschsprung's disease is a congenital condition associated with distal colonic obstruction treated with a transanal pull-through surgery by resecting an abnormal segment of colon and restoring continuity of the rectum. It has a significant learning curve so trainees rarely gain adequate experience. A Hirschsprung's pull-through model using a lamb anus connected to its rectum, colon and pelvic structures provided the opportunity for trainees to learn with one-to-one support (Figure 2)(4). The model, costing under RM100, is highly realistic (8/10 rated by trainees) especially when combined with the use of diathermy operating (courtesy of Medtronic®) to achieve dissection similar to real-life. Trainees' satisfaction was high due to the safe space provided to make mistakes without harming patients whilst finesse was attained during the workshop.



Figure 2: A Hirschsprung's pull-through model using a lamb anus connected to its rectum, colon and pelvic structures

Laparoscopic inguinal hernia repair

Paediatric laparoscopic inguinal hernia repair (LIHR) confers many advantages to patients (5). However, training is limited to very few centres. An LIHR simulation model which costs RM15 has been shown to offer a high level of training for trainees developing skills translatable into operative competence (Kirkpatrick level 3)(6, 7). We conducted 8 LIHR workshops to train 17 trainees by combining a flipped-classroom method (8) using 3 pre-recorded videos showing the 3 essential laparoscopic suturing skills to complete LIHR. During the workshops, participants focused on psychomotor development using the simulated LIHR models guided by a trainer to improve confidence in performing LIHR (upscaled 55%). Concurrently, two third-year elective medical students (UMMP 3.1) conducted a research project validating two LIHR simulation models, and discovered that a novel sausage skin model compared more favourably against the published glove model (6) (Figure 3), making strides in simulation research and medical education.



Figure 3: A novel sausage skin model compared more favourably against the published glove mode

Future

Our growing experience enables us to work collaboratively with other Malaysian and UK centres to provide training and develop research in surgical simulation. Even resource challenged settings in low and middle income countries can benefit from using these low cost models for training.

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SIMULATION IN EDUCATION RESEARCH: 8 LESSONS IN 8 YEARS OF TRIAL AND ERROR



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Research in medical education contributes to understanding the learning process and provides evidence to support educational decision-making. Simulation is a technique that creates a situation or environment to allow persons to experience a representation of an actual event for practice, learning, evaluation, testing, or to gain an understanding of systems or human actions. Simulation, therefore, can be used to contribute to understanding learning or assist in decision-making. In this learning journey, I have learnt these eight things.



Figure 1: CSU team

01

Look inside the box

If one person encounters a problem to solve, someone else may have encountered it before and has solved it. It may have been a different problem, but lessons learnt from solving it in the past can be applied. It would be helpful to look into that treasure box. In medical education, areas that have contributed to progress include the acquisition of expertise, effectiveness evaluation of problem-based learning methods, assessment of learner performance and post-certification assessment. These ideas coincide well with areas identified to improve patient safety that can be addressed with simulation: technical and non-technical skills, systems probing, assessment and evaluation of the effectiveness of an intervention. Merging best practices and lessons learnt from these two fields to solve problems is a powerful tool.

02

Is simulation the subject of research, or is simulation the tool for research?

This distinction is essential, as it achieves different objectives, methodologies, reporting methods, audiences and applications.

03

Every activity is a research opportunity

Many of our activities have a vital purpose: to solve problems or be curiosity-driven. Having a clear target helps chart a plan to analyse and solve problems systematically. Clear documentation helps future learning, either to replicate the activity in a similar or new context, adding to the body of knowledge. Viewing learning activities with a research mindset helps develop exploration, focus, and clarity.

04

Use a framework to design an activity

A solid theoretical foundation with methodology helps a researcher plan a learning activity while helping them identify the limit to generalising the outcomes or methods. It also helps them identify what works and how. The theoretical framework connects the researcher to existing knowledge, supporting rigour.

05

Include evaluation and sharing in the plan

An activity is designed in three stages: plan, implement and evaluate. Including the methods and tools for evaluation during planning is very important. Often, we evaluate only the reaction of our learners. This can be pushed 1 to 2 steps further, i.e. learning by doing something as simple as a pre-and post-test and a follow-up interview to check if the activity has made a difference. The commitment can be made with the learners a priori. A more advanced stage is identifying and committing to share the experience via a bulletin or a research article.

06

Go beyond constructive alignment

A lot has been emphasised on constructive alignment when designing any educational intervention. It is crucial to match learning to the learners, their needs, levels and expectations, and to do so with the available resources. It is important to get them engaged via a learning contract and involved via evaluation and co-creation of future learning materials.



Figure 2: UM Anaesthesiology sim team

07

Think about the “so what”

When sharing with fellow educators and researchers, many of us report what we did, how we did it and why. It is also imperative to share the “so what”. When thinking about the so what, we challenge our boundaries and will continue to explore fresh ways to solve problems. The bonus point is that this engages our readers, and help them apply our methods in their context.

08

Work together

It seems this is too much work for a person to do for every small educational activity. Therefore it is essential to look at the bigger picture: where does this piece of jigsaw fit in the puzzle? It is also important to realise that this is not a solo journey. Content experts can provide context to the issues or problems; educational experts can provide the theoretical framework most suitable to solve issues, along with its benefits and limits; simulation experts could assist in finding the most appropriate tools to ensure rigour.

As far as I can conclude, let's continue to be dedicated to the endless pursuit of knowledge and always pushing the boundaries of what we already know. I would encourage you to chart your path with enthusiasm and curiosity, but keep in mind the valuable insights and lessons that may be learnt from the experiences shared here.



A Competency Framework for Ethics Education in Health Research

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Medical Humanities and Ethics Unit (MedHEU),



In an increasingly complex ethical landscape, the importance of establishing a competency framework for education in health research ethics (HRE) cannot be overstated. Although formal HRE educational programs are increasingly being developed worldwide, it is crucial to clearly define their outcomes to ensure both the quality of education and the competencies of the graduates. The Master of Health Research Ethics (MOHRE) program, a collaboration between the Faculty of Medicine at Universiti Malaya (UM) and the Berman Institute of Bioethics at Johns Hopkins University (JHU), serves as a prominent example in Southeast Asia. Co-led by Professor Dato' Dr. Adeeba Kamarulzaman and Professor Dr. Jeremy Sugarman, the programme is supported by the National Institutes of Health Fogarty International Center (R25TW010891).

However, despite the proliferation of such programmes, there is often no clearly communicated understanding of the educational outcomes or whether they meet the needs of the HRE field. To address this, a competency framework for HRE education was empirically developed through a supplementary grant (3R25TW010891-03S1) led by Dr. Sean Tackett. This framework is known as the 'Framework for Research Ethics Studies Competencies and Outcomes' (FRESCO) (Fig. 1).

The framework was systematically developed through a six-step methodology designed to guide, implement, assess, and evaluate programs like MOHRE. FRESCO can be implemented to refine recruitment and selection processes, educational and assessment methods, and performance measures to ensure that HRE programs achieve their intended outcomes. Our study also identified functions of varied importance and actors with varying levels of influence, revealing gaps in existing HRE systems. Through FRESCO, we were able to validate the MOHRE program's effectiveness in producing competent graduates. Concurrently, the MOHRE program also served as a practical setting to validate FRESCO as a suitable tool for assessing industry needs in HRE.

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1. Tackett S., Jenn Ng C., Sugarman J., Daniel E.G.S., Gopalan N., Tivyashinee, Kamarulzaman A., Ali J. (2023). A Competency Framework for Health Research Ethics Educational Programs: Results from a Stakeholder-Driven Mixed-Method Process, *Ethics and Human Research*. 45(3), 29-39. doi:10.1002/eahr.500166
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Framework for Research Ethics Studies Competencies and Outcomes' (FRESCO)



Foundational Knowledge



Laws, Regulations, Guidelines, and Policies for Research Oversight



Ethical-Issue Identification, Analysis, and Resolution



Engagement, Communication, and Advocacy



Lifelong Learning, Education, Research, and Scholarship



Coordination, Stewardship, and Responsiveness in HRE Systems



Impartiality, Honesty, and Responsibility

Figure 1. FRESCO competency domains

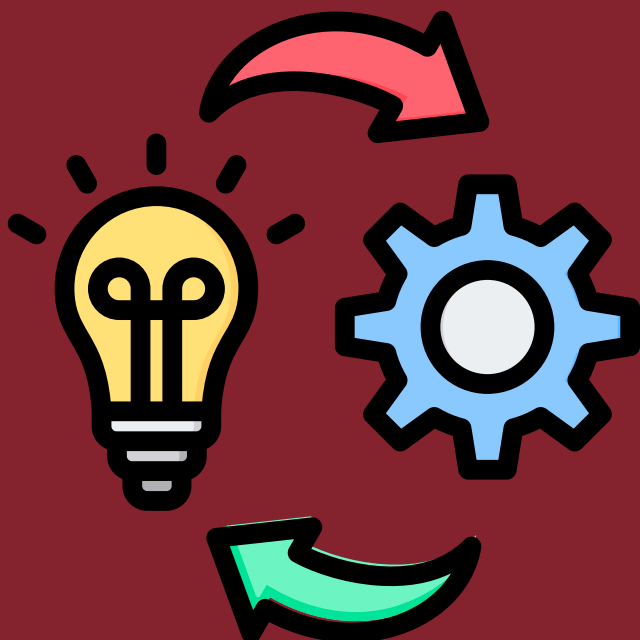
MIST SUMMER BOOTCAMP – 2023

Making Implementation Science
Approachable, Affordable and
Accessible



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The Centre of Excellence for Research in AIDS (CERiA), Centre For Epidemiology and Evidence-based Practice (CeBP) under Faculty of Medicine (FoM), Universiti Malaya (UM); Yale School of Medicine and Yale School of Public Health, Yale University, US, came together for the third time to host MIST Summer Bootcamp-2023 from July 17 to July 19, 2023 at the DoubleTree by Hilton, Kuala Lumpur. In 2020, Yale University and Universiti Malaya (UM), under the leadership of Professors Rick Altice and Adeeba Kamarulzaman, were awarded a multi-million-dollar grant by the Fogarty International Program at the National Institutes of Health, US, titled the 'Malaysian Implementation Science Training (MIST)' program, to catalyse Implementation Science (IS) research and training. With this support, MIST has expanded the local reach of IS by creating and sustaining a short-term training program through this annual Boot Camp. This program is fully aligned with UM's new mandate to build and strengthen research training in IS and research.

With a commitment of enhancing the skills of researchers, academicians, healthcare professionals and community-based workers across Malaysia, the theme of MIST-2023 was 'Making Implementation Science Available, Approachable, and Accessible to Resource-Limited Settings'. Taking stock of the latest advances in IS and how IS can be utilized in expanding the HIV care cascade by incorporating other infectious and non-communicable diseases (NCDs) to serve the most affected in resource-limited settings was the centre of all presentations, panel discussions, and skill-building workshops at MIST 2023. MIST Summer Bootcamp 2023 featured lectures with question-and-answer sessions, skill-building workshops, interactive workshops, audience-driven sessions, and panel discussions led by global experts from Yale University and emerging IS scholars from UM. MIST-2023 offered a platform for over 140 participants across disciplines to come under the same roof with a common agenda of learning, sharing and exchanging ideas on IS.

In 2021 and 2022, MIST Summer Bootcamp was focused on HIV in IS. This year, MIST Summer Bootcamp broadened the focus from HIV to other Infectious Diseases and NCDs. Additionally, the Bootcamp extended a warm welcome to participants from Thailand, the Philippines and US. The program was inaugurated by Professor Dr. April Camilla Roslani, Dean, Faculty of Medicine, UM, with an exciting agenda that allowed participants to hear from global scholars Professors Sten Vermund, Rick Altice, Denise Esserman, Jennifer Edelman, Luke Davis, Sheela Shenoi, and Lynn Madden, followed by hands-on practice of the concepts and methods demonstrated. As we all learn at our own pace, extra time was allotted for the session on 'Ask the Expert'.

UM-Yale plans to reconvene in 2024 again with an aim to open the door not only to the next generation of Implementation Scientists in Malaysia but to the region.



Figure 3. A panel discussion by faculty members and the Ministry of Health



Figure 2. An exhibition of photovoice in HIV research



Figure 3. Participants learning about the Nominal Group Technique from Prof Rick Altice



THE UM-NUS JOINT SYMPOSIUM ON INFECTIOUS DISEASES AND TRANSLATIONAL PROGRAM: ON THE FRONTIER OF PANDEMIC



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The "UM-NUS Joint Symposium on Infectious Diseases and Translational Program" that unfolded on 25 July 2023 proved to be an intellectual feast, one that showcased the amalgamation of exceptional ideas and collaborative spirit.

The symposium attracted an audience of diverse 150 attendees, comprising esteemed professionals, postgraduate candidates, and passionate enthusiasts. The highly anticipated event exhibited a harmonious blend of inquisitive minds, fervent discussions, and insightful exchanges, thus creating a truly stimulating and dynamic atmosphere. An enlightening array of topics came under the spotlight as 8 speakers from the Infectious Diseases Translational Research Program, National University of Singapore (IDTRP-NUS) took the stage. Their presentations offered a kaleidoscope of insights into the latest advancements, cutting-edge research, and emerging trends in infectious disease. From illuminating keynotes to engaging panel discussions, each session brought unique perspectives and inspired innovative thinking.

One of the highlights of the symposium was the insightful 3-minute lightning research talk by student representatives from the Department of Medical Microbiology, Faculty of Medicine, Universiti Malaya. Their presentations brought fresh perspectives that challenged traditional paradigms and kindled conversations around groundbreaking ideas. It left attendees with a wealth of knowledge and plenty to contemplate upon. The symposium was officiated by the esteemed Dean of Faculty of Medicine, Universiti Malaya, Prof. Dr. April Camilla Roslani. As we look back at the event's success, we are filled with gratitude and inspiration, as we anticipate future collaborative efforts against infectious diseases that the symposium undoubtedly has catalyzed.



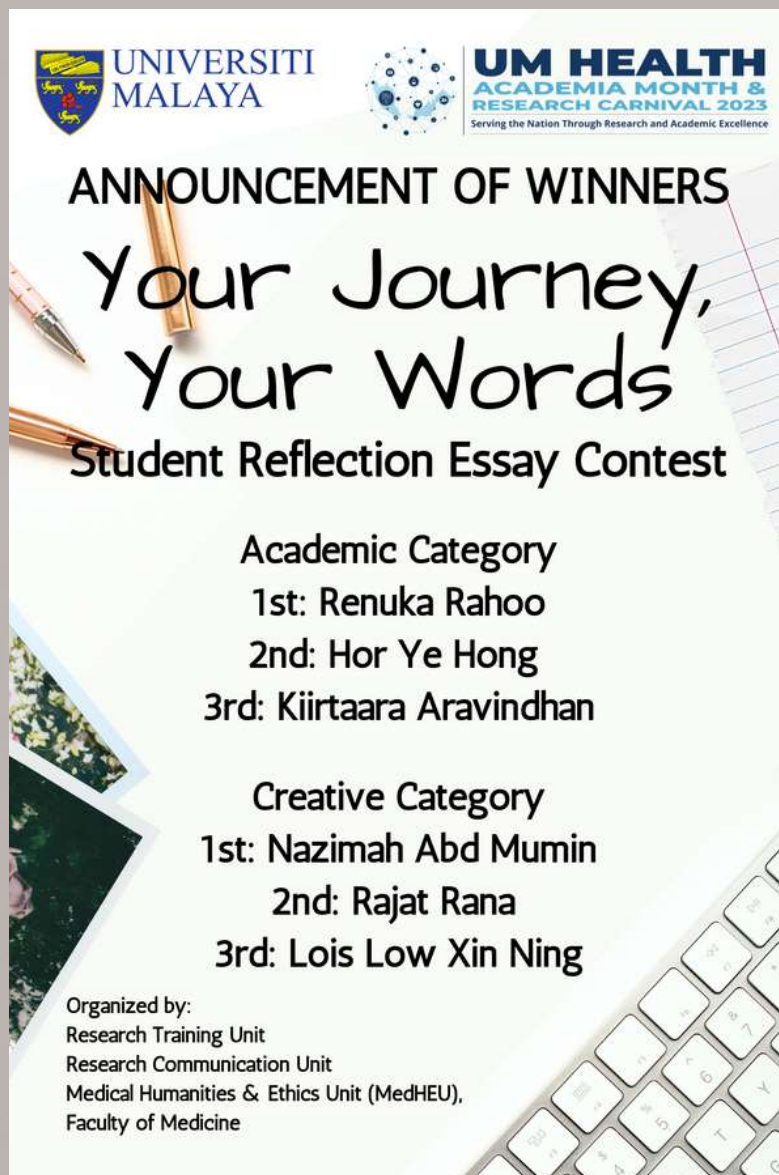
Figure 1. (Top) All participants gathered at the symposium. (Bottom) The organizing committee, esteemed speakers, and students presented in the 3-minute lightning talk.



Figure 2. The organizing committee. From the left, Dr. Chin Kim Ling (Program), Dr. Rafidah Lani (Publiscity & sponsorship), Prof. Dr. Chan Yoke Fun (Advisor), Assoc. Prof. Dr. Chandramathi Samudi (Chair), Dr. Kumutha Malar Vellasamy (Logistics), Dr. Azwani Abdullah (treasurer), Dr. Nurhafiza Zainal (secretariat), Ms. Nur Atifah Ghazali (support) and in the right picture insert, Dr. Anis Rageh Al-Maleki (secretariat).

STUDENT REFLECTION ESSAY CONTEST:

Your Journey, Your Words



UNIVERSITI MALAYA **UM HEALTH**
ACADEMIA MONTH & RESEARCH CARNIVAL 2023
Serving the Nation Through Research and Academic Excellence

ANNOUNCEMENT OF WINNERS

Your Journey, Your Words

Student Reflection Essay Contest

Academic Category
1st: Renuka Rahoo
2nd: Hor Ye Hong
3rd: Kiirtaara Aravindhan

Creative Category
1st: Nazimah Abd Mumin
2nd: Rajat Rana
3rd: Lois Low Xin Ning

Organized by:
Research Training Unit
Research Communication Unit
Medical Humanities & Ethics Unit (MedHEU),
Faculty of Medicine

The short essay competition "Your journey, Your words: Student reflection," which took place as part of the UM Health Academia Month and Research Carnival 2023 at the Faculty of Medicine (FoM), was an overwhelming success. The event received a remarkable number of entries, with 17 submissions for the academic category and 33 for the creative category. This enthusiastic response highlights the vibrant and engaged community within FoM and beyond.

The Research Training Unit (RTU), Medical Humanities and Ethics Unit (MedHEU), and Research Communication Unit (RCU) extend their heartfelt appreciation to all the participants for their valuable contributions and support. The success of this competition would not have been possible

without the active participation and enthusiasm of the FoM community.

This competition served as a platform to encourage and showcase the creative and academic writing talents of the students. It is a testament to the diverse skills and interests that exist within the faculty. The organizers look forward to building on this success in the future, with the hope of nurturing and promoting a culture of passionate writing within the FoM community.

6 winning essays are highlighted in this Pulse@UM issue.

My Symbolic Tag



I have chosen to keep the tag I received after registering for the conference, which had the words "UM delegates" elegantly etched upon it. While I have had the privilege of attending several conferences throughout my career as a pharmacist, this one holds a special place in my heart. It serves as a tangible reminder of my personal journey; a symbol of my determination to step out of my comfort zone and to continuously pursue my passion for knowledge within my field.

This tag is not merely a piece of paper; it is a repository of memories, encapsulating my experience as a first-time participant as an oral research candidate at the conference. Presenting

my oral research at the conference filled me with immense pride and satisfaction. As I reflect upon it, I realize that nearly a year has passed since I embarked on my master's degree journey at the age of 37, while simultaneously balancing the roles of a mother to two toddlers, a wife and a student.

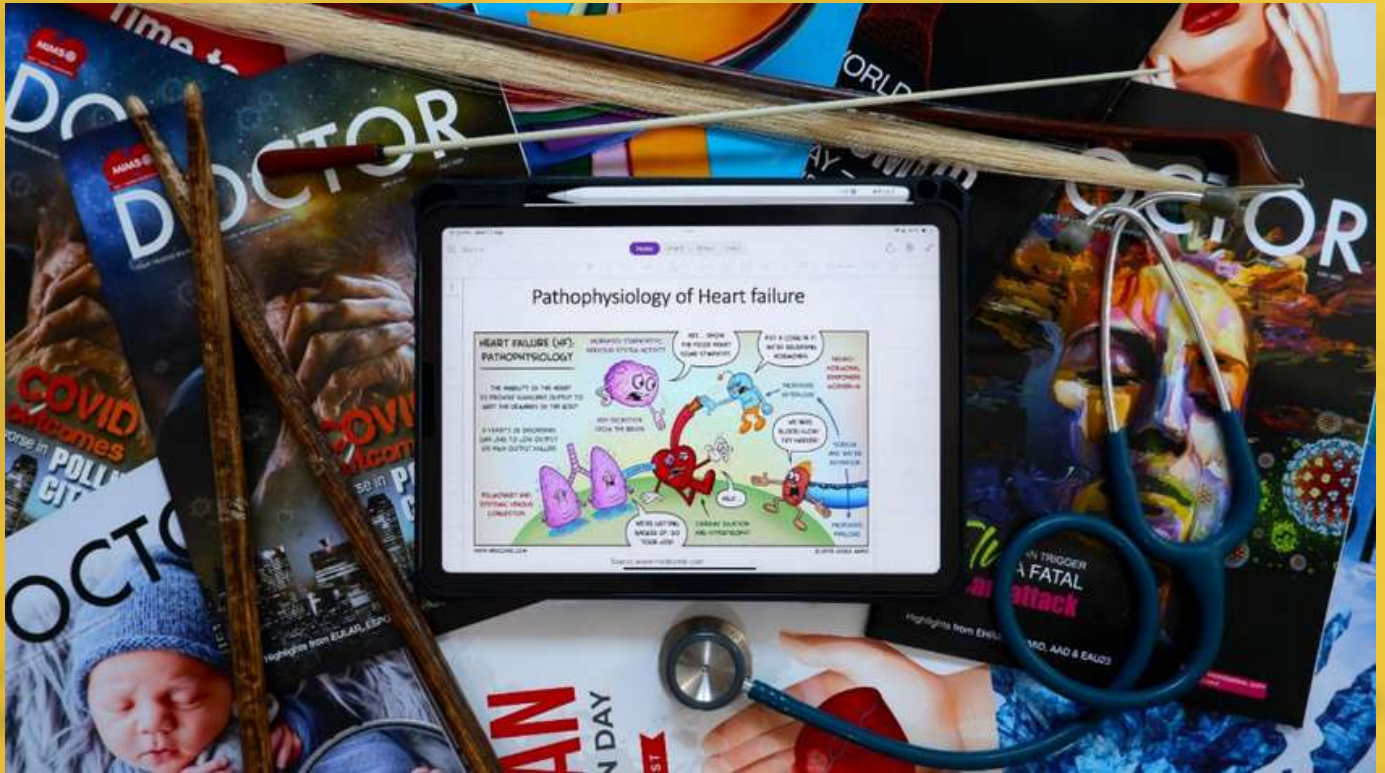
During an intense week with proposal defence and family commitments, I strategically scheduled study hours and communicated openly, ultimately improving both times management skills and my relationships. Throughout my academic journey, I encountered numerous obstacles, including setback with my research methods and occasionally feeling of being overwhelmed. But, I found my way out and this experience taught me the importance of being resilience and adaptability yet to remain focused.

This journey has been transformative, and this tag symbolizes my evolution.

By Renuka Rahoo

***1st prize winner of Your Journey, Your Words Student Reflection Essay Contest
(Academic Category)***

Special Highlight



Dazzled by the light glaring off my blank answer sheet, the familiar sound of lead meeting paper shook me from my trance. Nerves frazzled, heart pounding, I pored over question by question, sleuthing through each tiny quirk, hoping to unearth the correct answers. The occasional cough pierced through the deathly silence as I wearily shaded in my answers, emotionally and physically fatigued by countless hours spent in my tiny ramshackle of a dorm studying, battered by the stress that comes with any exam.

Stress takes its toll, even on the best of us. I've never witnessed a comrade fall victim, but I've heard tales, brilliant minds driven mad by it. Their aspirations, their dreams, brutally shattered, being axed from the medical program with their sanity barely intact. So far, it's been smooth sailing for me, but deep inside, I know, an uphill battle with stress awaits me.

Stress, is like an orchestra – too little and there is nothing to be heard; too much, and it's jarring noise. In the right volumes, it harmonizes, resonating with the listener, gently coaxing them towards greatness. Of course, every orchestra needs a conductor, he regulates its tempo and pitch, urging it on as it falls behind; reeling it back as things get too hectic.

Music, is my conductor, my life's metronome; steadying the tempo of my life, allowing me moments of serenity in the otherwise manic lifestyle of a medical student. I'm marching on to the beat of my own drum, are you?

By Hor Ye Hong

**2nd prize winner of Your Journey, Your Words Student Reflection Essay Contest
(Academic Category)**

Navigating the Path to International Recognition in Aging and Mental Health Research



My journey in aging and mental health research has been a relentless pursuit of knowledge, marked by imposter syndrome battles and financial hurdles. My primary goal has always been international research dissemination, and the chance to present at the International Association of Gerontology and Geriatrics Asia-Oceania Regional Congress 2023 is a significant milestone.

Acquiring research skills was my initial challenge, necessitating tireless dedication to honing expertise through literature review, data analysis, and refining writing skills. I attended workshops, collaborated with mentors, and sought guidance from peers, ultimately developing a comprehensive skill set for complex research.

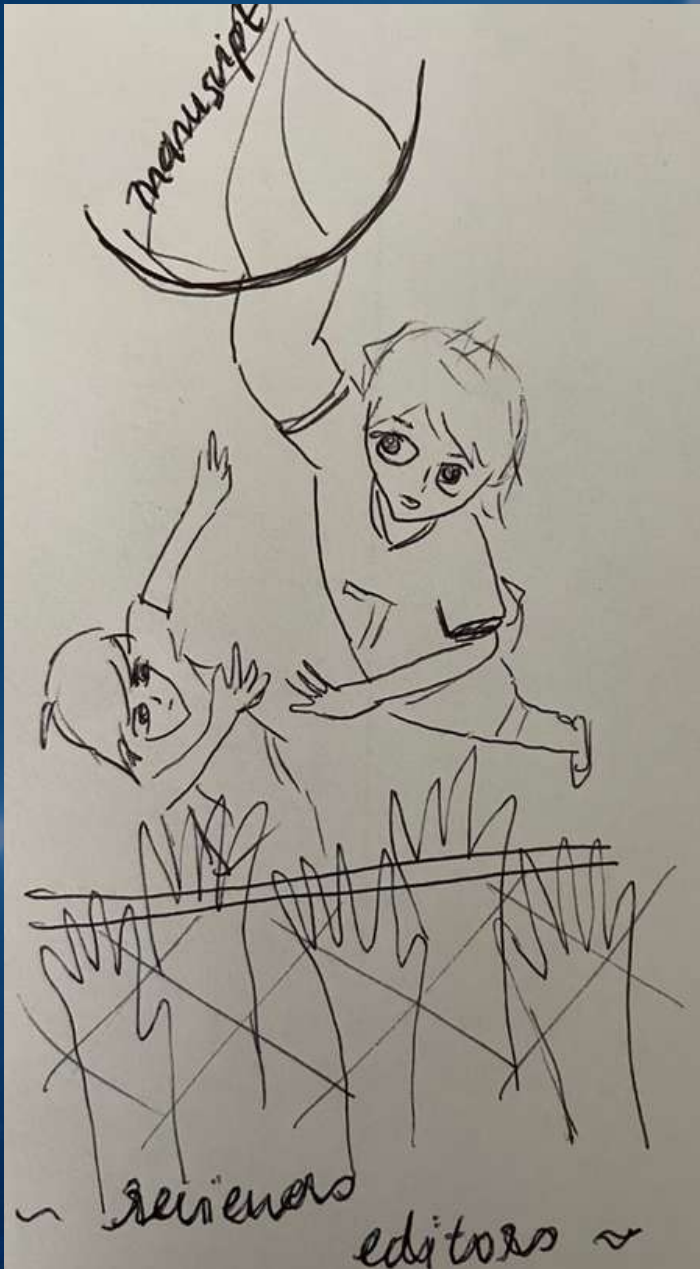
Imposter syndrome proved a formidable adversary despite my growing expertise, raising doubts about my research's value on the international stage. Financial constraints were another hurdle in funding my trip, requiring creative solutions. This process reinforced my commitment to research goals. To tackle this, I applied for a travel grant to the Asia-Oceania Regional Congress. The application required careful curation of essays, a deep dive into research relevance, and articulating potential impact, serving as a pivotal moment of self-validation.

As I stand on the cusp of presenting my research internationally, I am reminded that the journey to achieve one's goals is filled with challenges. Through dedication, perseverance, and the courage to confront these challenges, I am poised to share my findings with the global community, making strides in advancing our understanding of aging and mental health. The path may have been arduous, but the destination promises to be transformative.

By Kiirtaara Aravindhan

***3rd prize winner of Your Journey, Your Words Student Reflection Essay Contest
(Academic Category)***

Persistence?



It is hard to get inspired, but inspiration usually comes from unexpected sources. As for me, it comes from overhearing the shrieking voice-over of an anime show that my kids were watching.

"I haven't reached the level where I can show my perseverance.... What I have now is a sense of responsibility....everyone is working so hard, so I thought I also should do better...."

Hearing that, I cannot help but be reminded of the fifth journal rejection that I received 2 days ago. Intrigued, I turned towards the TV. Staring back at me was a wide-eyed ginger-haired boy, too short to play as an ace in his volleyball team.

His teammate shouted to him, "You are no ace, but with your speed and spring, you can overcome any block to score!" ... and working on these skills, he achieved his dream of winning at the national level! "Wah!"

If only real life is an anime series... but, it is!

The ball is the manuscript, the tall blockers are the reviewers and editors, the setter is my supervisor, the supporters are my family and friends cheering me on, and the spiker is me!!

I am no ace, but, with the whole team and supporters backing me up, there is no stopping "this ball" from hitting the opponent's court!

Smiling now that I had managed to conjure a realistic visual of me spiking down the manuscript through the "blockers" , I walked up to the working desk and opened the rejected manuscript (again). Remember, in the end, the person you will always have to beat is yourself.

Special thanks: (1) Prof Emeritus Dr Ng Kwan Hoong (2) Inspiration and snippets from "Haikyu!" and Sarah Sofiyah and Sulayman (for introducing me to the anime)

By Nazimah Ab Mumin

**1st prize winner of Your Journey, Your Words Student Reflection Essay Contest
(Creative Category)**

Navigating the Path to International Recognition in Aging and Mental Health Research



In the photograph captured during my enriching journey through the mountainous countryside of Eritrea, the joy and camaraderie with local African children radiate through the smiles on our faces. Each time I look at this image, a wave of warmth overcomes me, echoing the genuine connection we shared during this unplanned trip. Pedaling through the rugged terrain, thirsty and tired, the kids residing in a remote village offered me water and snacks when there were no shops around. This unsolicited but humane, and kind gesture is an incident that vividly depicts the affability of children, impoverished but rich in generosity and warmth. The wind whispered tales of resilience and determination as I navigated the hills, symbolizing the challenges of balancing my demanding role at United Nations with my personal pursuits. The ascent mirrored the uphill battles of my work, and the downhill represented moments of reprieve and joy, much like life's ebbs and flows.

Interacting with the children added a layer of perspective to my journey. Their laughter echoed simplicity and purity of life, reminding me to find joy in every moment. They taught me beauty of embracing spontaneity and the importance of cherishing human connections amidst a busy life. This profound experience epitomized the essence of study-life balance, a delicate equilibrium I aspired to replicate in my daily lifestyle. In retrospect, that trip encapsulated a metaphorical cycle of life—balancing uphill climbs with exhilarating descents, finding harmony in the journey, and appreciating the human connections that enrich our experiences.

By Rajat Rana

***2nd prize winner of Your Journey, Your Words Student Reflection Essay Contest
(Creative Category)***

Special Highlight



"So, this is your third time donating blood?" The nurse asked while inserting the needle. Nodding, I contemplated the personal significance of blood donation.

Reflecting on the past two decades, I have been mostly on the receiving end of love and support. The lessons taught, kindness lavished, and time invested were good soil for my growth. Now, like a young tree with tender green leaves, I am able to give back.

But what could a penniless undergraduate student give? To my parents, who drove me to school for years, I offered respite from behind the wheel. To my teachers, who sowed seeds of knowledge, I gave the joy of witnessing growth. To my friends who have been through thick and thin with me, I gave a listening ear and words of

encouragement. To the critically ill, I donated blood and pledged my organs that they may have a second chance at life. And to my future patients, I dedicate my youth to studying, for the day when I am the only thing between them and the grave.

Freely I have received, freely I shall give. Inspired by others to be a regular blood donor, I aspire to inspire through a selfless lifestyle. Whether it is giving time, sharing resources, or extending thoughtful gestures, when we give within our capacities without expecting anything in return, it is the best gift one could give – the gift from the heart.

By Lois Low Xin Ning

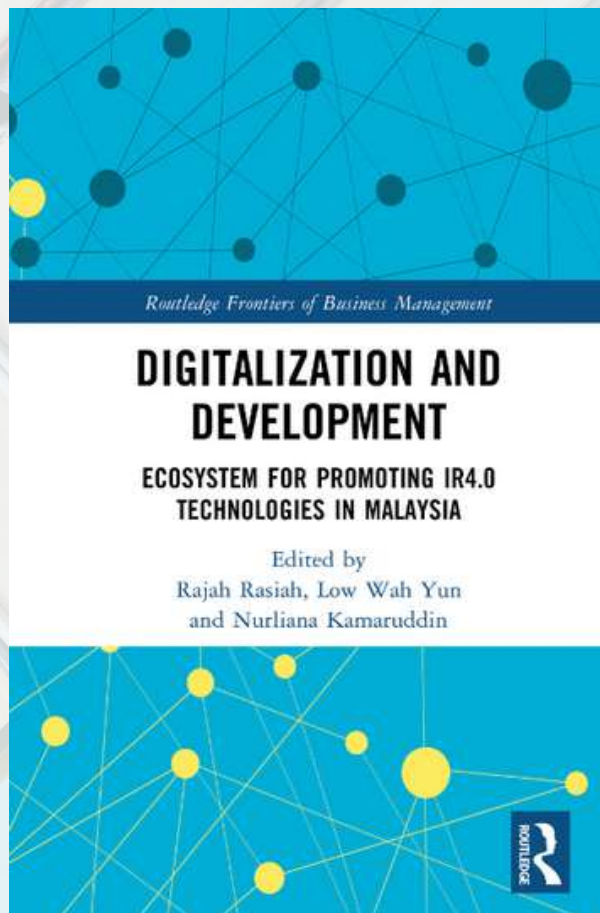
*3rd prize winner of Your Journey, Your Words Student Reflection Essay Contest
(Creative Category)*

A light blue background with falling confetti in various colors (yellow, red, green, blue, purple).

Congratulations!

**to the members and former members of the Faculty of Medicine
that are listed in the Top 2% Scientists in the World in their
respective fields in Single Year 2023 by Stanford University
through Elsevier Data Repository:**

Dato' Professor Dr. Adeeba Kamarulzaman
Datin Professor Dr. Indra Vythilingam
Emeritus Professor Dato' Dr. Goh Khean Lee
Emeritus Professor Dato' Dr. Lam Sai Kit
Emeritus Professor Dr. Liam Chong Kin
Emeritus Professor Dr. Ng Kwan Hoong
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Assoc. Professor Dr. Rafdzah Ahmad Zaki
Dr. Jeyasakthy Saniasiaya



Digitalization and Development Ecosystem for Promoting IR 4.0 Technologies in Malaysia

Editor from FoM: Low Wah Yun
Honorary Professor of Psychology

Publisher: Routledge

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This book examines the diffusion of digitalization and Industry 4.0 technologies in Malaysia by focusing on the ecosystem critical for its expansion. The chapters examine the digital proliferation in major sectors of agriculture, manufacturing, e-commerce and services, as well as the intermediary organizations essential for the orderly performance of socioeconomic agents.

The book incisively reviews policy instruments critical for the effective and orderly development of the embedding organizations, and the regulatory framework needed to quicken the appropriation of socioeconomic synergies from digitalization and Industry 4.0 technologies. It highlights the importance of collaboration between government, academic and industry partners, as well as makes key recommendations on how to encourage adoption of IR4.0 technologies in the short- and long-term.

This book bridges the concepts and applications of digitalization and Industry 4.0 and will be a must-read for policy makers seeking to quicken the adoption of its technologies.

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