

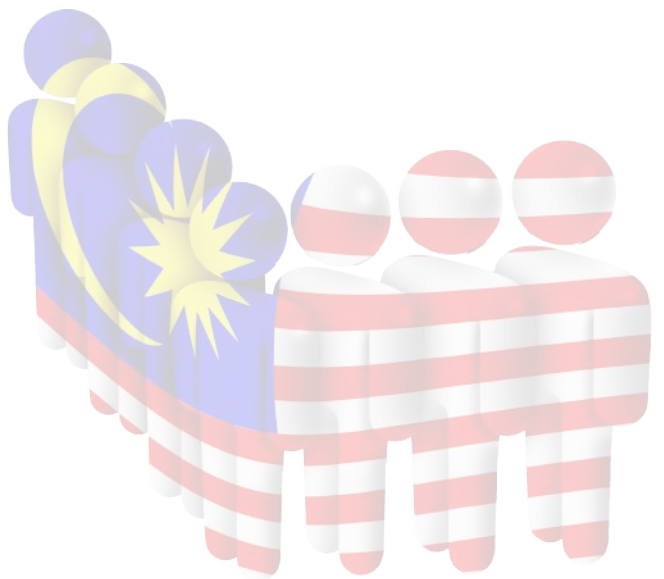
MALAYSIAN SOCIETY 5.0: SELECTED CONTEMPORARY SOCIO-LEGAL ISSUES

EDITED BY
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 **UMMU** PRESS
MULTIMEDIA UNIVERSITY



Malaysian Society 5.0: Selected Contemporary Socio-legal Issues





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Published by
MMU Press
Research Management Centre
Multimedia University
2nd Floor, Chancellery Building
Persiaran Multimedia
63100 Cyberjaya
Selangor Darul Ehsan

© 2022

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Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

MALAYSIAN SOCIETY 5.0: SELECTED CONTEMPORARY SOCIO-LEGAL ISSUES / EDITED BY SITI ZAHARAH JAMALUDDIN, OLIVIA TAN SWEE LENG, SHEREEN KHAN, SU WAI MON.

Mode of access: Internet

eISBN 978-629-97040-2-7


1. Sociological jurisprudence.
2. Law and the social sciences.
3. Society 5.0.
4. COVID-19 Pandemic, 2020--Social aspects.
5. Electronic books.

I. Siti Zaharah Jamaluddin. II. Olivia, Tan Swee Leng.

III. Shereen Khan. IV. Su, Wai Mon.

340.115

Edited by Iwani Khairul and Ahmad Rizal Bin Selamat
Cover design by Muhamad Hanis Aiman Bin Syed Mohd Muntazar
Typeset by Iwani Khairul





Contents

List of Figures	vii
List of Tables	ix
List of Legislations	x
List of Cases	xiii
List of Contributors	xv
Foreword	xvii
Preface	xviii

CHAPTER 1	1
Malaysia from Industry 4.0 to Society 5.0: The Way Forward to Societal Transformation	
<i>Olivia Tan Swee Leng and Rossanne Gale Vergara</i>	

CHAPTER 2	31
Infodemic Laws in Malaysia: Lessons, Challenges and Suggestions for the Future in Light of the Covid-19 Pandemic	
<i>Hafidz Hakimi Bin Haron</i>	

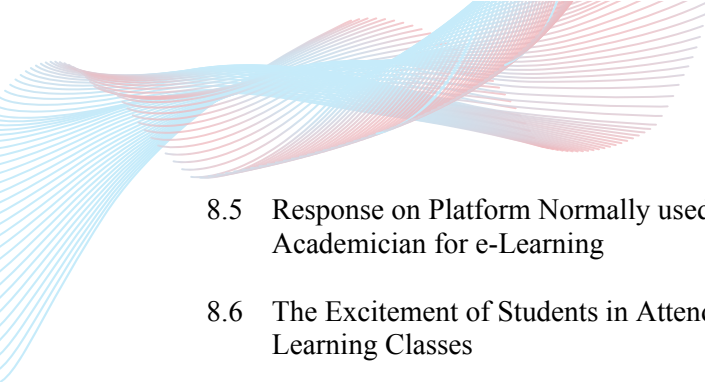
CHAPTER 3	71
The Presumption of Legitimacy in Malaysian Society 5.0: Embracing Fertility Preservation Technology	
<i>Siti Zaharah Jamaluddin and Sridevi Thambapillay</i>	

CHAPTER 4	101
Mediation Process in Malaysia During the Covid-19 Pandemic: The Role of Lawyers	
<i>Wong Hua Siong</i>	
CHAPTER 5	127
Smart Homes for the Elderly: The Living Arrangement in Malaysian Society 5.0	
<i>Siti Zaharah Jamaluddin, Mohammad Abu Taher and Ng Seng Yi</i>	
CHAPTER 6	157
Accelerating Gender Equality and Empowering Women in Malaysia	
<i>Rozana Abdullah and Muhamad Sayuti Hassan</i>	
CHAPTER 7	185
Online Fraud Amid the Covid-19 Pandemic	
<i>Rizal Rahman</i>	
CHAPTER 8	221
E-Learning and the Importance of Implementation of Policies and Regulations: A Case Study of Multimedia University	
<i>Nur Fazini Asro Binti Ramzi Sulaiman, Asmida Binti Ahmad, Nadia Binti Abu Hassan, Amir Nur Ikhwan Bin Amernudin and Putri Syaidatul Akma Binti Mohd Adzmi</i>	
Index	267



List of Figures

1.1	The Evolutionary Aspect of the Society 5.0 Concept as Introduced in the 5 th Science and Technology Basic Plan of Japan	5
1.2	The 4 Main Walls to Break Through to Achieve Malaysia Society 5.0	6
1.3	Digitally Enabled Government	9
1.4	4IR Industries to Society 5.0	10
1.5	Economic Development and Solutions to Social Problems in Parallel	13
2.1	The Relationship between Misinformation, Disinformation and Fake News	38
2.2	Calculation of Fact-Checks on <i>Sebenarnya.my</i> Between December 2020 to May 2021	41
2.3	The Evolution of Human Society	56
8.1	Respondents' Current Years of Studying	235
8.2	Respondents' Current Residence	236
8.3	Types of Gadgets used by Respondents in Accessing their e-Learning	237
8.4	Respondents' Location in Accessing their e-Learning	238



8.5	Response on Platform Normally used by the Academician for e-Learning	239
8.6	The Excitement of Students in Attending e-Learning Classes	243
8.7	The Responses from Students on Participating in e-Learning Classes	244



List of Tables


1.1	MyCERT Incident Statistics 2010-2020	24
6.1	Global Gender Gap Index Score (2006 – 2020)	171
6.2	ASEAN Countries in the Global Gender Gap Index (2021)	175
6.3	Women Representation in Malaysian Parliament (1959 -2018)	178
7.1	Reported Incidents based on General Incident Classification Statistics 2020	187
7.2	List of Cases	201
8.1	Students' Responses on Challenges Faced During e-Learning	241



List of Legislations

Malaysia Act

Adoption Act 1952 (Act 257)
Age of Majority Act 1971(Act 21)
Anti-Fake News Act 2018 (Act 803)
Births and Deaths Registration Act 1957 (Act 299)
Care Centres Act 1993 (Act 506)
Communications and Multimedia Act 1998 (Act 588).
Computer Crimes Act 1997 (Act 563)
Consumer Protection Act 1999 (Act 599)
Contracts Act 1950 (Act 136)
Copyright Act 1987 (Act 332)
Digital Signature Act 1997 (Act 562)
Distributions Act 1958 (Act 300)
Domestic Violence Act 1994 (Act 521)
Electronic Commerce Act 2006 (Act 658)
Emergency (Essential Powers) (No.2) Ordinance 2021
Employees' Provident Fund1991 (Act 452)
Employment Act 1955 (Act 265)
Evidence Act 1950 (Act 56)
Federal Constitution



Guardianship of Infants Act 1961 (Act 351)
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Immigration Act 1959/63 (Act 155)
Income Tax Act 1967 (Act 543)
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Family Relations Act 1975
Surrogacy Act 2019



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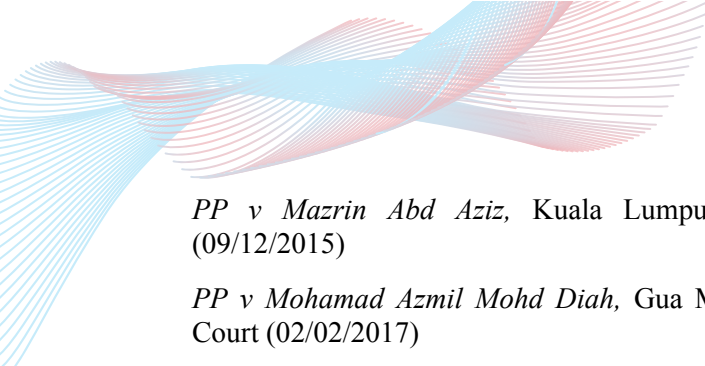
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PP v Mazrin Abd Aziz, Kuala Lumpur Sessions Court
(09/12/2015)

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Court (02/02/2017)

PP v Peace Okotie, Kuala Lumpur Magistrate Court
(24/03/2009)

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(09/07/2019)

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(20/09/2016)

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MLJU 1070)

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FOREWORD

I have much pleasure in writing the Foreword for this book, which is also the first book published by the Centre for Legal Research of the Faculty of Law, Multimedia University.

The Covid-19 pandemic has led to unprecedented changes in human lives. There has been heavier reliance on the use of technology following the abrupt shift to remote work, online education, the change of the consumer behaviour in preference of online purchase, the increase of online activities and others. The application of machine learning based-technology for policy and decision making in different aspects is also on the rise. Indeed, scientific and technological innovations are shaping our society and impacting the quality of our lives in a great degree.

Japan's "Society 5.0" presents a vision of an ideal future super smart society driven by technology. It is envisioned as a human-centred society that balances the resolution of social problems with the best interests of individuals. There is a need for regulation premised on proper strategies, which seeks to balance between the opportunities and potential risks of the emerging technologies as Malaysia pursues its own vision of Society 5.0 based on the local circumstances and goals. This book assembled a group of researchers who discussed contemporary social-legal issues pertaining to Malaysian Society 5.0. It is hoped that this initial research will attract more scholarly discourse on this subject in the future.

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PREFACE

The Covid-19 pandemic has accelerated the changes in society, especially in the usage and innovation of Information and Communication Technology, and Malaysia is no exception. The evolution of society started from the traditional society (a Hunting Society) and is culminating in Society 5.0 (a Super Smart Society). Society 5.0 can be defined as ‘a human-centred society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space.’ The integration between these two will also have an impact on the law, through the introduction of innovations and technology advancement, something that sometimes is overlooked. Selected social-legal issues are discussed in this book, as a conversation starter among the legal researchers on the law and its role in the new Society 5.0. It is hoped that more interdisciplinary and exchange of information will be held in the future as Malaysia prepares to embrace this new society evolution.

Chapter 1 of the book entitled *Malaysia from Industry 4.0 to Society 5.0: The Way Forward to Societal Transformation* is a broad overview on the concept of Society 5.0. Olivia Tan and Rossanne Gale Vergara touched on the evolution of societal communities, beginning with Society 1.0 “hunting society”, Society 2.0 “agricultural society”, Society 3.0 “industrial society” and Society 4.0 “information society”, and how the difference between Society 5.0 and Society 4.0. is the convergence of the virtual world with the physical world. According to the authors, the COVID-19 pandemic has also accelerated the migration of society from physical to digital infrastructures. As such, a new policy for the 4IR in Society 5.0 is needed to support the emerging technologies, which are all essential tools in the new Malaysian digital economy. The authors are of the view that although the use of these

technologies has created a convenient tool, it has also increased social complexity, and revealed that there are negative aspects to the new digital society. Malaysia's reduced labour productivity is an urgent issue and considering the increasing unemployment rate, thoroughly strengthening industrial competitiveness is becoming a critical task, especially during the new normal era. Hafiz Hakimi in his chapter entitled *Infodemic Laws in Malaysia: Lessons, Challenges and Suggestions for The Future in the Light of the Covid-19 Pandemic* discussed how the 'Infodemic' has amplified anxiety and mistrust among the people against the authorities' efforts to curb the spread of Covid-19, forcing the authorities to opt for strict legal actions to stop it. The author is of the view that managing the infodemic and combating its hazards such as disinformation, misinformation, and fake news would require a fresh outlook. In order to do that, the author re-evaluates the effectiveness of the existing related laws in Malaysia in managing the abundance of information in this infodemic, as part of finding the suitable solutions for a Malaysia Society 5.0.

Siti Zaharah and Sridevi explored how technology had assisted married couples with terminal illness to have children through Assisted Reproductive Technology (ART). In chapter 3 entitled *The Presumption of Legitimacy in Malaysian Society 5.0: Embracing Fertility Preservation Technology*, the authors discussed ART technology, the method, and circumstances of its usage in assisting couples to become parents. Nevertheless, the usage of ART had raised legal issues on the legitimacy of the child born to the couple. The authors further touched on the current legal framework on these issues and emphasised the need to consider the principle of the best interest of the child in finding the solution to the said legal issues.

Since technology will be integrated with the physical space in the future, Wong Hua Siong decided to discuss the role of lawyers and mediation in his chapter entitled *Mediation Process in Malaysia During the Covid-19 Pandemic: The Role of Lawyers*. The author began by discussing how Covid-19 had propelled the usage of technology due to the restriction on face-to-face communication. The author proceeds to discuss Alternative Dispute Resolution (ADR) and how online ADR is possible with the advancement in technology. The author opined that the usage of AI at the inception of the mediation process will result in more positive outcomes, including streamlining the process, fairness and minimizing disparity between the parties. Aside from using technology for online ADR, chapter 5 highlighted how it can assist the elderly to age in place in Society 5.0. Siti Zaharah, Mohammad Abu Taher and Ng Seng Yi in their chapter entitled *Smart Homes for the Elderly: The Living Arrangement in Malaysian Society 5.0* began their discussion by outlining the current living arrangement of the elderly in Malaysia before proceeding to discuss what is a smart home, and how this concept will support active and productive ageing. The authors pointed out the relevant legislations that need to be revisited in order to ensure smart homes can be part of the living arrangement for the elderly in future.

Rozana and Muhamad Sayuti in chapter 6 entitled *Accelerating Gender Equality and Empowering Women in Malaysia* discussed that gender equality is central to the 2030 Agenda for Sustainable Development, and Goal 5 calls specifically for gender equality and the empowerment of all women, which is the core to achieving the 17 Sustainable Development and Goals (SDGs). The authors further touched on the Malaysia Gender Gap Index (MGGI) which identifies the gap between women and men across four sub-indices: Economic Participation and Opportunity, Educational

Attainment, Health and Survival, and Political Empowerment. The authors opined that the Government has and continues to undertake numerous efforts to end all discrimination against women in Malaysia. Nevertheless, women still encounter discrimination issues, abuse, and domestic violence. Discussion was done to identify and analyse measures that need to be taken in advancing gender equality and closing the existing gap, mainly in the economic and political sectors. The authors offered recommendations to accelerate gender equality and empower women in Malaysia in line with Goal 5 of the SDGs.

Both chapters 7 and 8 focus the discussion on Covid-19. Nevertheless, the subject matters of the discussions are relevant when Malaysia moves into Society 5.0. Rizal Rahman in his chapter entitled *Online Fraud Amid the Covid-19 Pandemic* touched on how the restrictions on physical movements had resulted in an increase in virtual activities. This resulted in irresponsible individuals who fraudulently manipulate virtual facilities and the massive online dependence and limitations of others for their own wrongful gains. This chapter further discussed the *modus operandi* of the fraudsters and the mechanisms in place to deter their fraudulent behaviours. The current prevention and enforcement mechanisms were analysed, and the author forwarded viable recommendations for the authorities and individuals concerned in the effort to address this issue in the future. On a different note, Covid-19 had forced the higher education institutions to embrace technology as a teaching and learning method. In chapter 8 entitled *E-Learning and the Importance of Implementation of Policies and Regulations: A Case Study of Multimedia University*, Nur Fazini, Asmida, Nadia, Amir Nur Ikhwan and Puteri Syaidatul Akma discussed their findings on e-learning conducted during the Covid-19 pandemic at the Faculty of Law, Multimedia University. The authors recognised that e-

learning was the best solution, nevertheless, there were challenges faced by both the students and educators in conducting e-learning. The authors further discussed the solution by proposing a framework for policy implementations for e-learning in the Malaysian educational system. E-learning will be ever more important in the future as Malaysia achieves its Society 5.0.

Editors

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1


Malaysia from Industry 4.0 to Society 5.0: The Way Forward to Societal Transformation

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Rossanne Gale Vergara [https://orcid.org/0000-0003-2024-3977]*

Abstract - Malaysia Society 5.0 is the state in which a society's challenges and problems are solved. This problem-solving approach implements 4th Industry Revolution (4IR) technologies, which integrate both physical and digital environments. Innovative information-based technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), Cybersecurity and Robotics are expected to generate new added-value. The concept of Society 5.0 was created under these circumstances, and by doing so, this chapter intends to propose a new guiding principle for innovation from the Malaysian perspective. The term “Society 5.0” describes the next stage of the evolution of societal communities, beginning with Society 1.0 “hunting society”, followed by Society 2.0 “agricultural society”, Society 3.0 “industrial society” and Society 4.0 “information society”. The main difference between Society 5.0 (the digital age) and Society 4.0 (the information age) is the convergence of the virtual world with the physical world. According to the McKinsey Global Institute, there are “potentially between 400 million and 800 million people globally that could be displaced by automation and will be forced to seek new jobs by 2030”. The COVID-19 pandemic has also

Cite this chapter as:

Tan, O. S. L., & Vergara, R. G. (2022). Malaysia from industry 4.0 to society 5.0: The way forward to societal transformation. In S. Z. Jamaluddin, O. S. L. Tan, S. Khan & W. M. Su (Eds.), *Malaysian society 5.0: Selected contemporary socio-legal issues* (pp. 1-30). MMU Press.



accelerated the migration of societies from physical to digital infrastructures. A new policy for 4IR in Society 5.0 is needed to support the emerging technologies such as Blockchain, AI, IoT, Cybersecurity and Robotics, which are all essential tools in the new Malaysian digital economy. Malaysians are still working from home (WFH) at the time of writing this chapter. During this time, technology and connectivity are the key modes of handling society's daily activities and ensuring that their well-being is intact. Although the use of these technologies is convenient, it has also increased social complexity, and revealed that there are negative aspects to a new digital society. Malaysia's reduced labour productivity is an urgent issue and considering the increasing unemployment rate, thoroughly strengthening industrial competitiveness is becoming a critical task, especially during the new normal era.

INTRODUCTION

World In Data projects that by 2050, "68% of the world's population will live in urban areas." Due to urbanisation, there will be an increase of 2.5 billion people in cities over the next three decades, which has environmental, social, and economic impacts.

The 4th Industrial Revolution's (4IR) emergence has had an impact on all sectors of manufacturing, automation, digitalisation, and other information technologies by boosting productivity and transforming the sectors. However, the rapid advancement of these technologies may potentially lead to adverse societal consequences. Automation replacing human roles leaves a question mark over the impact that digital technology has over society. However, such interaction between people and devices will build a new social revolution to meet the needs of the people and the environment.

Emerging changes in society, such as progression in culture, philosophy, and technology, are described as a social

revolution. The current revolution is Society 5.0, and it connects the innovations to lead the society towards sustainable development. Presently, Society 5.0 continues to evolve in Japan and the concept is an example of attempts at bringing human thinking into technologically advanced environments. A good example is where Japan created a “super-smart society” to improve healthcare, mobility, and infrastructure for its inhabitants. Such initiatives are realised through the adoption of new technologies, such as artificial intelligence (AI), robotics, big data, and drones.

Japan’s efforts to solve societal problems with technology in Society 5.0 are comprehensive, as it is holistic in nature. Such efforts include cutting carbon emissions with driver-less vehicles, robot caretakers for the elderly, and sensor alerts for patient care when required. The concept of Society 5.0 is to develop technology solutions and implement them toward sustainable development practices to address evolving urbanisation issues. Over population is one of the main challenges of urbanisation in large cities. The INRIX, Global traffic Score Card (2020) study states that “it causes \$300 Billion of financial damages every year in the U.S. alone, and drivers in cities can spend more than 100 hours per year sitting in traffic.” To reduce the traffic problem, solutions such as automation technologies have been used. Vehicle-to-infrastructure (V2I) technology transforms traditional traffic signals to be smarter and more efficient. Sensors collect and transmit the movement and speed points from vehicles to improve the timing of traffic lights and thus reduce congestion. In Columbus, Ohio, this information from V2I was analysed, and used as a benchmark for the city’s smart city pilot program (INRIX, 2020).

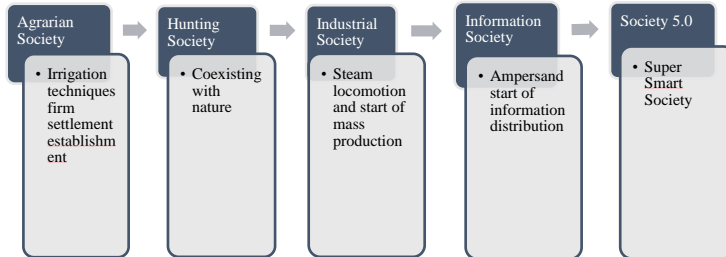
MALAYSIA SOCIETY 5.0

Moving towards 4IR, Malaysia is fortunate to have the chance to re-engineer and use technologies which decentralise authority and de-emphasises divisions along the lines of colour, creed, and country which the Japanese have coined as “Society 5.0”. This concept model is proposed in this chapter as “Malaysia Society 5.0”. Malaysia Society 5.0 is a problem-solving approach to the society’s challenges and problems by using 4IR technologies, which integrates physical and digital technologies.

Society 5.0 is the next stage of the evolution of societal communities having begun from a hunting society (Society 1.0) to an agricultural society (Society 2.0), then to an industrial society (Society 3.0), and followed by an information society (Society 4.0). Society 5.0 is centred around the needs of a human-focused society. The subsequent stage for the evolution of society is in the economic and community aspect. Malaysia Digital Economy Corporation (MDEC) is tasked to lead the role in catalysing the transition to Malaysia Society 5.0 as a new human-centred society for the nation. This will include using emerging technologies that are now considered as essential tools in the new Malaysia 5.0 digital economy. By embracing Malaysia 5.0, the digital economy can contribute to an enhanced, sustainable, and all-rounded economy. With Society 5.0, it is now possible for Malaysia to ensure greater well-being for all citizens regardless of age, ethnicity, and economic class.

Figure 1.1

The Evolutionary Aspect of the Society 5.0 Concept as Introduced in the 5th Science and Technology Basic Plan of Japan



Note: Keidanren. (2016). Toward realization of the new economy and society – Reform of the economy and society by the deepening of “Society 5.0”. [Figure] Adapted from http://www.keidanren.or.jp/en/policy/2016/029_outline.pdf

Figure 1.1 shows how Japan takes the digitalisation and transformation dimension from the level of individual organisations and parts of society to a full national transformational strategy, policy, and even philosophical level.

THE CHALLENGES

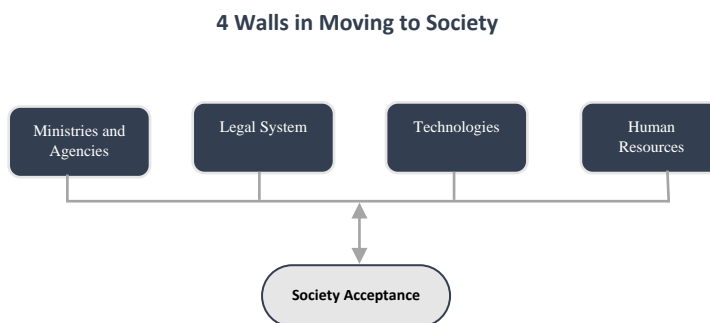
According to Keidanren (2016), there are 5 main walls to break through in moving to Society 5.0. These walls are: Ministries and Agencies, Legal Systems, Technologies, Human Resources and Social Acceptance. In order for a society to move toward Society 5.0, all five of these walls need to be broken down. However, Figure 1.2 shows an adaptation of Keidanren’s model to four specific walls in relation to Malaysia’s progress in reaching Society 5.0. Ministries and Agencies need to develop a national policy to support Society 5.0 initiatives. The laws need to be written so that advanced techniques can be implemented. A knowledge bank needs to be

Malaysian Society 5.0

developed for the society to understand new technologies. Human resources need to engage all citizens in the new economy and society. Finally, societal acceptance of the integration of technology and society by the citizens in the case of Malaysia occurs. Without this acceptance of integrating technology and society, Malaysia will not reach Society 5.0.

Figure 1.2

The 4 Main Walls to Break Through to Achieve Malaysia Society 5.0



Note: Keidanren. (2016). Toward realization of the new economy and society – Reform of the economy and society by the deepening of “Society 5.0”. [Figure] Adapted from http://www.keidanren.or.jp/en/policy/2016/029_outline.pdf

Ministries and Agencies

Across socioeconomic activities, the 4IR connects digital technologies, innovation, and knowledge. 4IR will strengthen Malaysia’s digital economy, as it has done in other nations such as Japan. The Malaysian Digital Economy Blueprint “embeds a delivery-driven governance structure and a whole-of-nation strategy incorporating partnerships between citizens, businesses (private sector), and government (public sector),” according to the document (Malaysia Digital Economy

Blueprint, 2021). The Malaysia Digital Economy Blueprint also intends to demonstrate Malaysia's digital economic potential in building a sustainable socio-economic environment. Malaysia established the National Digital Economy and 4IR Council, chaired by the Prime Minister, in November 2020 to promote local digitalisation skills.

Advancing Malaysia to 4IR will not be an easy journey. Connectivity reaching rural areas is still a challenge and although Malaysia's Digital Economy Blueprint is a good effort by the government in paving the way forward for Malaysia to reach 4IR, it is still a daunting task for rural areas to catch up with the rest of the country. Connectivity and the intention to learn how to use new technologies are amongst the most challenging factors in moving Malaysia to 4IR and Society 5.0. Having said that, even with the COVID-19 pandemic, Malaysia has demonstrated to the world its resiliency and adaptability to the crisis. The people have learned to use technologies such as fintech, or financial technology, as it became critical that physical distancing be maintained to prevent the spread of infection of COVID-19. The pandemic has accelerated the growth of the digital economy, thereby helping to build economic resilience. Malaysians, like the rest of the world during the early stages of the pandemic, were forced to work from home. Shopping for groceries, clothes and necessities were restricted to shopping online. The COVID-19 pandemic forced economies of the world to be resilient. Access to technologies and connectivity were necessities for anyone to function during the lockdown. However, digitalisation in all levels of life has also increased the risk of a digital divide. Lack of access to the internet and smart devices limit the opportunities for the underprivileged groups to receive quality education, healthcare services, employment, and other benefits.

Access to the internet was not without risk for people who were online during the pandemic. Cyber Security Malaysia's Malaysia Computer Emergency Response Team (MyCERT) serves as a "point of reference for the internet community in Malaysia to cope with computer security events." In 2020, MyCERT registered a total of 10,790 computer incidents, with fraud (7,593 occurrences) being the most common (MyCERT, 2020). Data fraud and cyber-attacks are among the top ten hazards to economic stability and social cohesion, according to the World Economic Forum (WEF). People's trust and confidence in the digital economy may be harmed as a result of such significant dangers. However, as digital technology advances, traditional skills are being phased out, and those with low digital abilities are being disadvantaged as a result of job displacements caused by automation and technology. According to the World Economic Forum, 75 million jobs could be lost globally by 2022 (WEF, 2018).

Digital Economy Opportunities for Future Malaysia

Malaysia's digital economy is transforming the country. It has the potential to influence society, entrepreneurs, and the government. Although there are disadvantages for those who cannot be part of the digital economy due to their lack of technological knowledge or lack of connectivity, the digital economy is also creating job opportunities, such as network specialists, mobile application developers, data scientists and community specialists in social networks (WEF, 2018).

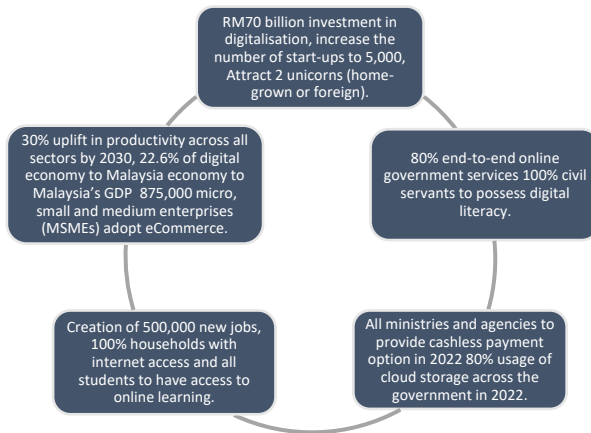
Although traditional products like as books and music CDs or records are still used, the majority of these commodities are either available online or are on their way to becoming digital. Cloud computing is another technology that allows businesses to store large amounts of data without having to buy and maintain actual hard drives. Malaysia's government also

permits residents to access online services such as passport renewal and tax filing. This enables the government to provide high-quality, timely, and cost-effective services.

Figure 1.3

Digitally Enabled Government

A digital-enabled government will provide integrated end-to-end online government services which are more efficient, effective, and transparent. Malaysia in 2015 will advance to achieve the following targets.



Note: Malaysia Digital Economy Blueprint. (2021). [Figure] Retrieved from <https://www.epu.gov.my/sites/default/files/2021-02/malaysia-digital-economy-blueprint.pdf>

The 4IR will propel us forward towards Society 5.0, thanks to the digital economy. In recent years, the rate of digitisation has been unparalleled. “The digital economy in 2017 is anticipated to range from 4.5 percent to 15.5 percent of the world’s gross domestic product (GDP) worth between US\$3.6 trillion and US\$12.3 trillion,” according to the Malaysian Digital Economy Blueprint. “Global internet users are expected to expand to 4.5 billion people in 2020 from 3.4 billion people

Malaysian Society 5.0

in 2016,” according to the report. In 2020, there will be 3.8 billion social media users, up from 3.7 billion in 2017. The increased use of the internet will create opportunities in a variety of industries, including education, business, and healthcare (Malaysia Digital Economy Blueprint, 2021).

Malaysia’s adoption of the 4IR has resulted in the development of a digital economy. The current economic change is unprecedented in history. Almost every industry in the world has been disrupted by this transition, which has changed production, management, and governance. The 4IR’s quick embrace of digital technologies and data integration will propel the digital economy forward and us closer to Society 5.0.

Figure 1.4

4IR Industries to Society 5.0

How will we work? and how will our society change?

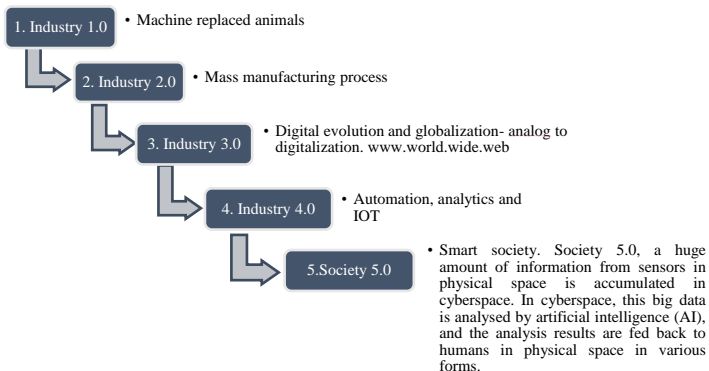


Figure 1.4 shows how 4IR differs from its predecessors in terms of “size, scope, and complexity.” The Fourth Industrial Revolution (4IR) is a new and different revolution in which people can “constantly produce new information and generate

new knowledge in the mining of information.” The opportunities for 4IR innovations are endless. Mobile phones are used to record and track people’s daily lives in society. The information gathered exposes a person’s living habits, food preferences, commuting time to and from work and home, and personal purchasing choices. Following that, the technology’s intelligence will grow as a result of continual data collection and analysis.

The Industrial Revolution would “change modes of production and the relationships between parts of production processes,” not just in terms of technology and productivity. 4IR improves production efficiency and communication across all levels of the manufacturing chain while conserving energy and lowering emissions, thus transforming the manufacturing industry into an information business. Simultaneously, production flexibility, mass customisation, and the ability to make a variety of items on a production line will transform manufacturing, transportation, and the entire SME industry.

Small Medium Enterprise (SME)

The Small Medium Enterprises (SME) in Malaysia comprises over one million industries, which is 98% of total businesses. Micro-SMEs make up most of the SMEs, of which 21% have female entrepreneurs or founders. The barriers that SMEs face which prevent them from reaching Society 5.0 are the lack of business connections, limited awareness of tools, limited access to funding, lack of education and lack of internet presence in a world going fully digital. Micro-SMEs are mainly “self-employed” and manage a small non-incorporated business that may or may not be the owner’s principal source of income.

The key to increasing productivity in Malaysia is for SMEs to achieve more inclusive growth while also allowing for adaptation to major economic transformations in the digital age. The disparity in development potential and revenue distribution between SMEs and large corporations has already had an impact. As a result, successful initiatives that enable SMEs to scale up and develop must now have significant economic and social consequences in order for the country to continue to innovate and prosper in the global economy. As a result, Society 5.0 should close the productivity and innovation gaps. Previously, it was usual practise for SMEs to gather data via the internet and have it analysed. People, things, and systems are all linked in cyberspace as we move towards Society 5.0. The AI-assisted data outcomes outperform the norm.

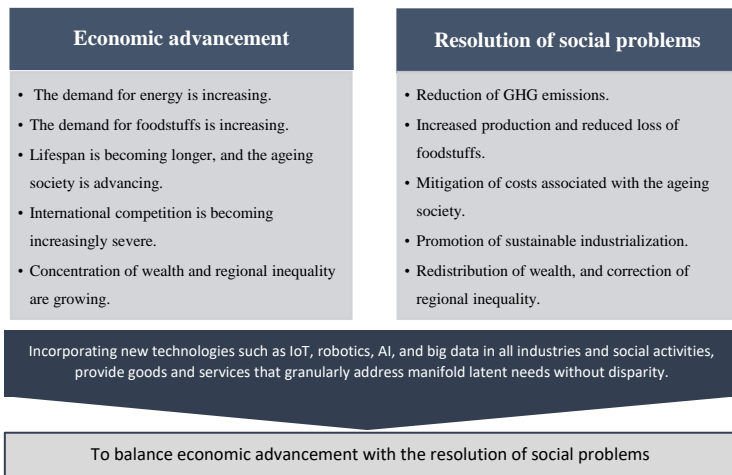
SMEs with a broader viewpoint can overcome the problems that SMEs confront in moving toward Society 5.0. Convenience is the driving force behind life in both developed and underdeveloped countries. The demand for energy and food continues to climb. The average longevity for both men and women has increased, the population of persons aged 60 and up is increasing, and economic globalisation is progressing. With all of this in mind, global competition is becoming more intense. Problems like wealth concentration and geographical inequality are also on the rise. As a trade-off to such economic prosperity, the social problems that must be tackled have become increasingly complex. In the current social system, achieving both economic progress and remedies to social concerns at the same time has proven impossible.

New value created via innovation will reduce regional, age, gender, and language inequalities in Society 5.0, allowing for finely customised product and service offering to different individual demands and latent needs. As shown in figure 1.5, it

will be feasible to create a society that can both encourage economic development and solve social problems in the future. However, achieving such a society will not be easy, and Japan plans to meet them head on in order to be the first country in the world to address these difficult issues and present a model future society (Keidanren, 2016).

Figure 1.5

Economic Development and Solutions to Social Problems in Parallel



Note: Keidanren. (2016). Toward realization of the new economy and society – Reform of the economy and society by the deepening of “Society 5.0”. [Figure] Adapted from http://www.keidanren.or.jp/en/policy/2016/029_outline.pdf

Islamic Fintech and Fintech

Malaysia is already a global leader in Islamic finance and is well positioned to take advantage of the myriad opportunities offered by Islamic Fintech. “Islamic bank loans increased by 8.9% year on year in 2018, compared to 2.5 percent for conventional banks,” according to the International Monetary

Fund (IMF). This demonstrates that global demand for Shariah-compliant financial services is growing. Islamic financing accounts for 32% of all customer financing in Malaysia, including both Muslim and non-Muslim customers. “Islamic Fintech is still in its infancy in Malaysia, with only a handful of start-ups and SMEs,” according to the IMF. Fintech for non-Islamic finance, such as e-wallets for cashless transactions, has only lately been implemented in Malaysia. This mode of payment was accelerated due to the COVID-19 pandemic. Prior to the pandemic, using fintech in Malaysia was in its infancy with most retail shops still receiving conventional modes of payment i.e., cash or credit/debit cards. Looking at Islamic Fintech, Malaysia has the potential to pioneer this technology given that the country has adopted Islamic Finance successfully, and its knowledge and use of fintech is thriving due to the pandemic.

In Malaysia, the growth of Islamic Fintech will impact development in rural areas, especially among ethnic Malays. It will become the backbone for this community, as unique financial-inclusion opportunities will ensure that they can catch up and increase their contribution to Malaysia’s socio-economic development.

Fintech is one example of a disruptive innovation that has gained acceptability in the Islamic financial world (Atif et al., 2021). Financial technology is defined as the application of modern innovative and disruptive technology to provide financial services, such as Blockchain, artificial intelligence, Regtech, smart contracts, crowdfunding, peer-to-peer lending, and digital currency (Rabbani et al., 2021). Financial crises paved the way for financial services to progress technologically. Fintech is not only innovative, smooth, user-friendly, and speedier, but it also has the potential to provide financial services at a low cost.

The COVID-19 pandemic is at its last stage, due to the news of the vaccine being administered and the broader economy shifting from “respond” to “recovery” mode. New opportunities arise for some Fintech companies to leverage their unique assets and skills. There is also the prospect of Islamic financial institutions (IFIs) grabbing this opportunity and providing a sustainable and long-lasting financial service with the use of Fintech, as society is now moving towards using cashless based transactions rather than cash (currency basis) payment.

Industry 4.0 Elements into Curriculum

Ensuring that the correct “components” are introduced, 4IR elements must be included in the educational curriculum beginning in primary school. It is a fallacy to believe that simply introducing children to technology or allowing them to play computer games in class, especially if they are instructional games, will help them understand 4IR. The 4IR introduction should be treated more seriously. Although familiarity with 4IR technology is an important part of the school curriculum, education from a young age should also emphasise ethics, communication, teamwork, creativity, and the ability to synthesise and develop knowledge rather than just absorb it. This type of information has always been important, but it is even more essential for the future of the industry.

If Malaysia wants to have equitably shared prosperity and avoid the concentration of powerful technologies in the hands of the few, it will need to produce not only active users but also active creators of the technologies. A great emphasis should be made on teaching programming logic, building algorithms, functional programming, as well as object- and service-oriented programming. These are important tools to learn and are being taught in Malaysia’s universities. The knowledge of

these technologies should not be limited to adult technicians and university students. The 4IR requires the entire society to know, understand and use technologies such as blockchain, AI, and IoT to improve and make living in 4IR easier for everyone.

Transcending the Humanities/Sciences Divide

Although the Malaysian education system has been stream-free since 2020, allowing students to choose between STEM and non-STEM subjects, this does not fully remove the barriers between subjects and disciplines. The best strategy is to have a uniform, well-balanced collection of STEM and non-STEM disciplines that all students must take up to university level. Computational thinking, statistics, and programming are required in Singaporean universities regardless of course majors, whether humanities or science. This standard will help to eliminate unemployment and underemployment by developing balanced persons who are well prepared and equipped for an exceedingly fluid and dynamic future. All the foregoing improvements in the educational system are necessary and must be implemented.

Telemedicine Health System

The World Health Organization (2010) defines that “telemedicine, was coined in the 1970s, which meant “healing at a distance”. Telemedicine uses technologies such as Information Communication Technology (ICT) to provide patients with access to care and medical information. The use of telemedicine is growing, and Malaysia is beginning to experience the benefits of this new technology. Sunway Medical Centre in Malaysia opened their Telemedicine Command Centre in January 2021. The centre operates 24 hours, 7 days a week, to provide healthcare advisory services to patients online and *via* social media platforms. If the patient

agrees with the recommendation made by the nurse or medical officer to seek a consultation from a specialist, the next step is to make an appointment with the hospital. Other than the Telemedicine Command Centre, Malaysia currently has apps such as Speedoc, a company founded in 2017 made up of doctors, business professionals and engineers to facilitate telemedicine services. This is just the beginning for Malaysia in the practical use of telemedicine; however, it was back in 1997 that Malaysia had already envisioned Telemedicine and was one of the first countries to enact a Telemedicine legislation.

Unfortunately, the Telemedicine Act 1997 (Act 564) has not come into force. It is an Act “to provide for regulation and control of the practice of Telemedicine and for matters connected therewith” (Telemedicine Act 1997). The COVID-19 pandemic has changed the way societies behave toward physical distancing. Businesses allowed to operate during the lockdown are also forced to ensure physical distancing and cashless payment options are available for their customers. Educational institutions are ensuring classes continue by having teachers/lecturers use video conference platforms such as Zoom, Google Meet and Microsoft Teams to conduct classes. The same goes for companies working remotely and conducting meetings with their clients and among colleagues over the internet. Healthcare services are not left behind during the COVID-19 pandemic. Telemedicine services have made headway in countries such as the United States of America (USA) and United Kingdom (UK). While telemedicine wasn't the mainstream way of receiving medical advice before the pandemic, it has since then been a more convenient and safe means for patients and doctors to receive/give medical advice respectively. Telemedicine makes for an appropriate means of conducting healthcare during the COVID-19 pandemic,

especially for patients who are restricted to their homes and require appropriate basic medical consultations.

Healthcare is ever important now as it will be in Society 5.0. As described in the previous paragraphs, Society 5.0 is the convergence of the virtual world with the physical world. In the healthcare world, telemedicine bridges the gap between conventional and virtual healthcare services. Telemedicine is a means for everyone in the society to receive healthcare from anywhere there is internet access. Hence, while Medicine 1.0 is treatment of consolidated illnesses, Medicine 2.0 is introduction of technology to provide and advance healthcare needs, while also focusing on prevention of diseases for the patient. The Medicine 3.0 model, in terms of both production and management, pushes towards total flexibility, which through the innovative use of “smart materials”, transforms the healthcare sector, introducing a digital model.

The technologies used in 4IR are, in more ways than one, transforming Medicine 4.0 (Wolfe, 2017). During the COVID-19 pandemic, technological breakthroughs such as robotics to support COVID-19 hospitals in the checking and therapeutic administration for patient management; 3D printers used for healthcare personal protective equipment (PPE); telemedicine (remote medical advice); and sensors and smart health technologies are all key factors in the transition to a Medicine 4.0 (Javaid, 2020).

In Medicine 4.0, the patient actively collects their own bio-data such as blood pressure and heart rate, for the doctors to evaluate while using a mobile health device or application. It is possible to engineer a personally tailored smart health tool from the combination of intelligent implantable systems thanks to nanotechnology and within a biological environment (body sensors and dedicated AI chips), with additive technology. As

described, this biomedical/ health technology drives the advance to Medicine 4.0. These smart health tools can assess a patient's clinical condition, based on data mining processes, and select autonomously, or according to the specialist's indications, to diagnose and treat the ailment or disease.

The aforesaid tendencies point to the inevitable change of the healthcare model into a Society 5.0, which must be based on an evolved social model. In order to develop meaningful human-machine interfaces (HMIs), an “ambient intelligent system” must be created, in which individuals can even relinquish control over decision-making in an atmosphere that trusts the use of technology to its maximum extent. In order to be continually linked, this social model will require full access to the possibilities of digital technologies. As a result, this social model is based on machine learning technologies that can autonomously and automatically manage a patient's connection with his family doctor without the need for human physical interaction.

Society is being dramatically reshaped by technology and big data. The volume, variety, and complexity of big data will bring problems and opportunities for the healthcare sector as vast amounts of digital data created by mobile technology blend with clinical, molecular, and contextual data of thousands to millions of patients. “In the near future, integrating digital technologies, which will allow the development of personalised strategies, introducing remote monitoring of patients, and the acquisition, analysis, and return of big data, will play a central role in improving oral health by reducing unnecessary costs both at the individual patient and health system levels” (Nishita et al., 2019).

Medicine 4.0 must advance in tandem with 4IR, capable of responding to pressure while also taking advantage of strategic

opportunities to provide extra value to the patient, the supplier, and the enterprise. The five Ps of Medicine – “predictive, preventative, personalised, participatory, and purpose-driven approach” - represent a strategic and inventive challenge, and e-health tools and solutions ensure a long-term transition to a new techno-digital, patient-centred environment (Pravettoni & Triberti, 2020). This is a new issue that must be addressed if a genuine integrative medical strategy is to be realised.

Researchers built a novel deep neural network named “MNet” to diagnose numerous neurological illnesses using resting-state MEG signals, resulting in exceptionally high specificity, based on a study conducted by Osaka University, JST PRESTO, the University of Tokyo, and RIKEN (Saito et al., 2019). According to Aoe et al. (2019), using MNet as a classifier can enhance neurological diagnosis while also generating high specificity. In critical care, MEG-based diagnosis can take a long time and requires a lot of experience; consequently, using AI to analyse MEG signals is predicted to relieve doctors of a lot of work.

AI is being used to classifying diseases in a variety of fields, including oncology. Using a single tumour marker, the University of Tokyo, Shimadzu Corporation, and Juntendo University created a predictive model that lowered disease misclassification rates by around 50%. (Yamamoto et al., 2017). Similarly, researchers from Japan, Germany, the United States, and Chile collaborated to improve breast tumour histology categorisation by using small morphological changes in microenvironmental myoepithelial cell nuclei (Inoue et al., 2019). The use of these technologies in rural or resource-constrained places will ensure high-quality care while eliminating the requirement for specimen transfers between institutions. The use of AI in pathology could help to advance the development of additional telemedicine technologies.

By connecting and sharing medical data that is now dispersed in various hospitals, effective medical treatment based on data would be provided. Remote medical care makes it possible that elderly people will no longer have to visit hospitals frequently. One can also measure and manage health data such as heart rate while at home, so that it will be possible to extend people's life expectancy.

INFRASTRUCTURE

To achieve Society 5.0, infrastructure must be established that will allow the implementation of support technology and regional Society 5.0 projects that are focused on labour-saving and 'smartification.' The key to Society 5.0 transformation is to support technology and different work practises through developing knowledge derived from digital data. However, interoperability between systems managed by different players is another critical component for the growth of Society 5.0, so we must establish its infrastructures, including hardware, software, and technical standards. The balancing of numerous goals that infrastructures must fulfil, as well as real system designs, should be done with input from a variety of stakeholders, including infrastructure providers and consumers. The government should encourage the practise.

In addition, ongoing stakeholder evaluations should be conducted on issues such as whether the above goals are being met during infrastructure operations, whether there have been any changes in conditions that affect the infrastructure, and whether any improvements or revisions are required as a result of the findings from these evaluations (Study Group on New Governance Models in Society 5.0, 2021).

LEGAL FACTOR

A fundamental revision of the concept of traditional and inflexible laws and regulations, the function of the public authority that administers and enforces such laws and regulations, and the role of the judiciary as a remedy system for rights violations is required in order to attain Society 5.0. It is becoming more difficult to sustain a model in which the law uniformly stipulates requirements or in which the regulatory body controls every activity performed by firms in the face of rapid technology innovation and societal changes. It is vital to move away from a model in which the state performs all governance functions on its own, such as rulemaking, monitoring, enforcement, and redress, and toward multi-stakeholder governance, which includes enterprises and users. The government is expected to play a role not only in the formulation and enforcement of laws and regulations but also in the creation of an infrastructure that allows multiple entities' services to work together, the establishment of market rules, ensuring a competitive environment, and the facilitation of stakeholder dialogue to discuss the design of these systems and rules. Furthermore, as ex-ante regulatory models meet challenges in an increasingly complex and uncertain world, the role of the judicial function as an ex-post remedy will become more significant. It's becoming increasingly important to have a specialised and quick-response mechanism based on increasingly complicated social systems (Study Group on New Governance Models in Society 5.0, 2021).

CYBERSECURITY

In 1991, Malaysia's Vision 2020 was presented by Prime Minister Mahathir Mohamad during the Sixth Malaysia Plan. Malaysia's Vision 2020 was the prime minister's vision for Malaysia to become a developed nation by 2020, which

included his thoughts on how the nation can achieve this goal by meeting nine specific objectives. These nine objectives as he pointed out in his vision were to establish the following: “United Malaysian nation, Secure and developed Malaysian Society, Mature democratic society, Fully moral and ethical society, Matured liberal and tolerant society, Scientific and progressive society, a society that is innovative and forward looking, one that is not only a consumer of technology but also a contributor to the scientific and technological civilization of the future, Fully caring society and caring culture, Economically just society, Prosperous society, with an economy that is fully competitive, dynamic, robust and resilient.”

Malaysia’s Vision 2020 catapulted initiatives to support Prime Minister Mahathir’s agenda, specifically to achieve objective number six: to establish a scientific and progressive society. Thus, the Multimedia Super Corridor (MSC) Malaysia was launched in 1996 and the first cyber laws of Malaysia were introduced: Computer Crimes Act 1997 (Act 563), Telemedicine Act 1997 (Act 564), Copyright Act 1987 (Act 332), and Digital Signature Act 1997 (Act 562). The Communication and Multimedia Act 1998 (Act 588) followed one year later and further followed by the Payment Systems Act 2003 (Act 627), the Electronic Commerce Act 2006 (Act 658), and the Personal Data Protection Act 2010 (Act 709). These laws will be discussed further in the subsequent section.

Cybersecurity Statistics Malaysia

In the 2020 Global Cybersecurity Index, Malaysia was ranked 5th overall, tied with the Russian Federation and the United Arab of Emirates (International Telecommunications Union, 2021). GCI is a survey that measures the commitment of the International Telecommunications Union (ITU) Member States

to cybersecurity in order to raise awareness, which revolves around five pillars (legal, technical, organisational, capacity building, and cooperation).

However, while the total incidents reported by the Malaysia Computer Emergency Response Team (MyCERT) decreased from years 2015-2017, the number of incidents has increased since 2018 and continues to climb. Table 1.1 shows the top two incident categories (Fraud and Intrusion) reported by MyCERT from 2010 to 2020 and total incidents. Total incidents reported include Fraud, Intrusion, Cyber Harassment, Spam, Denial of Service, Intrusion Attempt, Intrusion, Content Related, and Malicious Code.

Table 1.1

MyCERT Incident Statistics 2010-2020

Highest incident	Fraud	Intrusion	Total incidents reported	Total % fraud	Total % Intrusion
2010	2212		8090	27.3	
2011	5328		15218	35.01	
2012	4001		9986	40.07	
2013	4485		10636	41.17	
2014	4477	1125	11918	37.57	9.44
2015	3257	1714	9915	35.85	17.29
2016	3921	2476	8334	47.05	29.71
2017	3821	2011	7962	47.99	25.26
2018	5123	1160	10699	47.88	10.84
2019	7774	1359	10772	72.17	12.62
2020	7593	1444	10790	70.37	13.38

Note: MyCERT. (2010-2020). Reported Incident based on General Incident Classification Statistics. [Table] Retrieved from <https://www.mycert.org.my/portal/statistics?id=b75e037d-6ee3-4d11-8169-66677d694932&page=1&per-page=6>

In 2011, Malaysia had the highest overall reported incidents (15,218) with fraud (5,328) and spam (3,715) as the two highest reported incidents. The trend overall shows that fraud incidents

reported across 2010-2020 consistently ranked the highest. The likelihood that fraud cases will continue to grow is high according to the Malaysia Threat Landscape Report 2018 by MyCERT. Phishing incidents, according to the MyCERT report is the “highest contribution to online fraud incidents every year” with 2018 amounting to 4,513 phishing incidents. The second highest were online scams (275 incidents), third highest were fraud purchases (114 incidents) and fourth highest was impersonation and spoofing, with 90 reported incidents in 2018.

According to the MyCERT statistics in Table 1.1, from the past four years (2017 to 2020), the cases have increased, showing that although Malaysia is ranked 5th overall according to the GCI, the country is still vulnerable to cyber-attacks. The reason may possibly be due to lack of awareness and training on cyber security and cyber resilience. An organisational policy is needed to enforce responsibility on the people in the organisation to maintain a cyber-safe environment. Despite the existence of cyber regulations, cybercrime in Malaysia resulted in losses of 67.6 million Malaysian ringgit (USD 16.3 million) as of April 2019. Fraud instances, such as telephone scams, e-commerce scams, e-financial fraud, and credit card fraud, accounted for the majority of the losses. Despite the Malaysian government’s measures and gallant efforts to raise public awareness about cybercrime, fraudsters continue to target Malaysian individuals.

According to the Malaysia Threat Landscape Report 2018, the most dominant cyber threat incidents reported were “cyber blackmail web defacement, data breach, malicious APK, ransomware and crypto-mining malware.” These mentioned cyber threat incidents have grown and become more sophisticated, targeting more Malaysians than in the past. MyCERT further states that “cyber-attacks as well are evolving

in their ability to avoid detection from network security programs and law enforcement agencies”. Furthermore, the increased use of social media by Malaysians with lack of cybersecurity awareness can lead to more cyber-attacks such as identity theft and cyber blackmail.

Due to an increase in intrusion attempts, the fines and penalties stated under the Malaysian cyber laws may need to be reviewed. Awareness training needs to continue to be top priority for both private and public sectors as this is an important preventive measure. Hence, for Malaysia to transform to Society 5.0, the cybersecurity infrastructure must be in place as Society 5.0 is mainly a society beyond data analytics or IoT. The use of large data and algorithms raises worrisome worries about monitoring and manipulation, while the social implications of AI are only beginning to be understood. Given the numerous unexpected turns the internet has taken in its brief existence, this should serve as a cautionary tale for those who are unduly optimistic about the future of other emerging technologies. Society 5.0’s technological innovations have the potential to drastically restructure the economy and society, even questioning core political and moral categories like agency, accountability, and personhood.

CONCLUSION

The 4IR is on its way to Society 5.0, also known as a “super-intelligent society” and oriented toward a humanitarian society, thanks to the digital transition. Many sectors of society are being affected by the digital transition, including private life, public administration, industrial structure, health care, transportation, energy, and employment. Simultaneously, major socioeconomic changes are occurring as a result of the application and influence of new technologies and information, resulting in faster, more targeted, and integrated scientific and

technical progress. The use of modern robots, automation, sensors, artificial intelligence, intelligent networks and structures, microelectronics, big data, and databases in all parts of society and the environment in which people live updates in real-time with IT connectivity. A new civilisation built on creativity, ideas, invention, and knowledge is crafted and boned through the implementation of smart control and monitoring systems, as well as the establishment of a global human network in which everyone communicates in real-time from any place on the planet. The human mind is focused on creativity and creative activities in Society 5.0. It is the goal of such creation to offer individuals with a high quality of life, as well as life satisfaction, subjective well-being, and happiness. In the coming decade, Society 5.0 will serve as the foundation for the transition to the fifth industrial revolution.

Funding: This research received no external funding.

Acknowledgement: The contributions by all are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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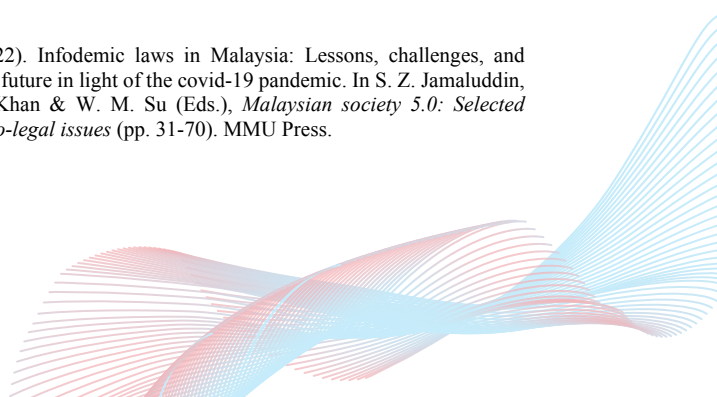
Infodemic Laws in Malaysia: Lessons, Challenges, and Suggestions for the Future in Light of the Covid-19 Pandemic

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Abstract - Online dissemination of fake news and disinformation has become increasingly rampant as the world faces the Covid-19 pandemic. The overabundance of availability of information on a subject matter, known as an infodemic, has negatively affected the effort to fight the pandemic. This infodemic has amplified anxiety and mistrust among the people against the authorities' efforts to curb the spread of Covid-19. The authorities have taken strict legal actions in their crusade against the infodemic. Nevertheless, critics construed those legal actions alone to be ineffective and even went to the extent of claiming that they may amount to draconian and undemocratic practices. On the other hand, many, including the authorities in charge of the fact-checking eco-system in Malaysia, have little effect on managing the infodemic. Some might even contemplate those traditional strategies in managing the infodemic and combating its hazards such as disinformation, misinformation, and the fake news would require a fresh outlook. Perhaps the recent government initiatives of Malaysia Society 5.0 are the ultimate answer. Thus, the main objective of this research is to re-evaluate the effectiveness of

Cite this chapter as:

Haron, H. H. (2022). Infodemic laws in Malaysia: Lessons, challenges, and suggestions for the future in light of the covid-19 pandemic. In S. Z. Jamaluddin, O. S. L. Tan, S. Khan & W. M. Su (Eds.), *Malaysian society 5.0: Selected contemporary socio-legal issues* (pp. 31-70). MMU Press.



the existing related laws in Malaysia in managing the abundance of information or infodemic. This research recommends several suggestions to curb disinformation, misinformation, and fake news and to manage infodemics at present and in the future. Therefore, to achieve this objective, this research adopts qualitative research methodology in formulating its findings, mainly through textual analysis of several related legislations and available secondary sources such as academic manuscripts, textbooks, online resources, and other relevant sources.

INTRODUCTION

On the 15th of February 2020, during the Munich Security Conference, the World Health Organisation (WHO) Director-General, Tedros Adhanom Ghebreyesus, remarked, “We are not just fighting an epidemic; we are fighting an infodemic”. In this regard, the United Nations Secretary-General, Antonio Guterres also echoed the same sentiment with the former when he tweeted on the 28th of March 2020; “Our common enemy is Covid-19, but our enemy is also an “infodemic” of misinformation. To overcome the coronavirus, we need to urgently promote facts and science, hope and solidarity, over despair and division”.

As of September 2020, 268 investigation papers on fake news related to Covid-19 have been opened by the authorities in Malaysia. Out of 268, 131 were under probe, 35 were charged in court, 12 were issued with warning notices, 16 were still on trial, and 19 had pleaded guilty (Mohamed Radhi, 2020). In this respect, there is a huge possibility that the numbers will be on the rise as the government is currently working to boost its vaccination effort starting from March 2021. Anticipating this, the Deputy Inspector General of Police, Acryl Sani Abdullah Sani, announced a warning that a

person may be apprehended for spreading fake news geared toward opposing the Covid-19 vaccine shot (Bernama, 2021).

Although technological advancements have brought a boon to human civilisation in general, it is not without side effects. In today's context, the convergence of information technology and "big data" have brought out a "disrupted society" (Boucher et al., 2020). Through this, a once "disconnected" and later "connected" society has become "overconnected" due to technological advancement. This, of course, results in a phenomenon often described as an infodemic, where information is available in abundance, so much so that it becomes difficult to differentiate between beneficial and harmful information. Unfortunately, this excessive amount of information travels faster than a virus, where it makes the public and the authorities face difficulties in identifying an actionable path to manage the infodemic or counter misinformation, disinformation, or fake news. In relation to the Covid-19 pandemic, it hampers public health responses and generates general distrust and confusion in society.

Thus, in this chapter, the author first identifies the scope and parameters of the infodemic and the hazards caused by it, such as misinformation, disinformation, and the spread of fake news. Next, the author will discuss the current Malaysian fact-checking eco-system by analysing its efficacy and effectiveness. Following that, the author will explain the current legal settings relating to infodemics at the international level and in Malaysia. Additionally, the author will explore some selected approaches taken by other jurisdictions in tackling the infodemic, especially regarding fake news. Then, the author will also discuss the meaning and the possibility of the Malaysian Society 5.0 initiative to be a solution to the infodemic. Finally, this chapter will end with recommendations

and a conclusion to tackle the infodemic issue in Malaysia in the present and future countermeasures to be employed.

THE INFODEMIC; MISINFORMATION, DISINFORMATION, AND FAKE NEWS

An infodemic is not a new phenomenon as the term itself has been used since the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003. This term was first coined by David Rothkopf, a journalist, and a political scientist, as he wrote in a *Washington Post* column in May 2003; the term infodemic initially refers to “a few facts, mixed with fear, speculation, and rumour, amplified by technology to create a disproportionate reaction” (The Royal Society, 2020). The Merriam-Webster Dictionary (2020) defines an infodemic as “a blend of information and epidemic that typically refers to a rapid and far-reaching spread of both accurate and inaccurate information about something, such as a disease”.

The term has seen renewed usage due to the Covid-19 pandemic. More recently, according to WHO, the term infodemic refers to ‘an overabundance of information, both online and offline (WHO, 2020). This includes “deliberate attempts to disseminate wrong information to undermine the public health response and advance alternative agendas of groups or individuals.” Although the term infodemic itself is neutral, this term comes with a negative connotation. This is consistent with the definition provided by the Cambridge Dictionary, where an infodemic is defined as “a situation in which a lot of false information is being spread in a way that is harmful” (Cambridge, 2021). The Oxford Dictionary describes an infodemic as “an excessive amount of information about a problem that is typically unreliable, spreads rapidly and makes a solution more difficult to achieve” (Oxford, 2020). Based on

the definitions given by both dictionaries, the usage of the term “infodemic” has been widened in its application, where it comprises any harmful information and is not only exclusive to diseases as it was initially intended.

According to The United Nations Department of Global Communications (DCG), an infodemic is an excessive amount of information relating to a certain issue or problem, whereby the solution to the said problem would be challenging to identify (WHO, 2020). Thus, an infodemic can spread disinformation, misinformation, and rumours during a health crisis, alongside legitimate information.

Some scholars prefer to disassociate a general and vague term of fake news against misinformation and disinformation. Misinformation can be defined as “untrue information sent without explicit intent to mislead media consumers.” (Hameleerset al., 2021) On the other hand, it can also be defined as “information that is false when scrutinised by experts.” (Vraga et al., 2020). Bode & Vraga maintain that even though the information resulting from misinformation can be misleading the sender may not necessarily intend this in the first instance. However, this is different for ‘disinformation’. Conceptually, even though disinformation is part of the information, it is an extreme subset, crucially ‘requiring the intent to deceive. According to Fallis (2015), disinformation should be differentiated from an honest mistake, whereas disinformation is created by someone who “is actively engaged in an attempt to mislead.” Fallis further explains that there are three salient features of disinformation. According to him, firstly, disinformation is a type of information; secondly, disinformation is misleading information, which is a type of information that is highly probable to create false beliefs, and finally, disinformation is non-accidentally misleading information; it must be created intentionally to mislead.

The term fake news, however, is more difficult to define in contrast to misinformation or disinformation (Albright, 2017). Nevertheless, most scholars agree that the term “Fake News” had been popularised and largely politicised, notably by the then Presidential Candidate, later the U.S President, Donald Trump, during the 2016 U.S Presidential Election (Lazer et al., 2018). The popularisation of such a term even earned its way to be named “Word of the Year 2017” by the Collins Dictionary (2021). In addition, many legislations have been enacted and officially named after the term as a countermeasure to fake news; for example, the defunct Malaysia’s Anti Fake News Act 2018 (Act 803). Historically, fake stories have been published to sell newspapers, entertain, or sow anger and fear (Uberti, 2010). In addition to that, Kalsnes (2018) argues that the definitions of fake news are changing according to the development and challenges posed by new communication technologies. This is where fake news often intertwines or overlaps with other terminologies such as disinformation (Gelfert, 2018), mal-information and misinformation.

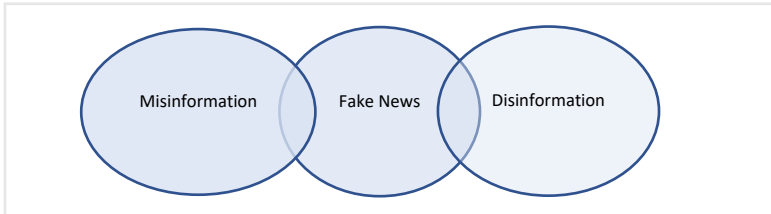
Some scholars even associate “fake news” with a specific news format, such as Mark & Lewis (2021), who stated that “fake news refers to a wide range of disinformation and misinformation circulating online media.” This led to the argument that using the term fake news in its current usage is inaccurate as it is associated with the news format. This is in line with the suggestion made by the European Union Report, where they argue that the term fake news is inadequate enough to explain the complexity of the situation; thus, the term “disinformation” is rather proportionate to be used in this context (High Level Expert Group, 2018). Meanwhile, according to Chamil Wariya (2017), false information, popularly known as fake news, can be divided into five categories; 1) Intentionally misleading information, 2) Misleading news or information that is not based on facts but

supports an ongoing narrative, 3) Satire or parody, 4) Mass disinformation, and 5) Disputed and contested information. The spread of fake news has recently become more rampant, resulting from the development of social media technology. In this respect, Zainul & Said (2020) highlighted that social media has become the medium of choice to spread fake news due to several factors: Firstly, due to the *cost*. In this sense, disseminating information, including false ones, can reach a large audience with almost no cost compared to any mode of traditional media. Secondly, *anonymity*. This is because anyone can create different personas and identities online, which contrasts with any traditional publications, where the content creator's identity must be identified and publicised in most cases. The third is *credibility*. Unfortunately, credibility in the context of the day is no longer tied to the truthfulness of information, but it depends on the virality and popularity of such information. Therefore, in this respect, social media is a great choice to spread fake news since its algorithm of information sharing is based on the popularity of news, not its truthfulness (Mohd Yatib, 2019).

Therefore, based on the definitions of the terminologies given above, the author summed up the relationship between misinformation, disinformation, and fake news in Figure 2.1:

Figure 2.1

The Relationship between Misinformation, Disinformation and Fake News



The figure shows that an infodemic is a more extensive set than misinformation, disinformation, and fake news since it refers to information in general. In this respect, information brought by an infodemic can be true or untrue, good or bad, beneficial or otherwise. The figure above also explains that disinformation, misinformation, and fake news are subsets of an infodemic; even though they might be different in terms of application, they share the same characteristic, in that they are all types of untrue information. In addition to that, the figure also shows that “fake news” is overlapping with both misinformation and disinformation. This is because fake news can be both, in terms of content. They can either be misinformation or disinformation. The main difference is the format used to convey such a message, where it must be in a “news format” (Wardle and Derakhsan, 2017).

In short, misinformation, disinformation, and fake news are harmful components that breed in an infodemic. Therefore, the author believes that, by managing infodemics, we may be able to control the dissemination and creation of disinformation, misinformation, and fake news.

CURRENT MALAYSIAN FACT-CHECKING ECOSYSTEM

According to Zainul & Said (2020), the recent spread of disinformation and misinformation, and fake news is generally attributed to the current Covid-19's infodemic. The rise of social media technologies has democratised dissemination, content creation, and publication. This, accordingly, has broken down the pre-internet age information barrier. However, it is unfortunate that the democratisation of content creation does not always increase the quality of information but in fact, decreases it. Hence, fake news, misinformation, and disinformation spread like wildfire through an infodemic, powered by information technology.

Renee DiResta pointed out that the Covid-19 pandemic should not be likened to previous outbreaks like those of Zika and Ebola viruses since the latter two are confined geographically (DiResta, 2020). At the same time, Covid-19 is the first outbreak that affects the entire global population during the social media era. Therefore, misinformation, disinformation, or fake news regarding the pandemic spreads globally online. As information flows, so does harmful content that comes with it. In this respect, it is only natural for reasonable users to seek clarification on any information they consume to shield themselves from becoming the victims of illusory truth. In Malaysia, the government created “soft” defence mechanisms to combat misinformation, disinformation, and fake news. Several strategies have been adopted, including providing clarifications and verifications through official websites or social media platforms of ministries and related government agencies. Another approach which is more accessible and user friendly to the public is through a dedicated official government-sponsored fact-checking website, namely *Sebenarnya.my*.

Sebenarnya.my was launched by the Ministry of Communications and Multimedia Malaysia and the Malaysian Communications and Multimedia Commission (MCMC) (Daud and Abd Ghani Azmi, 2021) on the 14th of March 2017. According to its former Minister, Datuk Salleh Said Keruak; “to ensure only genuine news and information to reach the Malaysian public.” The mechanism of the portal is to collect, analyse, confirm, and publish the information on the website for public consumption (Daud and Zulhuda, 2020). The MCMC is working closely with relevant ministries and agencies to ensure that the news is genuine and comes from the proper authorities. According to Mahyuddin and Sonny, this initiative could be considered proactive as the government assumes its educational role to ensure the public receives genuine information (Zainul and Said, 2020).

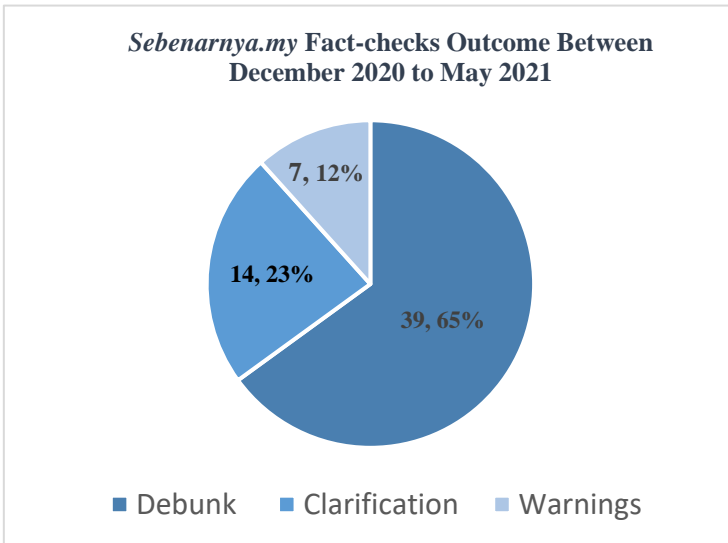
Zainul & Said (2020) in their study, analysed the content and coded each Covid-19 related fact check listed in *Sebenarnya.my* from January to June 2020. According to Zainul, within that period, there were a total of 377 entries under *Sebenarnya.my*'s “Covid-19” tab on its website. Out of the 377 entries, about 79% of them (296 entries) were labelled as “debunked” (*palsu*), while 17% (65 entries) required further clarification, and 16 entries (4%) were labelled as “*waspada*” (warnings). In the same study, Zainul also pointed out that the most popular medium used to spread false information was through WhatsApp (143 entries), followed by Facebook (126 entries), and the news (10 entries). He also revealed that most of the false information was circulated through texts (168 entries) followed by a combination of texts and pictures (63 entries). In addition, Zainul also concluded that the main motivation behind creating such false information was “to troll or provoke with no discernible political motive – or an expression of legitimate belief”, which was seen in 267 entries

(91%). He also noted that the second biggest motivation was profit, which was found in 17 out of 377 entries.

Thus, using the same methodology, the author has done a similar analysis from the same tab in *Sebenarnya.my* from December 2020 to May 2021. The findings regarding the number of entries are summed up in the following Figure 2.2:

Figure 2.2

Calculations of Fact-Checks on Sebenarnya.my between December 2020 to May 2021



Note. MCMC. (2022). *SEBENARNYA.MY*. [Figure] Adapted from <https://sebenarnya.my/>

Interestingly, only a total of 60 entries had been listed from December 2020 to May 2021. Out of 60 entries listed, 39 of them were classified as “debunked”, 16 needed “clarification”,

and 7 were classified as “warnings”. This is a significant reduction of entries compared to the previously mentioned period; from 296 (2020) to 60 (2021).

The other fact-checking initiative instituted by the government is the Ministry of Communication and Multimedia’s Quick Response Team (QRT). The QRT, formed on 24th March 2020, comprises staff from the Ministry’s Strategic Communication Division, other government agencies like the National Security Council (NSC), and the MCMC (Bernama, 2020). As the name suggests, the team will take between 30 minutes to 3 hours to verify each reported news and prevent it from spreading. In addition to that, the Ministry of Health and the MCMC formed a National Crisis Preparedness and Response (CPRC) team to address disinformation, misinformation, and fake news (Zainul and Said, 2020). Formed in 2010, one of the functions of the CPRC is to prepare and spread information related to a health crisis (CPRC-KKM). In the meantime, there are verified non-governmental fact-checking channels provided by the media, such as Malaysiakini, AFP Fact Check Malaysia, and Free Malaysia Today. In addition to that, there are several dedicated private facts checkers available to the public, such as Outbreak.com and Medical Mythbusters (Zainul, 2020).

UNIVERSAL LEGAL GUARANTEES AND RESTRICTIONS ON SPEECH AND INFORMATION

The people’s participation is essential in any democratic process. Such participation in this sense is not only exclusive to electoral participation but also inclusive of dialogues, discussions, or any other modes of expression that may or may not affect the policy of the decision-makers (Haron, 2020). Thus, denying such rights would prevent not just a functional but a healthy democracy, as freedom of speech and expression

is indispensable for accountable and transparent governance (Bari, 2005). Even the United Nations holds it in the highest regard, as mentioned in their first General Assembly:

“Freedom of information is a fundamental human right and ... the touchstone of all the freedoms to which the United Nations is consecrated” (Resolution 59(1), 1946).

The same sentiment was echoed by the United Nations Human Rights Committee, which stated that: “The right to freedom of expression is of paramount importance in any democratic society.” (*Tae-Hoon Park v Republic of Korea*, Communication No. 628/1995). Hence this is the reason why the rights to speech, expression, and information are being given such recognition and guaranteed under the international legal instruments. Generally, there are two leading international legal instruments regarding the protection and limitations of freedom of expression, speech, and information. The central authority is set under Article 19 of the *Universal Declaration of Human Rights* (UDHR) (Sambo and Shuaib, 2012):

“Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.” (UN General Assembly Resolution 217A(III), 1948)

The generality of the guarantees under the UDHR is further described under the *International Covenant on Civil and Political Rights* (ICCPR, 1966), as stipulated under its notable Article 19:

1. Everyone shall have the right to freedom of opinion.

2. Everyone shall have the right to freedom of expression; this right shall include the freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing, or print, in the form of art or through any other media of his choice.

Despite its guarantees, freedom of expression under the ICCPR is not absolute. This is stipulated under Article 19(3) of the same legal instrument where it can be restricted on two accounts and should be enabled by law, which are:

- a) For respect of the rights or reputations of others;
- b) For the protection of national security or of public order or of public health or morals.

It should be noted that such restrictions, according to the European Court of Human Rights, should be construed as prudently and narrowly as possible (*Thorgeirson v Iceland*, Application No:13778/88). In addition to that, the enabled restrictions should also meet the requirements as set out in the “three-part test” (*Mukong v. Cameroon*, Communication No:458/1991) where first and foremost, the interference must be enabled by law (Randhawa, Pua and Loone, 2005). Secondly, the interference must pursue a legitimate interest. The object of “Legitimate Interest” is restricted to the grounds provided under Article 19(3), such as public-moral and national security. Finally, the restrictions imposed must be necessary to safeguard one of those aims, in which the state should give “sufficient and relevant” justifications for the constraints, and those constraints must be proportionate (*Lingens v. Austria*, Application No. 9815/82).

LEGAL GUARANTEES AND RESTRICTIONS ON SPEECH AND INFORMATION UNDER THE FEDERAL CONSTITUTION

Apart from that, freedom of speech and expression is also guaranteed under the Malaysian Federal Constitution. In general, Article 10 of the Federal Constitution covers the fundamental guarantees of freedom of speech and expression, assembly, and association. The most pertinent provision in Article 10 would be Article 10(1)(a) of the Federal Constitution, which defines the general extent of freedom of expression where all Federation citizens should be entitled to such freedom. The scope of safeguard nevertheless does not go without any restriction; as the provision explicitly included, such rights under Article 10(1)(a) are subjected to constraints outlined under Article 10(2)(a), Article 10(4) as well as Article 149 and Article 150. These three provisions essentially offer the basis for the legislative body to formulate restricting laws to restrict the democratic practice in Malaysia (Faruqi, 2008). Thus, under Article 10(1)(a), speeches and expressions are protected; despite their being in many kinds and forms. This consists of, but is not limited to, verbal communications, symbols, music, or printed medium communications such as books, newspapers, or magazines; whether it is apolitical or political; artistic, or aesthetic.

Despite Article 10(1)(a) outlining the general guarantees and protections to freedom of speech and expression, the guarantee over such freedom is far from absolute. This is because the Federal Constitution allows itself to impose several restrictions on freedom of speech and expression. The main restriction to speech and expression is set out in Article 10(2)(a) of the Federal Constitution, which empowers the Parliament to enact laws that can restrict the said freedom, if necessary. There are eight grounds of limitations mentioned in Article 10(2)(a)

alone; however, the author identifies at least three relevant to our discussion on infodemics: public security, public order, and morality (Haron, 2020). It justifies the enactments of several restrictive laws on speech and expression through security and public order grounds, such as the notable Printing Presses and Publications Act 1984 (Act 301) and the Sedition Act 1948 (Act 15).

Furthermore, a moral basis has been used to justify censorship against the media, which brought the enactment of the Film Censorship Act 2002 (Act 620) and the Indecent Advertisement Act 1953 (Act 259). In addition to that, the Parliament can enact restrictive laws to free speech on several other grounds: to protect friendly relations with other countries, to uphold privileges of Parliament or any legislative assembly, to punish those held in contempt of court, or incitement to any offence and defamation (Faruqi, 2008). Apart from Article 10(2)(a), another restriction is also furnished under Article 10(4), which authorises the Parliament to enact any law with the object to prohibit questioning of subjects that can be regarded as politically delicate. Four subject matters are prohibited under this provision: the position and privileges of the Malays and the natives in Sabah and Sarawak, the prerogative of the Malay rulers, the position of the national language, and the right to citizenship in the Federation (Article 10(4), Federal Constitution of Malaysia). Additionally, Article 149 of the Federal Constitution allows the Parliament to restrict freedom of speech on several additional grounds, including on the accounts of curbing subversion, crimes prejudicial to the public and organised violence. Moreover, Article 150 indirectly allows freedom of speech to be restricted on the account of proclamations of emergency.

KEY INFODEMIC LAWS DURING COVID-19 PANDEMIC IN MALAYSIA (2020-2021)

There are many laws enacted and specifically designed to curtail freedom of speech in Malaysia; the author identifies that several laws are being used specifically to manage the infodemic; with the object to suppress the creation and dissemination, misinformation, and fake news during the Covid-19 pandemic. The identified laws are discussed below:

(1) Section 211 and Section 233 of the Communications and Multimedia Act 1998

Based on the author's observation, some of the legal mechanisms used to curb disinformation, misinformation, and fake news online during the Covid-19 outbreak in Malaysia are section 211 and section 233 of the Communications and Multimedia Act 1998 (CMA). According to Mahyuddin Daud, section 233 intends to regulate websites that offer interactive content, such as social media platforms or a news portal with a comment section, online forums, and chat rooms (Daud, 2019). While section 211, regulates portals, websites, or blogs offering static content. This difference perhaps justifies why most of the charges pursued under the CMA regarding fake news on Covid-19 were made under section 233 since most of them involve circulations around social media (Haron et al., 2020).

Nevertheless, despite the fact that section 211 and section 233 are different in terms of regulatory subject matter, both share the same characteristic in terms of the scope of their regulatory jurisdiction. It is against the law to furnish any online content which is "indecent, obscene, false, menacing, annoying or offensive in character". In this respect, the main challenge would be determining a context of what would amount to "indecent, obscene, false, menacing, annoying or

offensive” as there is no specific interpretation provided in the legislation. Even though the Content Code, in essence, offers some explanations on what would amount to, for instance, “menacing”, it is still broad and available to an open-ended understanding (Article 5.1 Content Code). This issue is also emphasised by Ida Madieha who questioned the efficacy of the Content Code in protecting netizens from online content, especially those with hate speech and anti-government propaganda (Azmi, 2004). Therefore, in this respect, both section 211 and section 233 would fail the grand test of legality as laws are required to be clear, ascertainable, and prospective (Robinson, 2005). Apart from the vagueness of the limitations given, some opine that the previously mentioned laws might be deemed unqualified to serve as a bar to speech. For example, content deemed to be “annoying” or “offensive” by an individual, irrespective of whether it is fair, objective, or a matter of public interest, can unjustifiably lead to severe punishment of another (Article 19, 2017). Even though both provisions are beleaguered with interpretational issues, the court ruled that section 211 and section 233 are constitutional. This is held in *Syarul Ema Rena Binti Abu Samah v Pendakwa Raya* [2018] MLJ 1128 where apart from the Court reaffirming its constitutionality, it is also held that section 233 and section 211 are neither ambiguous nor too vague to be construed.

(2) Section 505(b) of the Penal Code

Section 505(b) criminalises a person who “makes, publishes, or circulates any statement, rumour or report that causes fear or alarm to the public that might induce any person to commit an offence against the state or the public tranquillity.” Even though the provision is frequently used as an instrument to combat the creation and dissemination of fake news during the Covid-19 outbreak, there is no part in the section requiring such statement or rumour to be true or false. Therefore, the main

objective of section 505(b) is not dependent on the truthfulness of the said information. However, this provision depends on the intention of the creator or circulator of such news, whether it is done with the intention of causing public alarm or otherwise, which may affect public tranquillity.

Thus, the author believes that the criminality of such offences stipulated under section 505(b) is much based on the subjectivity of the listener's response. This concern was genuinely raised by many parties, including a group of human rights activists called Article 19. According to them, the subjectivity of the criminal liability inflicted under section 505(b) is much contingent on the subjectivity of the listener's reaction, assessing whether it is probable to cause alarm or otherwise (Zainul, 2020). It is feared that resulting from this aspect of the law, it may give the listener leverage to hush any critics against him. On the other hand, Article 19 also has concerns regarding the government's approach that is deeply dependent on legal measures in curbing fake news (ARTICLE 19, 2020). Concerning this, they opined those legal measures should only be used as a last resort, reserved only for the most dangerous and serious forms of speech.

(3) Emergency (Essential Powers) (No.2) Ordinance 2021

Constitutionally, the basis of the proclamation of emergency in Malaysia is vested under Article 150 of the Federal Constitution, where the *Yang Dipertuan Agong* may issue such proclamation if he deems that the security, the economic life, public order of the Federation, or any part thereof is under a grave threat. In effect of such proclamation, special legislation(s), called Emergency Ordinance(s), may be enacted by the Parliament or by the *Yang Dipertuan Agong* if both houses of Parliament are not in session. This aligns with Article 150(2B), where the *Yang Dipertuan Agong* is authorised to

enact the Ordinances, depending on the needs and necessities during the Emergency. Furthermore, the Federal Constitution does not stipulate the limits or the number of Ordinances that can be legislated during the Emergency. In addition to that, the Emergency Ordinance promulgated under Article 150 of the Federal Constitution may supersede any powers or guarantees under any law, including those that are related to the protection of fundamental liberties as vested under Part II of the Federal Constitution.

The Emergency (Essential Powers) (No.2) Ordinance 2021(Ordinance) was gazetted on the 12th of March 2021 to combat the creation and dissemination of fake news concerning the proclamation of emergency during the Covid-19 pandemic in Malaysia. However, since the jurisdiction of the Ordinance is only applicable to the matters as stated earlier, its scope of authority is considered smaller compared to section 233 and section 211 of the CMA and section 505(b) of the Penal Code.

The Ordinance defines “fake news” as any news that is wholly or partly false (Section 2, The Emergency (Essential Powers) (No.2) Ordinance 2021). By general understanding, news or information can be assumed to be false or fake if it lacks verification. In this regard, given the generality of its definition, critics of the Ordinance have voiced their concerns that it may be used as an instrument to shut down rights to free speech during the pandemic (ARTICLE 19, 2020). Apart from that, critics have also criticised the drafters of the Ordinance for employing the same approach as in the repealed Anti Fake News Act 2018 (AFNA) in defining “fake news”. AFNA, which was repealed only several months after the law was passed, was accused of being ill-conceived, and badly drafted, with dubious objectives and application flaws (Fernandez, 2019).

Generally, there are three types of offences stipulated under the Ordinance. The first type of offence is related to the publication and dissemination of fake news. In this regard, section 4(1) of the Ordinance shares the same element of *actus reus* as section 505(b) of the Penal Code whereby to qualify for a conviction; such “fake news” should cause “fear or alarm” to the public. Therefore, in the author’s opinion, the basis that the news is fake alone does not qualify a conviction under section 4(1) of the Ordinance. Although it shares the same criminal element as the Penal Code’s corresponding provision, the penalty imposed under the Ordinance is significantly more severe. On conviction under the Ordinance, a person can be fined up to one hundred thousand *ringgit* or face a term of imprisonment not more than three years, or both. This is in contrast with section 505(b) of the Penal Code, which only imposes a maximum of two years imprisonment and a fine.

On the other hand, section 4(2) of the Ordinance also empowers the court to order the convicted person under section 4(1) to issue an apology to the person affected by the offence committed. As of June 2021, only two cases were being prosecuted under section 4(1) of the Ordinance. The first case involved a housewife who was found guilty of following a social media post claiming nine students in a school in Perlis had been tested positive for Covid 19 (Shariff, 2021), and the second case involved a tuition teacher over his *Facebook* post claiming that a traffic policeman died after receiving his second dose of the Covid-19 vaccine (Jun 2021).

In addition to that, section 5 of the Ordinance also prohibits any financial assistance to facilitate the publication or dissemination of fake news. Furthermore, according to section 5 of the Ordinance, a person can be condemned to a maximum imprisonment term of six years, or fined not more than half a million *ringgit*, or both upon conviction. Apart from that,

failing to remove a publication that contains fake news within 24 hours on the direction of a police officer or any authorised person is also an offence under sections 6(1) and (2) of the Ordinance. In connection to this, a person may be fined up to one hundred thousand *ringgit*, or in the case of a continuing offence, not exceeding three thousand *ringgit* for every day the offence continues after conviction. Nevertheless, any person affected by an order of removal may apply to the court to review the order under section 6(3) of the Ordinance. Additionally, section 22 of the Ordinance also criminalises any form of abetment on the offences as stipulated earlier, should the offence be committed because of the abetment.

Even though the Ordinance can be viewed as a tough measure that may potentially curb the creation and dissemination of fake news in Malaysia, it should be noted that it should not be regarded as a long-term, effective solution to the standing dilemma. Apart from its enforcement that may negatively affect the fabric of free speech, the remedies and its enforcement are temporary. This is because the Ordinance operates in tandem with the emergency proclamation so it can be repealed by the Parliament as soon as it comes back into session, or the Ordinance shall automatically cease to have effect six months after the emergency has ended (Article 150(7) of the Federal Constitution of Malaysia).

SELECTED APPROACHES OF OTHER COUNTRIES IN COMBATING INFODEMIC HAZARDS

Various measures have been employed by countries worldwide to manage this infodemic, especially in countering disinformation, misinformation, or fake news. These measures encompass many kinds and forms, including legislative enactments, self-regulatory approaches, and administrative measures.

In Singapore, for instance, a specific Act has been enacted focusing on countering false information, namely the Protection from Online Falsehoods and Manipulation Act (POFMA) of 2019. POFMA enables the Singaporean authorities to employ administrative measures to counter false online information (Daud and Zulhuda, 2020). One of the main features of POFMA is that it enables any minister in Singapore to issue directions under Part 3 of the said Act in the forms of Correction Direction and Stop Communication Direction. According to Daud & Abdul Ghani Azmi (2021), POFMA empowers any Singaporean minister to issue a ministerial direction to rectify and cease the communication of false information to the general Singaporean public. This is enabled under section 16 of the Act, where the Minister of Communications and Information of Singapore may direct the Info-Communications Development Authority to take reasonable steps to disable access by the end-users in Singapore. Any non-compliance to the order would be deemed as an offence under POFMA. This order, however, can be subjected to appeal to the High Court. Apart from that, POFMA also enables the minister to order an end-user to issue corrections to the false information that has been published.

Additionally, POFMA also specifically addresses the liability of internet intermediaries through Part 4 of the Act, specifically under Section 20. Section 20 of the Act requires the internet intermediaries to communicate notice(s) to end-users who have access to the false subject matter. Furthermore, any minister is also authorised to issue a Disabling Direction to prohibit any access of the Singaporean public to false content (Section 22 of POFMA).

Some countries still rely on statutory approaches in combating this infodemic, particularly fake news. Nevertheless, the context and understanding of what may be

amounting to “fake news” are different. For instance, Russian’s Information Law defines fake news as “socially-significant false information distributed under the guise of truthful messages if they create a threat of endangering people’s lives, health, or property; create possibilities for mass violations of public order or public security; or may hinder the work of transportation and social infrastructure, credit institutions, lines of communications, industry, and energy enterprises”(Daud and Zulhuda, 2020) while the French law on the Freedom of the Press of 29 July 1881 criminalised the act of “disturbing public peace through the publication, dissemination, or reproduction of fake news in bad faith.” On the other hand, China outlawed the act of “fabricating false information a dangerous situation, epidemic, disaster or alert and disseminate such information via an information network or any other media while knowing that it is fabricated, thereby seriously disturbing public order.” In this respect, the generality of what constitutes fake news renders fake news legislations to be deemed unconstitutional by courts in some countries. In Canada, for instance, the Supreme Court ruled in the case of *R v. Zundel* [1992] 2 SCR 731 that provisions regarding fake news as stipulated in Section 181 of Canada’s Criminal Code were unconstitutional. The same happened in Kenya, where fake news provisions under Kenya’s Computer Misuse and Cyber Crimes Act 2018 were deemed unconstitutional (*Bloggers Association of Kenya (Bake) v Attorney General & 5 others* [2018] eKLR).

On the other hand, some countries, especially Scandinavian nations, prefer to regulate disinformation, misinformation, or fake news in a self-regulatory fashion. In this respect, Sweden regulates the matter through a professional organisation of journalists and media providers, such as the Swedish Press Ombudsman and the Swedish Press Council (Hofverberg,

2019). The approach taken by Sweden is consistent with the E.U. Code of Practice on Disinformation (Nuruddin, 2020).

MALAYSIA 5.0 TO ADDRESS THE INFODEMIC?

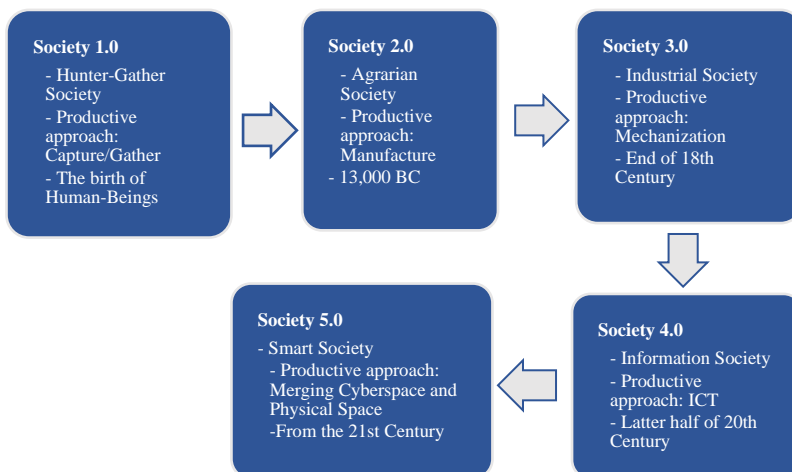
The reality of the day is that machines are increasingly taking over human functions. For instance, self-driving cars, known as autonomous vehicles, that can sense the environment and drive without or with very little human input, will soon take over our roads. In addition to that, financial technology (Fintech) is an emerging technology that uses technology to improve our financial experiences (Nuruddin, 2020). These technologies that are changing our world at an astonishing pace also affect our way of dealing with information. Thus, as information technology grows, so does the infodemic.

Nevertheless, the bigger question is, how do we respond to it? How will we cope with a world rife with propaganda, misinformation, disinformation, and fake news? The traditional approach to regulation information may no longer be adequate in the coming years. Perhaps, a more technology-savvy but people-centred solution should be considered to complement the traditional legislation approach.

In this respect, the vision of Malaysia 5.0 may be the solution to the problem at hand. “Malaysia 5.0” is an adaptation of what was first coined by the Japanese as “Society 5.0”, a utopia where society is developed around the needs of a “human-centred” society (Hussin, 2020). As prescribed by Fukuyama, the idea of “Society 5.0” is a manifestation of the natural evolution of Human Society, as illustrated in Figure 2.3:

Figure 2.3

The Evolution of Human Society



Note. [Figure] Adapted from Mayumi Fukuyama. (2018). Society 5.0: Aiming for a New Human-Centered Society, p 49, and Deguchi et al. (2018). Society 5.0 A People-centric Super-smart Society, Hitachi-U Tokyo Laboratory, p xii.

The idea was drafted during the 5th Science, and Technology Basic Plan by the Council for Science, Technology, and Innovation (Deguchi et al., 2018), which was first promoted by the Japanese government upon its cabinet’s approval in 2016. The basic aim of the idea is to “create a human-centric sustainable society to enhance people’s quality and productivity of life through the cyber-physical system” (Shiroishi et al., 2019). The idea was brought forth as a way for the Japanese to address its societal challenges, such as a declining birth rate coupled with an increasing senior population, which led to a shrinking labour force and increased social security costs (Fukuyama, 2018). According to Nuruddin

(2020), Society 5.0 is a “human-centred society that balances economic advancement with the solutions to social problems by a system that highly integrates cyberspace and physical space. From this concept, the Japanese strive to create a society that can solve various challenges by incorporating the Fourth Industrial Revolution (Industry 4.0) innovations, such as the Internet of Things (IoT) and Artificial intelligence (AI.), into the industry and social life (Nuruiddin, 2020).

The complex structure of Society 5.0 was made into a more comprehensible analogy by Deguchi et al. (2018), where it was likened to the function of an air conditioner that operates around physical (the real world) and cyberspace relationships. In their perspective, in Society 5.0, cyberspace is used to exchange volumes of data and analyse a problem that provides practical, real-world solutions. In an air conditioner, an internal microcomputer runs a program to measure variables that describe a room temperature. The program then will compare the variables with the registered temperature settings and decide whether to stop or continue the airflow. Through this analysis run by AI, a more advanced air conditioner can determine the more complex cyber model of a room to provide a solution (i.e., temperature and airflow) that would provide more comfort to its users (i.e., Human) by calculating a wide range of parameters, such as the density of people in the room, its natural temperature, and its size. Through Deguchi’s analogy, thus it can be digested that Society 5.0 works through the flow between cyberspace and physical space from the physical world into cyberspace, and then back to the physical world from cyberspace with relevant information and a meaningful solution, just like a modern air conditioner.

Gladden (2019), however, noted that the objectives of Society 5.0 are “ambitious.” This is because Society 5.0 aims to create equal opportunities (Bryndin, 2018) through emerging

technologies, as well as to provide security, comfort, and healthy life to every individual, where human-technology interaction will be used to create a vibrant, sustainable, and liveable people-centric world (Keidanren, 2016; Medina-Borja, 2016). Additionally, Society 5.0 is also designed to provide economic benefits to individuals by facilitating services and goods to the people at the right amount and at the right time when they need them (Gladden, 2019). In addition to that, Society 5.0 is also expected to solve social dilemmas such as a shrinking population, an ageing society, and even natural disasters to cultivate social benefits (Keidanren, 2016).

Despite Society 5.0 having some similarities with Industry 4.0, they should not be confused with one another. Industry 4.0 was a highly strategic initiative released by the German Federal Government in November 2011 (Deguchi et al., 2018). This initiative, called Industry 4.0, was led by Germany's Ministry of Education and the Ministry of Economic Affairs and Energy. The recommendations of the working group, led by Kagermann, were fully released in April 2013 through a report entitled "Recommendations for implementing the strategic initiative INDUSTRIE 4.0" (Kagermann et al., 2013). According to Deguchi et al. (2018), the main similarity between the two is the focus on technology, including those associated with IoT-related knowledge, such as Big Data and AI. Furthermore, the policies' structures are also similar where they take a state-led, top-down approach with participation from academia, industry, and the governmental sector. The main differences, however, lie within the main objectives of both visions. While Society 5.0 aims to create a super-smart society, Industry 4.0 calls for an industrial revolution, aiming to create smart factories. Therefore, it can be said that Industry 4.0 focuses on revolutionising the manufacturing environment, but Society 5.0 aims to create a people-centric society through a merger of cyberspace and physical space. On this aspect, the

author opined that the concept of the latter is far more complex, as to how the success of Society 5.0 is measured: “balance economic advancement with the resolution of social problems by providing goods and services that granularly address latent manifold needs regardless of locale, age, sex, or language to ensure that all citizens can lead high-quality lives full of comfort and vitality”. On the other hand, the former is only measured by creating new values and minimising manufacturing costs (Kagermann et al., 2013).

The emergence of Society 5.0 should provide a new opportunity for a fresh regulatory paradigm to manage the abundance of information or an infodemic; remnants of Society 4.0 spurred by the advancement of Information and Communication Technology (ICT). As mentioned in the earlier part of this chapter, despite the availability of existing legislations to manage and regulate infodemics, these legislations would not be sufficient in the future as technology progresses. The extraordinary pace of technological growth has increasingly made the traditional approach of governance over the technological aspect of society gradually obsolete over time. In this respect, the author believes that only technology can regulate technology in a not-so-distant future. The idea and concept of employing AI to regulate disinformation, fake news, and misinformation is not a strange concept and was even pointed out by the creator of *Facebook*, Mark Zuckerberg, when he testified before the United States Congress regarding misinformation on his social media platform in 2018 (Harwell, 2018). In the hearing, he theorised that in the future, AI would be the scalable method to identify and root out most of its harmful content, including false information.

Nevertheless, Harwell (2018) also noted that *Facebook's* AI technology is not yet ready to carry out that function effectively, and it is also unclear how it would do so and when

such technology would be available. Some experts, including Grimmelmann, are sceptical of this idea as, according to him AI is generally not equipped to understand the social context or nuance of a speech. Although it is a distant prospect at present, to have an AI that can detect falsehood in the future is not entirely impossible. According to Susarla (2018), by using the example of success stories on how AI fights spam emails, the same method may be employed to control infodemics and their harms along with them, such as disinformation, misinformation, and the spread of fake news. Using the text-analysis approach in detecting spam emails, AI's capabilities to examine how well a headline, or post's text, compares to the actual content of any articles shared and disseminated online can be enhanced. In addition to that, an AI can also be used to verify and examine similar articles available in other news media. Therefore, a similar approach can identify sources and websites that spread disinformation, misinformation, and fake news (Kai et al., 2017). Taking Society 5.0 into consideration, even better fact-checking or fact filtering can be created as it incorporates raw data from the physical world and creates mirror scenarios in cyberspace and the facilitation of AI to give meaningful information or knowledge that mitigates the hazardous effects of infodemic, including disinformation. However, Shiroshi et al. (2019) warn that human involvement in policy-making is needed as humans should remain decision-makers in the process. This is since pure policy-making by AI might not be accurate or even correct as subjective and qualitative factors and objective and quantifiable factors are involved in drafting future determinations (Shiroishi et al., 2019). At the same time, we must be careful and consider that the technological advancements offered by Society 5.0 are not being used for shady benefits, such as becoming a major tool for disseminating mass propaganda and fabricated truths (Sursarla, 2018). Therefore, a repetition at a larger scale of

cybersecurity risks borne out of Industry 4.0, such as internet addiction, should be foreseen and avoided (Gladden, 2019).

RECOMMENDATIONS AND CONCLUSION

Even though AI may be a potential solution to the infodemic, such technology is still under development and may not be available any time soon for public use. The availability of this technology depends on many variables, such as the transformation of future technologies. Consequently, until such an ecosystem can be achieved under Malaysia Society 5.0, we must rely on more contemporary approaches as a short-term countermeasure. The traditional legislation approach seems unreliable, as it is increasingly out of pace in keeping up with the rapid evolution of technology. In this respect, the author believes that proper self-regulation initiatives should serve as the main temporary measures. Fact-checking mechanisms propounded by many parties, especially *Sebenarnya.my* is a good initiative as it is easily understood and easily accessible to the public. Regardless, according to MCMC's Internet User Survey in 2020, only 20.4% of internet users in Malaysia are aware of the existence of *Sebenarnya.my*. and out of this figure, only 40.6% have visited it. This is a clear indication that the public is in dire need of more exposure to portals such as these. Apart from that, fact-checks under *Sebenarnya.my* must be translated into all major languages in Malaysia to reach as wide an audience as possible. Moreover, proper synergy and coordination between the government's official media and fact-checking outlets, including the private ones such as *Malaysiakini*, is needed to manage this infodemic more efficiently.

Furthermore, a self-regulatory body that monitors press ethics should be established as soon as possible. A self-regulatory body, such as a press or a Media Council, would

improve the media standards while reducing the authority's overreach against the media (Zainul and Said, 2020). This is crucial to ensure that the media industry is more resilient against political interference and machinations (Haron, 2020).

Apart from that, the proportionality principle in determining punishment against any related offences regarding the infodemic should be adequately observed to avoid any miscarriage of justice. Punishment should be determined based on the seriousness of the crime rather than leaving it to the sentiment or literal interpretation of the law. In this regard, several external and circumstantial factors should be considered, such as the extent of harm caused by such disinformation and its cause. Therefore, only harmful disinformation, misinformation, or fake news should be considered a crime, as minor disinformation only requires a simple rectification that can be done through proper available channels. This is crucial to avoid any attempt to undermine freedom of speech or any effort of using the law as a tool for political persecution to dissenting views against the authorities. Likewise, clearer legal or policy obligations should be enforced against the social media providers to assist the effort to combat disinformation and misinformation in Malaysia. In this respect, formalising the Standard Operating Procedure (SOP) on take-down notices through legislation should be done. However, these take-down notices should only be issued if such information is truly harmful for public consumption, for instance, if it may impede the healthcare officials in their efforts in fighting a pandemic (Zainul and Said, 2020). Additionally, social media companies can also publish each take-down notice for public oversight to ensure that checks and balances are in order.

Funding: This research received no external funding.

Acknowledgement: The contributions by all are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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Malaysian Society 5.0

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3

The Presumption of Legitimacy in Malaysian Society 5.0: Embracing Fertility Preservation Technology

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Abstract - A family is the basic unit in a society, and parenthood is a dream for most couples. Not all couples can have children naturally, if fertility is compromised due to various factors such as cancer therapy, metabolic conditions, autoimmune diseases, specific surgical interventions, and sex affirmation procedures. The advancement in Assisted Reproductive Technology (ART) has managed to address these issues in helping married couples who have trouble conceiving a child naturally, to become parents. Fertility Preservation Technology is an example of ART. The usage of this technology may be contrary to the presumption of legitimacy provisions in the Malaysian Evidence Act 1950. This chapter will attempt to discuss the said technology, the method, and the circumstances in which it is utilised while raising the legal issues on the legitimacy of a child who was born with the assistance of Fertility Preservation Technology. This technology is here to stay and may be widely used in the future. Thus, Malaysia needs to revisit the presumption of legitimacy by introducing ways to legitimise such a child, in the event that one of the spouses does not survive. The best interest of the child must be

Cite this chapter as:

Jamaluddin, S. Z., & Thambapillay, S. (2022). The presumption of legitimacy in Malaysian society 5.0: Embracing fertility preservation technology. In S.Z. Jamaluddin, O. S. L. Tan, S. Khan & W. M. Su (Eds.), *Malaysian society 5.0: Selected contemporary socio-legal issues* (pp. 71-99). MMU Press.

the underpinning principle in discussing this issue. A pragmatic approach will go a long way in embracing this technology for the future Malaysia Society 5.0 and at the same time safeguarding the best interest of children born using this technology.

INTRODUCTION

Marriage is a sacred institution. The purpose of marriage has changed over time, from social, economic, and political reasons to love and personal fulfilment (Manap et al., 2013). Parenthood illustrates the love and commitment of the spouses to the marriage through the birth of their children, building their family unit to be part of the society or community. Having children is a basic right of all couples. As such, they have the right to receive the highest standard of sexual and reproductive health (ICPD, Cairo, 1994). Nevertheless, not all married couples choose to have children. The reasons for not having children vary from a conscious decision not to have them to medical reasons. The conscious decision not to have children may be based on social and economic factors such as an increase in the cost of living, an increase in women's participation in the labour market or a lifestyle choice (The New Straits Times, 2019). On the other hand, a couple may be suffering from infertility, which can be attributed to the husband or wife. Since the inability to conceive a child is related to medical reasons, various technologies such as Assisted Reproductive Technology (ART) have been introduced in order to assist couples to have children. The usage of this technology may raise legal issues. There is the need to address these legal issues since this technology will be widely used not just by those who are unable to bear children or are terminally ill, but by others who want to delay their reproduction to the future. Even though this procedure is also available for those without any medical reasons, the discussion

is confined to married couples opting for the procedure due to medical reasons.

The availability of various ART allows choices and decisions tailored to the needs of the couples or the individuals. This technology will be improved further in the future. Perhaps when Malaysia becomes a Society 5.0, this technology will become the norm. Thus, it is important for Malaysia to embrace this technology by resolving the legal issues that arise from it in the best interest of the parties, especially the children, who are born by the miracle of this technology.

Assisted Reproductive Technology (ART)

A couple is said to have infertility issues when after a year of unprotected sexual intercourse, they failed to conceive a child (Gurunath et al., 2011). Not being able to have children sometimes can be perceived as a failure, especially for the woman. There are two types of infertility; primary infertility refers to those who have never had a pregnancy and secondary infertility refers to those who have previously been pregnant but are unable to become so (Shreffler et al., 2017). Assisted Reproductive Technology (ART) was introduced to address infertility issues. ART is defined as ‘all fertility treatments’ in which either the eggs or embryos are handled, involving surgically removing eggs from the woman’s ovaries, combining them with the sperm in the laboratory, and returning them to the woman’s body or donating them to another woman. Common methods for ART include In-vitro fertilisation (IVF), Zygote intrafallopian transfer (ZIFT), Gamete intrafallopian transfer (GIFT) and Intracytoplasmic sperm injection (ICSI). The method that is suitable depends very much on the cause of the infertility, the needs of the people undertaking the treatment, and the costs.

FERTILITY PRESERVATION

Fertility Preservation is gaining momentum in Asia with the establishment of the Asian Society of Fertility Preservation with member-countries such as Japan, Hong Kong, India, Singapore, Korea, Taiwan, Thailand, Indonesia, Vietnam, Philippines, China, and Pakistan. The Asian Society of Fertility Preservation is the first initiative of experts from all over Asia to promote Fertility Preservation science and practices (Harzif et al., 2019). The Asian Society of Fertility Preservation paves the way for countries in Asia to establish their own Fertility Preservation Society. The Asian Society of Fertility Preservation's mission is to raise awareness of fertility preservation among medical professionals and the public, to improve technical skills, and to keep health practitioners informed about the latest developments in the field and in a research setting.

The fertility preservation is a procedure to freeze sperm or eggs for future use. It is to safeguard the ability to have children in the future. This procedure may be opted for by those who want to delay starting a family, whether on medical or non-medical grounds. For example, illnesses such as cancer may compromise one's ability to have children in the future. Even though the risk for cancer is higher among those who are 50 years and above, nevertheless, the advance in technology has allowed cancer to be diagnosed earlier. Early diagnosis has reduced the mortality rate among cancer patients (Lambertini et al., 2016). Besides surgery, cancer patients are treated with other treatments, including chemotherapy, radiation therapy, immunotherapy, targeted therapy, hormone therapy and stem cell transplant (National Cancer Institute). These treatments may affect the patients' fertility. In cases such as this, counselling on fertility preservation is offered to the patient. If the patient opts to use fertility preservation, it must be

conducted before they begin their medical treatments that may cause infertility such as chemotherapy or radiation therapy. The most well-established methods of preservation of fertility include embryo cryopreservation and ovarian transposition in women, and sperm cryopreservation in men (Shah et al., 2011).

Fertility preservation is closely linked with the quality of life of the patients (Yeung et al., 2020). They survived cancer and therefore may want to start a family. In the case of death of a spouse, the surviving spouse is given the opportunity to utilise the eggs or sperm stored through fertility preservation technology for a chance to have a family. This technology has been extended to cover other medical illnesses such as lupus, glomerulonephritis, and myelodysplasia (Harzif et al., 2019).

The situations for the usage of this fertility preservation to married couples can fall within any of these three circumstances:

- (i) The spouse who suffered the illness survived

In this situation, the couple may opt to use IVF or ZIFT to conceive a baby. During the IVF cycle, the doctor retrieves the eggs that were frozen and then fertilises them with the husband's sperm. The fertilised egg grows in a petri dish for several days until it becomes an embryo. Thereafter, the embryo is implanted back into the woman's uterus (Centre of Reproductive Medicine). ZIFT is similar to IVF, the only difference is that the embryo is deposited into the fallopian tube.

- (ii) The spouse (the husband) who suffered the illness, died

If the husband died, the surviving wife could utilise the fertility preservation technology to have her husband's child. The surviving wife may opt for IVF, ZIFT or even ICSI. The ICSI method requires one or more eggs to be removed from the woman and injected with a single healthy sperm before being transferred back to the woman's body.

- (iii) The spouse (the wife) who suffered the illness, died.

If the wife who was ill did not survive, the husband can only have the child utilising his wife's preserved eggs through surrogacy. Being a male, he will not be able to carry the child himself. The surrogacy method allows another woman's womb to carry the baby for the surviving husband. This is known as gestational surrogacy, where an embryo from the intended parents is transferred to the surrogate uterus and the woman who carries the child has no genetic connection to the child (Patel et al., 2018).

The availability of the various technologies will allow these surviving patients to have a family of their own, something that they may not have been able to do previously. The advancement in medical technology has facilitated better healthcare treatment and management for these patients. Technology has given them the opportunity to have a normal life, which includes a family. Even at this point in the evolution of this technology, the legal issues pertaining to this technology need to be addressed in order to ensure that law and technology are working in tandem, to benefit the recipients of the said technology. The usage of this technology will increase when Malaysia becomes a 5.0 Society, where technology and physical space are integrated.

FERTILITY PRESERVATION IN MALAYSIA

Fertility preservation on medical grounds, especially cancer, is offered in Malaysia too, with the establishment of the nation's first oncofertility referral centre, known as the Advanced Reproductive Centre (ARC), located in the *Chancellor Tuanku Muhriz* Hospital of the National University of Malaysia (HCTM), Kuala Lumpur (The New Straits Times, 2020). The centre offers procedures such as ovarian tissue cryopreservation (OTC) that stores ovary tissues extracted from cancer patients for fertility treatments and preserves reproductive tissues between 10 to 20 years for family planning purposes.

The fertility preservation in Malaysia is guided by the Standards for Assisted Reproductive Technology Facility-Embryology Laboratory and Operation Theatre, issued by the Ministry of Health and the Guidelines of the Malaysian Medical Council on Assisted Reproduction. The first document deals with the technical and infrastructure required for an establishment offering the services, while the second document discusses the guiding principles in conducting the services.

The guidelines discuss the three issues that need to be considered by the service providers, namely; (i) respect for the dignity and integrity of the human being; (ii) protection of human genetic material so that it is not misused or used inappropriately without the donors' consent and (iii) the need for quality of care. The guidelines specifically state that this service should only be offered to a married couple and both parties must consent for the treatment. This consent is also necessary in the case of disposal or further storage of genetic material for an extended period of 5 years that can be applied for once. The stored gametes are systematically destroyed in the event of separation, divorce, or death. The guidelines

prohibit the selling of gametes, semen, or embryos, or reproductive cloning and the culturing of an embryo in vitro for more than fourteen days.

Malaysia was supposed to have introduced the Artificial Reproduction and Tissue Act in 2016, however it has been delayed. This Act will aim to regulate reproductive technologies including sperm or egg banking, sperm donation and surrogacy (Kooli, 2020).

Another relevant legislation is the Human Tissues Act 1974 (Act 130) which provides for the use of parts of human bodies of deceased persons for therapeutic, medical education and research purposes. This Act regulates organ removal after a person dies. It allows the person who is entrusted with the deceased's body to authorise the removal of any part from the said body for use for the purposes mentioned, if he believes that the deceased or his next of kin did not object to the said removal (Ahmad et al., 2016). This Act is not relevant for the discussion in this chapter, since fertility preservation is done during the lifetime of the parties.

LEGAL ISSUES ON FERTILITY PRESERVATION

(i) Legitimacy

The first and foremost legal issue that arises from fertility preservation is concerning the legitimate status of the child born from parents who used ART. The legitimate status of a child is a pertinent issue as it will determine his rights under the law. Being a legitimate or illegitimate child makes a difference in the following matters:

(a) ***Domicile***

Domicile is defined as a place of residence or ordinary habitation; a house or home; the place where one has his permanent residence, to which, if absent, he has the intention of returning (The Shorter Oxford Dictionary). Domicile determines a person's civil status, such as his rights and duties in family law. For example, domicile is relevant for the application of certain statutes such as the Law Reform (Marriage and Divorce) Act 1976 (Act 164) to the parties subject to their domicile in Malaysia. According to the landmark case of *Udny v Udny* (1869) LR 1 SC & Div 441;7 Macq 89), a legitimate child will follow the father's domicile upon birth, while an illegitimate child will follow the mother's domicile.

(b) ***Registration of Birth***

According to Section 13(2) of the Births and Deaths Registration Act 1957 (Act 299), an illegitimate child's birth must be registered with or without the name of the father for the non-Muslims.

(c) ***Right to Inheritance***

Being legitimate will also allow the child to inherit from both the parents (Section 3 of the Distributions Act 1958 [Act 300]) while an illegitimate child will only inherit from the mother, if she does not have any legitimate children (Section 11 of the Legitimacy Act 1961 [Act 60]). As such, the father of an illegitimate child will need to provide specifically through a

will for the child to inherit (*Tan Ying v Tan Kah Fatt & Anor and another appeal* [2018] MLJU 1070).

(d) Right to Maintenance

A legitimate child will have the right to receive maintenance from both the parents while, for the illegitimate child, the maintenance will come from the mother. Nevertheless, section 3(2) of the Married Women and Children (Maintenance) Act 1950 (Act 263) provides the power for the court to order any person to pay maintenance to an illegitimate child if the person neglects or refuses to do so. The duty to pay maintenance to an illegitimate child is also extended under section 2(1) of the Law Reform (Marriage and Divorce) Act 1976, which provides that the said illegitimate child falls within the definition of ‘child of marriage’ which include an illegitimate of either party, accepted by the other party.

As Malaysia practises a dual system of Family Law, one for the Muslims and one for the non-Muslims, it is next pertinent to look at the presumption of legitimacy for both these categories.

(a) Legitimacy Issues of Children of Non-Muslims

Under common law, a child is deemed legitimate if his parents are married when he is conceived or at the time of his birth. A legitimate child also refers to a person who was conceived during a valid marriage, but his parents have divorced or where his father has died (Blackstone’ Commentaries on the Law of England). In Malaysia, the presumption of legitimacy is more or less similar to the common law position. Section 112 of the

Evidence Act 1950 (Act 56) states the presumption of legitimacy as:

“The fact that any person was born during the continuance of a valid marriage between his mother and any man, or within two hundred and eighty days after its dissolution, the mother remaining unmarried, shall be conclusive proof that he is the legitimate son of that man, unless it can be shown that the parties to the marriage had no access to each other at any time when he could have been begotten.”

If the child is born outside the perimeters of the said section, the child is an illegitimate child. The first situation will be when the child is born during the continuance of a valid marriage between his mother and any man. The provision does not mention the marriage between his mother and his father, just between his mother and ‘any’ man. As such, the first situation emphasises on the time when he was born, and not when he was conceived. The marriage between his mother and the man must be a valid marriage. After 1st March 1982, a valid marriage for non-Muslims must fulfil the requirements as listed in the Law Reform (Marriage and Divorce) Act 1976. This presumption is a rebuttable, and it can be rebutted. For example, where the child is born during the continuance of the marriage, the presumption can be rebutted by proving non-access to each other during the time when the child was conceived. The non-access includes physical access (*Ah Chuck v Needham* [1931] NZLR 559) or medical situations.

The introduction of Deoxyribonucleic Acid (DNA) testing raised an issue whether the presumption of legitimacy can be rebutted through the said test. This issue was discussed by the court in the case of *CAS v MPPL & Anor* [2019] 2 CLJ 454 where the Court of Appeal held that the question on legitimacy

and paternity needs to be separated. The former concerns a question of fact; the latter a question of law. Section 112 of the Evidence Act 1950 constitutes adjectival law, and it is trite that adjectival law must be interpreted liberally so as not to defeat the rights of parties. Once access can be proven, the status of the child is legitimate, regardless of the DNA test. It is submitted that despite the decision in *CAS v MPPL & Anor*, with the advancement of medicine, the DNA test results are more conclusive as to the paternity of the child rather than referring to the archaic presumption in section 112 of the Evidence Act 1950 whether the parties had access to one another. Hence, the authors are of the view that the time is right for this section to be amended to provide that the presumption of legitimacy can be rebutted by resorting to the DNA test.

A child is still legitimate if he was born within two hundred and eighty days after the marriage is dissolved and the mother remains unmarried. Under section 8 of the Law Reform (Marriage and Divorce) Act 1976, a marriage can be dissolved by the death of one of the parties or by the order of a court of competent jurisdiction or by a decree made by a court of competent jurisdiction that the marriage is null and void. The period of two hundred and eighty days is crucial; if the child is born after that period, the child will not be considered as a legitimate child of the couple.

Based on the above provisions, a child who is born using ART during the continuity of the marriage will be considered as the legitimate child of the non-Muslim couple so long as the couple had access to one another at the time when the child was conceived. Nevertheless, the issue on legitimacy will need to be addressed where the child is born after one of the spouses dies. If the husband dies, the wife needs to give birth to the child within two hundred and eighty days (about 9 months) after the passing of her husband. Thus, it is important for the

time-of-birth to comply with the time period given for the child to be given the status of a legitimate child. Failure to comply with the time period would result in the child being deemed as an illegitimate child even though the child is the biological child of the spouses.

If the couple planned to use ART in the case of death of a husband due to illness, it would be challenging for the wife to think about pregnancy immediately after the passing of her husband. More so if she was the person who cared for her late husband throughout his illness. She would need time to get her life together after the passing of her husband, before thinking about having his child (Scharman, 2019).

(b) Legitimacy Issues of Children for Muslims

The issue that arises is whether section 112 of the Evidence Act 1950 applies to the Muslims in Malaysia. This is because, under Islamic Law, a child born within six months of marriage is deemed illegitimate. This issue arose in the case of *Ainan Bin Mahmud v Syed Abu Bakar Bin Habib Yusuff & Ors* [1939] MLJ 209, where the child concerned was born within six months of his parents' marriage. The learned judge held that the Evidence Enactment was of general application and thus would apply to all the inhabitants of the Federated Malay States. As such, the child concerned was held to be a legitimate child of his parents. This case has received several criticisms, one of which is as follows (Majid, 1999):

“... the legitimate status of Muslims is governed by the respective State Enactments and the State legislative assemblies, and that therefore the Evidence Enactment or Act should not have been applicable to Muslims.”

As mentioned above, even though the section 112 of the Evidence Act 1950 is applicable to Muslims, nevertheless, the Islamic Family Enactments have included the provisions on the presumption of legitimacy. For example, section 110 of the Islamic Family Law (Federal Territory) Act 1984 (Act 3030) provides that:

“Where a child is born to a woman who is married to a man more than six *qamariah* months from the date of the marriage or within four *qamariah* years after dissolution of the marriage either by the death of the man or by divorce, the woman not having remarried, the *nasab* or paternity of the child is established in the man, but the man, by way of *li'an* or imprecation, disavow or disclaim the child before the Court.”

Section 111 of the Act provides that a child who is born outside these parameters will not be considered as the legitimate child of the man, unless he or his family asserts that. The minimum requirement is for the child to be born at least six months from the date of the marriage (*Wan Azmi vs Nik Salwani* [1990] 9 JH 192) while the maximum period is four years after the dissolution of the marriage and the mother remained unmarried, provided the ex-husband did not dispute the said lineage of the child.

This provision allows for a longer period between the dissolution and the birth of the child in the event of a dissolution of marriage. Dissolution here includes dissolution due to death, too. If the parties opted for fertility preservation with a clause that clearly stipulated the consent of the husband for the wife to utilise the frozen sperm after he died and the child is born within the 4 years after his death, the child will be deemed to be his child, since he did not dispute the lineage.

(ii) **Surrogacy Contracts in Malaysia**

The next emerging legal issue is concerning surrogacy contracts in Malaysia. The issue with regard to surrogacy will arise if the wife died due to illness with her eggs being stored to be used in the future. Under this circumstance, the only way for the surviving spouse (the husband) to utilise the eggs is through gestational surrogacy. The issues concerning surrogacy contracts are discussed as follows:

(a) ***Validity of Surrogacy Contracts***

In Malaysia, there is no regulation on surrogacy. Is the surrogacy contract entered between the husband and a third party valid in Malaysia? The validity of the contract arises out of the application section 24(e) of the Contracts Act 1950 (Act 136) where the consideration is immoral or against public policy. Renting a womb may be considered as immoral or against public policy, nevertheless, to date there have not been any reported cases on surrogacy. If a gestational surrogacy case is tried in the Malaysian court, there is a likelihood that the court will follow the decision in the case of *In the Matter of Baby M* 217 N.J. Super.313 where the surrogacy contract was held to be invalid due to public policy.

(b) ***Legitimate Status of Children Born from Surrogacy Contracts***

Opting for gestational surrogacy may also affect the legitimacy of the child. If the surrogate mother is herself married, and the child is born within that marriage, based on the presumption under section 112 of the Evidence Act 1950, that child will be

the legitimate child of the married woman and her spouse. The person who requested the woman to be a surrogate mother (the requestor) will not have any right over the child.

If the surrogate mother gave the child to the requestor, the child can only be legitimised through an adoption order issued under section 9 of the Adoption Act 1952 (Act 257). Nevertheless, it is also important to bear in mind that the court will scrutinise any payment made to the surrogate mother before approving the adoption. Section 6(c) of the Act prohibits the payment or reward in consideration for adoption unless it is related to medical expenses for the birth of the child (*Re Sim Thong Lai* [1955] 1 MLJ 25).

The other option is for the husband to remarry, and the new wife could be the surrogate mother of the child from his deceased wife. It will not be considered as a surrogacy contract since there will not be a monetary consideration between the parties and it is only done with the consent of the new wife. The child could then be considered a legitimate child of the married couple. However, even then, there is the possibility that the child was not conceived from the egg belonging to the new wife. Hence, would the child be said to have been born to the new wife as envisaged under section 112 of the Evidence Act 1950?

For Muslims, surrogacy is prohibited because it involves the presence of a third element, the surrogate mother, without any valid marriage between the parent parties (Usman & Daud, 2017). It will further create confusion as to the

lineage, since there is no valid relationship between the parties. The lineage is important not only for the purpose of inheritance, but also for medical purposes. In Islam, a man can marry more than one wife. The question that arises is whether the other wives could be the surrogate mother? At present, the discussion on this issue is limited to the circumstances where one of the wives has medical issues to get pregnant and she is alive (Butt & Shah, 2020). The issue as to the possibility of her carrying two embryos at the same time was raised and this may affect the lineage. Nevertheless, this can be avoided by the parties not having any intimacy for 3 months prior to the surrogacy arrangement, in order to ensure the uterus of the surrogate wife is without a child. Nevertheless, our chapter's focus is a bit different in the sense that we are discussing a situation where, if a wife died and if the husband remarried, can the new wife be the surrogate mother for the child of his deceased wife? The new wife must consent to the surrogacy without any monetary considerations. The child will then be the legitimate child of the married couple, not the child of the deceased's wife, but the child of the surrogate mother (Syaiful Alam & Nur Putri Hidayah, 2019).

(iii) Issues on Consent

It is important for the spouse who underwent fertility preservation treatment to give clear consent for the surviving spouse to utilise the sperms in the future. This consent is important to validate the future pregnancy after the said spouse had passed on. For Muslims, this clear consent would indicate

that the child falls within the lineage of the husband, if the child is born within the stipulated time period. Without clear consent, the issue as to the paternity of the child may be questioned.

At present, Malaysia does not have any legislation that regulates the fertility preservation arrangement. The Guidelines of the Malaysian Medical Council on Assisted Reproduction mentions the requirement for written consent in order to undergo the treatment, while in the event of a death, the surviving party will not have the right to use the stored sperms and it must be destroyed. This aspect needs to be considered if recognition for conception after death is a part of a future in which ART plays a required role.

EXPERIENCES FROM OTHER JURISDICTIONS

Having discussed the legal issues that arise or may arise from ART in Malaysia, the authors are of the opinion that it would be incumbent to examine the legal practice or position in other jurisdictions on this issue. For the purposes of this chapter, three jurisdictions, i.e., Japan, South Australia, and New Zealand, have been selected since there have been commendable developments in these jurisdictions.

(i) Japan

The Supreme Court of Japan has been deciding on the status of children born using the ART since 2001. Between 2001-2004, at least 4 babies were born using IVF after the husband died (Noriyuki et al., 2008). The mother of 3 babies applied to register the babies but was rejected.

In Japan, Article 772 of the Japanese Civil Code provides a presumption that the husband is the father of a child born after 200 days from the date of marriage, and that a child born within

300 days after dissolution of the marriage is presumed to have been conceived during the marriage (Jones, 2014). Article 774 provides the right for the husband to deny the legitimacy of the child born under Article 772, covering both positions, during and after the dissolution of the marriage. The discussion on the status of a child born using fertility preservation was dealt with by the Supreme Court in 2006, involving a mother who had the child through IVF, using the husband's frozen sperm, after the husband died of leukaemia (BioNews, 2006). As the child was born more than 300 days after her husband died, the child was not recognised as the legitimate child of her husband. Thus, the birth of the child could not be registered. Once again, it is seen that the time period when the child was born is crucial to determine his status.

In another case reported in 2017, a couple had preserved their embryo prior to becoming estranged. The wife then utilised the frozen embryo and gave birth to the child (Meiji.net, 2017). The husband filed a lawsuit, denying that he was the legitimate father of the child because the wife transplanted the embryo without his consent. Thus, it is important for the child to be legitimate, to be born within the given time period, and the husband must have consented to the use of the said technology after his death. In a situation where the wife dies and the husband opts for a third party to give birth to the child, the court in Japan is reluctant to recognise the child as the child of the couple on the basis that the mother did not actually deliver the child, since she is already dead (Mayeda, 2006). This decision is based on the understanding that a valid mother- child relationship is only between the woman who gave birth to the child and the child who was borne by her. Therefore, in this circumstance, the child is regarded as an adopted child of the father.

(ii) South Australia

In South Australia, a child born to a woman during her marriage or marriage-like relationship with a domestic partner (irrespective of their sex or gender identity), or within 10 months of the marriage or relationship ending, is generally presumed (in the absence of proof to the contrary) to be the child of its mother and the husband or domestic partner (section 8 and 11, Family Relations Act 1975 of South Australia). Once again, the time period must be fulfilled for the child to be legitimate. Nevertheless, this Act had provided for a separate presumption of parentage or legitimacy for the children born by ART, which includes posthumous conception and surrogacy. Section 10C (5) states that if the woman had a posthumous conception, and the husband consented to the said conception, then the husband is the father of the child, regardless of when the posthumous conception took place (section 10C (7) Family Relations Act 1975). Section 10C (6) further provides a rebuttable presumption as to the husband's consent. This provision takes away the need to conceive the child immediately after the death of the husband for the child to be legitimate.

South Australia introduced the Assisted Reproductive Treatment Act 1988 and the Assisted Reproductive Treatment Regulations 2010 to regulate the services of ART by stipulating the qualifications and conditions for those who are offering the services and those who are eligible to opt for the services. It allows a woman or her partner who is suffering from a serious medical condition or who is undergoing treatments such as chemotherapy to opt for these services. The medically ill partner must provide clear consent for the surviving party to utilise the said sperm or egg must be included for the purpose of parentage and surrogacy arrangement under the Surrogacy Act 2019. By virtue of section 8 of the Surrogacy Act 2019, the provisions on parentage in the Family Relations Act 1975 are

applicable to the child born under this arrangement. The said provisions cover various surrogacy arrangements. The provisions in the Act stipulate various situations. However, the discussion in this chapter will only touch on gestational surrogacy using the couples' embryo, where the woman who gives birth to the child will not be the mother of the child (section 10C (2) Family Relations Act 1975). Besides the said presumption, section 18 of the Surrogacy Act 2019 allows the intending parent to make an application to the court to be recognised as the parent of a child born through a lawful surrogacy arrangement. Once again, these provisions will allow the father to be the lawful father of the child, without having to adopt him.

(iii) New Zealand

Section 5 of the Status of Children Act 1969 provides that a child born to a woman during her marriage or within 10 months after the marriage has been dissolved by death or otherwise, shall, in the absence of evidence to the contrary, be presumed to be the child of its mother and her husband, or former husband. Once again, the child being born during the allowed time period is of the essence of the child's legitimacy status after the death of the woman's husband.

Considering the development in ART, New Zealand introduced the Human Assisted Reproductive Technology Act 2004, in order to regulate it. The objectives of this Act are to secure the benefits of ART while protecting the health and safety of those who are using the technology, including posthumous conception and non-commercial surrogacy. There must be clear consent given by a spouse before their death as to the specific use of the sperm or egg in the instance of their death. Besides this Act, there is also a guideline known as Guidelines for the Storage, Use, and Disposal of Sperm from a Deceased Man, which deals with the protocol to be used upon

the death of a man after storing his sperm. Even though the legislation recognises posthumous conception, nevertheless the status of the child is not that clear. Section 7 of the Act discusses the relationship between the deceased father and the child. Nevertheless, two out of the three circumstances require the conception to take place during his lifetime or the acknowledgement of the child to be given in his lifetime. The last option allows a party to apply for a declaration of paternity to the Family Court (Section 7(1)(c) of the Status of Children Act 1969). For non-commercial surrogacy, section 17 of the Act provides that the woman who gave birth to the child is the mother of the child. The intended parents must apply to adopt the child.

The discussion above illustrates the different approaches in dealing with birth using fertility preservation technology by the individual countries to suit the needs of their people.

LEGAL ISSUES ON FERTILITY PRESERVATION: THE WAY FORWARD

It is important to accept that fertility preservation is here to stay. In other parts of the world, fertility preservation is offered as a choice to young single patients who are diagnosed with cancer (Rodriguez-Wallberg et al., 2020). This technology is already being extended to those who want to delay parenthood due to other reasons.

Thus, it is important for Malaysia to start preparing for the future, especially when cyberspace and physical space will interact freely. The technology indeed provides a better quality of life for those who want to have a family. ART will continue to advance in the future. Hopefully, as Malaysia plans to enter the realm of Society 5.0, the legal issues posed by the current legislations that surround ART and fertility preservation will

be something of the past. Malaysia will also hopefully have her own Society of Fertility Preservation to oversee the usage of this technology for the public.

(i) **Recognition of Posthumous Conception**

Since section 112 of the Evidence Act 1950 does not cater for posthumous conception, and in view of ART advancements, perhaps the time has come for the said section to be amended. Without amending this section, a child born with assistance from ART after his father passes on will be an illegitimate child, and he will be denied the right to inherit his father's estate. The recognition of posthumous conception in this circumstance will not create a new legal liability to the parents since they were legally married, and the child is their child. The only difference is that the child was conceived after the death of the father.

If posthumous conception is recognised, two issues must be addressed, namely the consent of the deceased father allowing conception to be undertaken after his death and the time period between his death and the birth of the child. As discussed earlier, the written consent, as in the Guidelines, requires the sperm to be destroyed upon the death of the husband. Perhaps an exception to these guidelines must be given for couples who are resorting to fertility preservation due to cancer or other terminal illness, since the purpose of the said preservation was for the chance to have a family in the future. If the husband clearly agreed for his wife to use the stored sperms after his death, then his wishes should be upheld. Thus, the written consent of the couple must also include this, since death may happen due to the husband's health situation. With this written consent, the child's lineage will not be disputed.

The second issue that needs to be discussed is the period between the death of the father and the birth of the child. Section 112 of the Evidence Act 1950 mentions that the child must be born within 280 days after the death of the husband to be a legitimate child of the couple. An exception to this time frame can be given to a couple using ART for posthumous conception. It is submitted that section 112 of the Evidence Act 1950 be amended to include the following sentence: “A child who is born using fertility preservation technology after the passing of the father will still be considered as the legitimate child of the couple”. Since the husband was not well, the wife would have been the primary carer of the husband and after his death, she may not be in the right frame of mind to start a family immediately. A reasonable time must be given for her to sort things out before thinking about having his child. According to the MMC Guidelines, the storage can be for up to five years. However, an application to extend it to 10 years may be made to the Ministry of Health. Perhaps the time frame as provided for the Muslims can be a reference point as the birth of the child must be within 4 years after the husband’s death.

(ii) **Resolving Surrogacy Issues**

For a husband who lost his wife due to cancer, the only available way to have his wife’s child is through surrogacy. Unfortunately, Malaysia may not be recognising surrogacy anytime soon. He can still have his child if he remarries, but not the child of his deceased’s wife. He can have a child of his deceased wife, if his future wife is willing to be the surrogate mother for his deceased wife’s eggs. The child will be a legitimate child of the couple according to section 112 of the Evidence Act 1950. The same position is applicable to Muslims too, if the secondary wife agrees to be the surrogate mother of the deceased wife’s child.

(iii) **Settling Consent Issues**

The consent allowing the surviving parties to use the frozen eggs or sperms must be spelt out very clearly in the contract entered for the fertility preservation. Since there is no legislation regulating this, the contract signed must include this clause. The consent must be limited to the husband and wife, not to the other members of the family. The consent must also include the timeframe in order to ensure that the child will be a legitimate child within the stipulation of the law.

CONCLUSION

In conclusion, it is to be noted that medical science has taken over the role of the Creator with the invention of ART. Couples nowadays have the option to resort to any of these technologies if they are unable to have children, be it during their lifetime or even after the passing-on of one spouse. They need not be worried about being shunned by the society as being infertile as this is prevalent among the Asian society when compared to the Western society. Many couples resort to dissolving their marriages when they find out that their spouse is infertile.

However, infertility could be described as a matter of the past with the advent of the ART. Nevertheless, several legal issues, as have been discussed in this chapter, have arisen in connection with these ARTs, especially concerning the legitimate status of the child born. The law ought to protect and safeguard the welfare of children. Thus, it is fervently hoped that the relevant authorities would revisit the archaic laws that are in force currently in order to amend the provisions therein to result in a win-win situation for both the parents and the child involved in a fertility preservation procedure, in line with the future Malaysian Society 5.0.

Funding: This research received no external funding.

Acknowledgement: The contributions by all are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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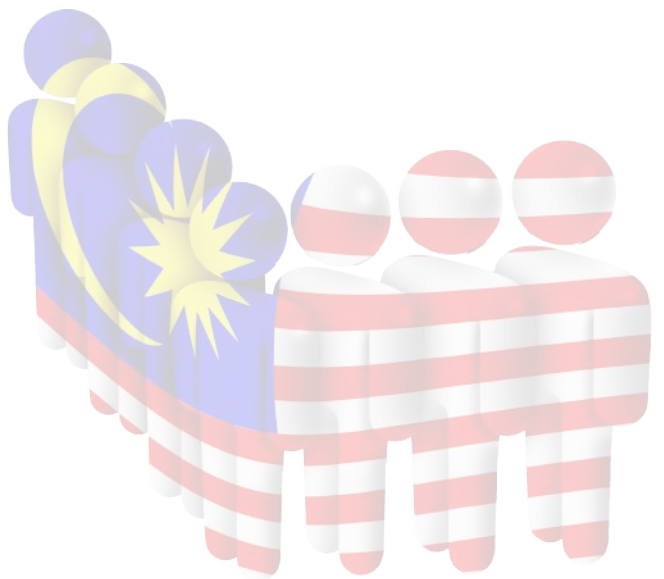
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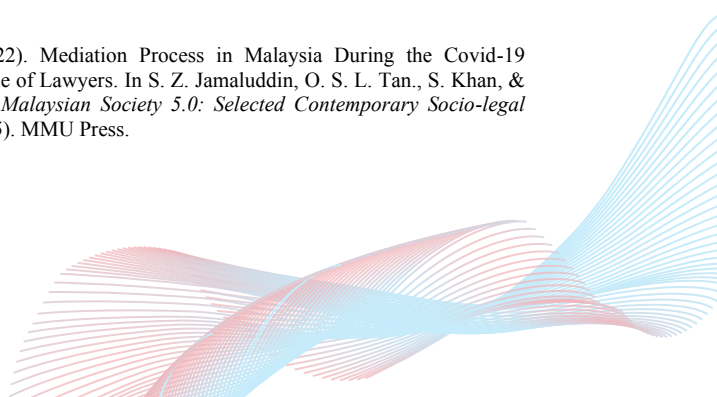
Mediation Process in Malaysia During the Covid-19 Pandemic: The Role of Lawyers

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Abstract - The general scope of a lawyer's role in society is commonly construed as one who advises on legal issues, including a dispute between individual parties and organisations, company corporate matters, and property transactions. Thus, the lawyers will face a lot of disputes with their clients which require lawyers to settle these disputes for the clients. As such, lawyers and clients may consider using mediation to resolve the disputes faced by them. To date, it is arguable that awareness of mediation among Malaysian is still low because it is considered a new concept for Malaysians. In Malaysia, the courts have started to use mediation to settle disputes via Rules of Court 2012. The disputants will not battle the legal issues through the courts. Thus, lawyers play an important role in the mediation process. With the advantage of information and communication technologies (ICT), online ADR (ODR) plays an important role particularly in the pandemic of Covid-19 which resulted in physical contact being restricted where face-to-face communication is not encouraged. Thus, ODR is gaining popularity in resolving disputes of various types. As such, the role of a lawyer in the mediation process should be taken attention to being the assistant

Cite this chapter as:

Wong, H. S. (2022). Mediation Process in Malaysia During the Covid-19 Pandemic: The Role of Lawyers. In S. Z. Jamaluddin, O. S. L. Tan., S. Khan, & W. M. Su (Eds.), *Malaysian Society 5.0: Selected Contemporary Socio-legal Issues* (pp. 101-125). MMU Press.



to the ODR, particularly during this Covid-19 pandemic. This study applies qualitative methods through library research by studying and analysing relevant provisions and information. The tentative findings illustrate the way the usage of Artificial Intelligence (AI) at the inception of the mediation process will result in more positive outcomes such as restructuring the process, fairness, and minimising inequality between the parties.

INTRODUCTION

Alternative Dispute Resolution (ADR)? ADR refers to the resolution of legal disputes outside the courts (Mnookin, 2018). ADR mechanisms are getting more popular than recourse to the court system at both national and international levels. ADR comes in a variety, including mediation, conciliation, negotiation, arbitration, and adjudication. These processes are different from each other, but they are “philosophically linked” as they constitute the main processes of ADR.

In this discussion, the focus will only be on mediation. Mediation is a structured negotiation process which required a neutral third party, namely a mediator who acts to facilitate the parties to find the common issues, isolate dispute issues, and subsequently aim to reach a mutual agreement that resolves the dispute that satisfies, as much as possible, the interests of the parties (Folberg & Taylor, 1984; Moore, 1986; New South Wales Law Society, 1988). Mediation has been used to settle court cases and in fact, the new amendment Order 34 Rule 2 of the Rules of Court 2012 gives the direction to both disputants, namely the plaintiff and the defendant to facilitate the settlement of the matter before the court by way of mediation provided always that the judge is of his view that the particular issue arising in the action or proceeding could be resolved by way of mediation, this includes all the accident cases. Thus, it is getting more popular to apply mediation in the civil litigation

process. As such, the role of a lawyer in mediation has become increasingly important as society views mediation as an effective ADR mechanism before considering litigation although, in the mediation process, the mediator will play a significant role.

The general scope of a lawyer's role in society is commonly construed as one who advises on legal issues, including a dispute between individual parties and organisations, company corporate matters, family matters, property transactions, etc. Nevertheless, it is pertinent to consider the role of a lawyer in mediation and the link between a lawyer and mediation. Malaysia practices adversarial jurisdiction and follows common law practice; litigants have access to a sophisticated and rigorous legal process. Former United States Chief Justice Warren Burger (1977) observed that generally when people face disputes, they want the resolution immediately so that they will not be hassled by the disputes. He wrote that "*[t]he notion that ordinary people want black-robed judges, well dressed lawyers, and fine courtrooms as settings to resolve their disputes is incorrect. People with problems, like people with pains, want relief, and they want it as quickly and inexpensively as possible*". In 1966, Abraham Maslow also popularly said, "*if the primary tool you have is a hammer, you tend to see every problem as a nail!*" Thus, to act in the best interests of the clients, some litigation lawyers will avoid settling disputes *via the court* system but rather seek an early resolution of the dispute outside of the court system. Mahatma Gandhi used to say that the true function of a lawyer is to unite parties driven asunder (Lannon, 2011). Therefore, lawyers possess the good ability to offer advice and provide guidance to their clients in order to bring the matter to an end without distrusting the role of the mediator in the process. However, the question we need to ask is "how does a lawyer apply his presentation skills in a mediation settlement?"

With the increasing significance of the role amongst lawyers in mediation sought by society instead of litigation, first, this chapter investigated this role in three stages: pre-mediation, during mediation, and post-mediation, particularly during Covid-19, and whether this pandemic has affected the process of mediation. Second, this chapter investigates the pressure borne by the lawyers by their involvement in mediation and future projections in both local and international contexts.

BACKGROUND

The retired Court of Appeal Judge of Malaysia, namely Datuk Wira Low Hop Bing has expressed his view that “the enthusiasm for mediation is global, and the increase in mediation is universal.” (Seminar on Mediation: The Navigation of Malaysian Mediation – Route to Resolutions, October 2010). In this era of globalisation, with escalating issues of conflict in business and for entrepreneurs, it is important to analyse how mediation as an ADR mechanism has contributed to or facilitated the settlement of disputes. According to Lim (1994), mediation has become one of the popular mechanisms to resolve disputes because of the efficiency of the outcome in settling the disputes, including saving and cost saving and maintaining the parties’ relationships. Senft and Savage (2003) also opted that “the legal authority of the courts may be the single most important cause for the growth of mediation across the country”.

The judiciary has viewed mediation as an alternative in clearing backdated cases, as reported in the 2005/2006 annual report, which stipulates “absence of [a] critical provision, such as the power of a court to direct parties to go for ADR is another reason [for the delay in disposing cases]” (Damis, 2007). Lee

(2006) asserted that mediation is bound to be the preferred choice upon being positioned on statutory standing.

Meanwhile, a study carried out by Charkoudian et al. (2009) revealed further confusion among mediators regarding the appropriateness and maintaining the role of a mediator in a balanced manner. Nonetheless, this confusion may be overcome based on where one finds his answer: the future or the past. Within the litigation context, it is common for lawyers to be involved in mediation. A common paradigm of negotiation in litigation pulls away a mediator from the zero-sum game, whereby litigants would convince the party involved that they would lose the lawsuit and cause them to give up the case.

Lawyers need to be knowledgeable about mediation if this becomes the preferred choice in society. Mediation does not only save money and time but also lessens emotional turmoil throughout the process. Mediation yields resolution based on mutual agreement, and it protects the legal rights of the involved parties. Mediation education and the advancing mediation amongst lawyers can enhance the multiple progressing forces, as depicted in the following section. Mediation has the potential to enhance the quality of life amidst the members of society for it strengthens the bond between one another and empowers one to control their life, apart from saving money.

Lawyers with a strong mediation stance could eventually help solve the issues that lurk within the legal system. Lawyers with mediation experience may also have effective resolutions to emerging issues. Practising and training in mediation assist lawyers in investigating their presuppositions in a subconscious manner, such as their behaviour as lawyers, the desires of clients, as well as rules and adversaries.

DISCUSSION

In addition to safeguarding the interest of their clients, lawyers also act as a middleman to reconcile parties that are at odds with each other. In other words, lawyers also act as conciliators in the dispute of parties. The role of lawyers in mediation settlements is extremely important, and both parties are encouraged to engage counsel. This is due to the lawyer's expertise in legal issues raised in mediation settlements, i.e., in drafting a settlement agreement. Indeed, the very presence of the counsel gives the client greater confidence in resolving such disputes.

A lawyer is an adviser in the pre-mediation process which includes assessing the suitability of the case for mediation. Lawyers play an active role during the mediation process at the presentation of the case, joint sessions, *caucuses* sessions, and joint negotiation sessions. After negotiation, the lawyer's roles are including but are not limited to drafting a settlement agreement and ensuring that it is enforceable under contract law, compliance with any undertaking or agreement made at the mediation, and consideration of settlement options that were explored, but not adopted, at the session. In drafting the settlement agreement, the lawyer may refer to the sample settlement agreement stipulated in the Malaysian Mediation Council's Mediation Kit.

The primary function of a lawyer is to offer effective advice or to be more precise, to be a skilled adviser (Ooi, 2004). A lawyer is required to advise his client on the law and procedure, analyse his client's case and his opponent's case and most importantly, act in his client's best interest. Applying this to a mediation context, the lawyer is to advise and prepare his client *before*, *during* and *after* the mediation process.

(1) Pre-Mediation

(a) Assessment of Matter Suitability for Mediation

It is common for a lawyer to evaluate and analyse a brief that was referred to him by a client and to act in the best interest of the client. At all times, lawyers are duty-bound to uphold the interest of the client. Rule 16 of Legal Profession (Practice and Etiquette) Rules 1978 provides that the lawyer should uphold the interest of his client fearlessly. However, the lawyer will be subject to disciplinary action pursuant to section 94(3) of the Legal Profession Act 1976 if he disregards his client's interest during handling the brief of his client. Meanwhile, it was decided in the cases of *Tetuan Theselim Mohd Sahal & Co & Ors v Tan Boon Huat & Anor* [2017] 1 LNS 254, *Sri Alam Sdn Bhd v Tetuan Radzuan Ibrahim & Co (sued as a firm)* [2010] 1 MLJ 284, the lawyer is also expected to exercise reasonable care and skill in giving his advice and taking the necessary steps and/or action in respect of the matter involved which is demanded of a competent and reasonably experienced advocate and solicitor when he is accepting any brief. In Islam, *Al-wakalah bil khusumah* is a Contract of *Amanah*. Lawyers are bound to act for their clients to the utmost. The very same skills in litigation are used in mediation as the first step a lawyer must do is to evaluate if the case in question is a suitable candidate for mediation. It is an undisputed matter that in certain circumstances, mediation is unsuitable for dispute resolution and litigation is the only answer.

It is submitted that cases are suitable to be resolved via mediation if the parties and counsel are prepared and willing to discuss and work towards an amicable settlement (NSW Law Society, 1995). To that end, few factors need to be considered when evaluating if mediation is suitable to resolve a dispute (Bevan, 1992): -

(i) Relationship between parties

Mediation is suitable to resolve disputes where the parties are still in a relationship i.e., as business partners in matters concerning dissolution, distribution of business goodwill, or winding up a business where it requires cooperation from both parties. Nevertheless, even in the context of an ordinary man, mediation is also a chosen technique of dispute resolution as they have in mind the objective of maintaining positive relations with the opposing party.

(ii) Power balance between parties

In the mediation process, it is noted that the interest of the parties will be prioritised rather than the position of the parties. Thus, it is submitted that if there is any imbalance of negotiation and bargaining power between the parties, the result of the mediation process would fail. For example, if there is a commercial contract dispute between a listed company with a sole proprietorship, the listed company with a strong financial background will hire a strong legal team to back up the company whereas the sole proprietor has to face the battle alone. In such a situation, during the mediation process, the mediator should ensure that the interest of all the parties must be treated equally same and no party's interest will be adversely affected.

(iii) Scope of dispute

Generally, not all disputes are suitable to go for the mediation process. It depends on the nature and complexity of the issues. For example, a dispute between the country and country related to a political issue may not be suitable for mediation. Pursuant to Schedule [paragraph 2 (a)] of the Mediation Act 2012, the Schedule listed down the example of a situation in which mediation is not applicable, including but not limited to

proceedings which will affect the provision of the Federal Constitution, Land Acquisition Act 1960, election issues, judicial review, etc.

(iv) Subject matter of dispute

Generally, a win-win type of case is best suited to mediation. When disputants are willing to co-operate and be tolerant towards the other party, they have a higher chance of success in mediation, and this is what is called a win-win case.

(b) Preparation Mediation for a Client

It is important to note that most of the clients have no experiences in attending the court proceedings or mediation process. They might feel stress and anxious when attending such a process. As such, the solicitors must brief the clients accordingly and prepare them for mediation mentally and physically. These preparations include but are not limited to reminders of the mediation appointments such as the date, time, and venue for mediation, and to bring the relevant documents. The lawyer should differentiate the litigation proceedings and mediation process and they do not apply advocacy skills during the mediation process. In the mediation process, the main duty of the lawyer is to give legal advice to the clients effectively because the clients are often inexperienced with the mediation process.

Sordo (1996) has listed down a few functions of the lawyers in the mediation process and the method to guide and prepare the clients for the mediation process:

- If the mediator has made the decision or tends to suggest options for the disputants in the mediation process, the lawyer may remind the mediator to maintain neutrality in the process. It is the main duty of

the mediator to assist the parties to reach amicable agreement and to generate options for the parties to decide on the outcome.

- In the event that the clients do not understand the process of the mediation, the lawyer may explain the process in detail to the clients. The lawyer may also explain to the clients that the discussion in the mediation process will not bind the parties unless the parties have entered into a settlement agreement;
- The lawyer could assist the clients to identify the legal issues arising from the dispute and propose the best solution to settle the dispute while at the same time the interest of the clients will not be compromised.
- Should another party raise any objection or disagreement, the lawyer can guide his clients on the way to overcome this objection;
- Should the clients do not know how to prepare the opening statement in the mediation process, the lawyer can guide the clients by doing more practice of speaking the opening statement; and
- To remind the clients that the mediation process is voluntary, and the clients are not obliged to agree to or to commit any settlement from the other party. However, the mediation process will only be successful if the parties render full cooperation and assistance throughout the whole process.

(c) Agreeing on the Mediation Rules

Before the disputing parties enter the mediation process, generally the parties are required to sign the mediation

agreement. The agreement lists down the ground rules and commitment of the parties in the mediation process. This requirement has been provided in section 7 of the Malaysian Mediation Centre (MMC) and Rule 2 of the Asian International Arbitration Centre (AIAC) Mediation Rules 2018. Further thereto, a few matters that the parties need to take note of in this mediation agreement including but are not limited to issues of confidentiality, mediation costs, allocation of times in the mediation process, etc. The lawyer could explain the contents of the mediation agreement to the clients and make sure that the clients understand the contents of it before the clients sign the mediation agreement. Once the parties have signed the mediation agreement, it indicates that the parties are now submitting their dispute to the mediation.

(2) During Mediation

A lawyer's roles in mediation proceedings are listed in the following:

- The lawyer may not be allowed to enter mediation room during the process. However, if the lawyer is allowed to join the mediation process, his roles are to advise the clients to speak and to take part discussion actively. The lawyer will not speak on behalf of the clients in the mediation process because this process belongs to the disputant parties and the generation options for settlement should come from the disputant parties and not the lawyer.
- Should the clients need any legal advice during the mediation process, for example, the issue for maintenance in the divorce case or issue of salary in an employment dispute, the lawyer can assist the clients by analysing the facts and issue and then supplying the

information to the clients in respect of the said legal issue.

- If at the end of the mediation process the parties managed to reach an amicable settlement agreement, the lawyer could assist the clients in drafting the agreement and finalising the same. Should the clients need to file any documents in court, the solicitors can render assistance in the process too.
- The lawyer may monitor the attitude of the mediator in the mediation process to ensure the mediator does not decide on behalf of the parties. However, the lawyer should not disturb the roles of the mediator but assist the mediator when necessary.
- The lawyer is refrained from using advocacy skills and an aggressive manner in the mediation process because the objective is to convince the mediator about the lawyer's client's case's rightness and to raise doubts amidst the other party to generate negotiation, wherein the other party may be convinced to make an equitable decision.

The disputant parties will describe their concern in the opening statement and address their concern as well as dissatisfaction over the other party. An opening statement is important to give the overall concern of the party and build a bridge between the disputant parties. Some clients may not know how to prepare the opening statement and in this respect, the lawyer could assist the clients to prepare it and train them.

The lawyer can help timid or inexperienced clients to express their concerns and to communicate well in both joint and *causus* sessions. It is to take note that the lawyer should not supersede the role of the disputants during the mediation

process. During a joint session, the lawyer is the second pair of ears listening to their client and the other party's arguments and hence, may identify the strengths and drawbacks of their case. At this stage, the lawyer must pay full attention to the arguments presented by the other party.

During a private session or *caucus* session, the lawyer must adhere to the instructions given by the clients. However, if the clients presented wrong facts in the private session to the mediator, the lawyer should advise the clients about it. Although these types of sessions are not compulsory, they help clients to express their opinions and grievances in a proper medium. It permits the lawyer and mediator to discuss revealed issues. To ensure the session is fruitful, the lawyer must work closely and be opened with the mediator.

Second joint negotiation sessions take place after opening statements and optional private sessions. This session focuses on resolutions for the future. The parties need to assess the range of settlement choices available with assistance from their lawyers. Then the lawyers must help the clients devise and fine-tune the final agreement.

However, if the mediation process reaches an impasse, the lawyer must be creative in finding solutions and ways to overcome deadlocks. A lawyer may confer with the mediator to find a viable solution. He may indicate how far the client is willing to negotiate without changing the offer. Should the parties are not able to reach the settlement terms, the lawyer can always request to adjourn the mediation process as what practice in the litigation proceedings.

(3) After Mediation

If both parties have reached an agreement, they may now draft a settlement agreement. Where the parties do not have legal representation, the agreement may be drafted by the mediator. If the parties are represented by legal counsel, the lawyers will perform their duty. The lawyer should ensure that the points agreed upon by the parties in the mediation process should reflect in the settlement agreement accurately.

The drafting skill of the lawyer is similar regardless of the types of the agreement to be drafted. However, should the lawyer need to refer to the precedent of the settlement agreement, they may refer to the MMC mediation kit. The principle of the settlement agreement is similar to the laws of contract in which the elements of the valid contract must exist. For instance, the parties must have the legal capacity to enter into the contract and that the terms in the agreement must be enforceable under the laws of contract and etc.

The role of the lawyer is not as an advocate and solicitor, but the lawyer could qualify as a certified mediator if he is a registered mediator. Certification can be obtained with the organisations which offered the mediation service, such as MMC and AIAC. However, when the lawyer becomes the mediator in the mediation process, he needs to distinguish between the lawyer's function and the mediator's function.

Sometimes a lawyer-mediator can make mistakes during the mediation process. One of the most common mistakes is when the lawyer did not prepare well to attend the mediation process. Another common mistake is the failure to read the facts of the dispute and take down the necessary points raised by the parties. Other than that, failure to brief the parties clearly on the ground rules of the mediation process or evaluate the case with

the clients. Next, if a lawyer fails to communicate his willingness and readiness for litigation if the necessity arises.

Lawyers should uphold justice as well as maintain good discipline in conducting their role as lawyers. The Legal Profession Act 1976 (Act 166) (LPA) and the Legal Profession (Practice and Etiquette) Rules 1978 both set up the rules to ensure the lawyers maintain good discipline and integrity in performing their duty.

E-MEDIATION AND LAWYERS DURING THE COVID-19 PANDEMIC

Electronic mediation is getting widespread as one of the dispute resolution methods (Turel et al., 2007), especially for businessmen and entrepreneurs. These business owners and entrepreneurs have started to use online dispute resolution (ODR) to resolve their e-business conflicts (Ebner, 2012; Betancourt & Zlatanska, 2013). The use of electronic has brought about the concept of e-mediation. In another words, the mediation process is electronically supported.

E-mediation is part of ODR which refers to resolving conflict and negotiation processes via web-based support systems. E-mediation can be used in e-business, disputes between employees and employers, family and neighbour disputes, and conflicts related to an environmental issue. In e-mediation for e-business dispute, two expert mediator systems will be adopted, namely Negotiator Assistant and its successor Vienna Negotiator Assistant. These systems will assist the disputants to assess and analyse the overview of the negotiation processes and subsequently deliver the expected outcomes (Druckman & Koeszegi, 2017). Parties can rationalise the mediation process by using computer-assisted methods in the early stage of the mediation process by evaluating the issues

and conflict before the meeting remotely. Negotiation could be done with the assistance of computer systems supported by artificial intelligence agents and help settle conflicts, which requires advanced negotiation strategies used in ODR (Lopes & Coelho, 2014). AI agents can assist in mediation conflicts between two disputants, or even act as human negotiators. The two disputants, for instance, will come together to share their dispute. Subsequently, the AI agent will ask each party questions and clarifications on their interests and concerns. Then, work on to facilitate an efficient agreement and to achieve an amicable settlement. In an e-mediation, the parties do not need to be in the same physical space. They can even be admitted to the virtual conference room at different times so that they do not have to see each other at all.

A study by Bollen and Euwema (2012) of the University of Leuven, Belgium, found that when disputants were from the same company, subordinates who conflicted with a superior were substantially more comfortable with technology-supported mediation than the conventional face-to-face mediation. Online conflict settlement will also boost the perception that the procedure is just and fair among all parties involved.

In the e-mediation process, the mediator will play the main role too. The mediator will assist the parties to communicate to resolve their concern. In current practice, the e-mediation takes place in a virtual conference room instead of a physical conference room. If the mediator wants to separate people into separate conference rooms, then the mediator can use breakout rooms to have a private space to converse with the person one-on-one. Various online platforms can be used by the parties, namely Zoom, Google Meet, Microsoft Team, Cisco Webex Meetings, etc. Another new feature of e-mediation is that, once the parties have reached the settlement agreement, it must be

signed electronically instead of having all parties sign a physical agreement. In Malaysia, legislation governing electronic signature includes the Digital Signature Act 1997(Act 562) (“DSA”), Electronic Commerce Act 2006 (Act 658) (“ECA”) and Electronic Government Activities Act 2007(Act 680) (“EGAA”).

In respect of the signature of the agreement, the mediator may suggest the parties to use digital signatures, which is legally recognised under the DSA. The recent case of *Yam Kong Seng & Anor v Yee Weng Kai* [2014] 4 MLRA 316 illustrates that the court has agreed to accept even a simple short message service (SMS) as fulfilment of the legal requirement for a signature. Thus, even an agreement by SMS could be legally recognised for a signature.

Another issue is the role of a lawyer in the e-mediation process. Generally, the role of the lawyer in e-mediation is not much different from the physical mediation process. The roles in pre-mediation, during mediation, and post mediation, will be the same. E-mediation will still maintain a highly confidential, informal, voluntary, and structured process in which an impartial mediator facilitates communication between those in dispute to reach a mutually acceptable solution. Compared to the physical mediation process, this method seems more cost-efficient, and time and energy saving. The cost for physical mediation is higher due to the rental of venue.

(1) Benefits of E-mediation

As mentioned above, e-mediation would bring many advantages. Firstly, it is more of time and cost-saving in terms of rental for venue and transportation. This is where the approach that the field of medicine took through companies like Locatemotion. This is a classic example of e-mediation

(Safiullah, 2020). Currently, eBay and Amazon provide e-mediation avenue to resolve disputes online as the disputants may be from various countries where the distance apart is large. Various methods will be used in online mediation such as email, audio class, video class and real time chats. Any documents sent during the online mediation process and via email will be subject to the discovery process too. Meanwhile, e-mediation is not subjects to geographical restrictions in which this process could be done despite two parties being in different countries.

(2) Disadvantages of E-mediation

There are concerns about security as the mediation process places emphasis on confidentiality. Currently, there is no adequate instrument to ensure information security that is being presented in discovery. As Joel Eisen observes, although e-mediation brings various advantages, the real practice of mediation cannot easily be substituted by an online environment because human has expression and human is living in the real world and not the mirror image. Thus, the mediator may not be able to feel the facial expression and personal feelings of the disputants during the process of e-mediation. As William (1997) observed, mediation is most effective when the disputants are physically present before the mediator.

FUTURE OF ONLINE MEDIATION IN THE MALAYSIAN SOCIETY 5.0

The Government of Japan has created the “super smart” cyber-physical society rather than “human-centred” under Japan’s Society 5.0 (Harayama 2017). The Government of Malaysia has taken the initiative to launch Malaysia’s Society 5.0 too. Alternative online dispute resolutions (ODR) which

refer to dispute resolutions could consider an initiative under Malaysia's Society 5.0. With the assistance of the information and communication technologies (ICT), communication can be done online rather than face-to-face communication. Thus, ODR is gaining popularity in resolving disputes in various areas, particularly during this Covid-19 pandemic and to respond to Malaysia's Society 5.0. A pilot project in online mediation conducted for eBay by the University of Massachusetts Centre for Information Technology and Conflict Resolution was one of the key catalysts for this move (Elisavetsky et al., 2021). UN Economic Commission for Europe has also used online ADR as a mechanism to resolve the e-commerce dispute (Mireze Phillipe, 2002). Meanwhile, another popular online ADR service provider namely SquareTrade also offers the service of mediation to customers for e-commerce disputes (Krause, 2001). In Malaysia, Ms. Shanti Abraham in the webinar of APEC Alternative Dispute Resolution - Mediation in PostCovid-19 Times on 30 November 2020 also shared her view that online ADR is commonly used worldwide. In certain ODR cases, the use of artificial intelligence (AI) agents could be used for negotiation strategies on behalf of a human negotiator. ODR is getting popular due to its convenience and without being restricted by the geographic border, time zones, cultures, and the differences in legal frameworks (Haloush, & Malkawi, 2008)

As mentioned earlier in the study by Bollen and Euwena (2012), workplace conflicts can be resolved through technology-supported mediation (Shonk, 2020). The dispute between employer and employee in the workplace could be settled via mediation process too by using online conflict resolution. Employees may have dissatisfied with the benefit given by their employers, but they are not comfortable raising them. However, if the parties could attend to the mediation process with the assistance of the evaluations from the AI

technology, this process will assist the mediator to gain a better grasp of the problem without letting the parties argue physically.

There is so much for the future of ODR, with the right SKAs, namely Skills, Knowledge, and Attitude for human capital development and working in synergy with technology (the 4th party); a call to action for action learning, planning, strategies, and exchange with a focus on constant change for improvements through training, education, re-education, exposure to diversity (learning from those not in the same industry, country, or culture), creativity, and innovation.

CONCLUSION

It is of utmost significance that lawyers at this advanced age be equipped with adequate knowledge of and comprehend the range of process options available. The importance of being knowledgeable is to ease any decision-making process for themselves and clients, including the most appropriate settlement models that suit their cases. Ultimately, this heavily relies on the mediation objectives that the clients wish to meet, hence demanding lawyers to explore further with the clients. Daniel Gaitley, Assistant General Counsel, Chrysler Corporation, mentioned: "The will always by many disputes that can only be resolved through litigation. But there are many cases [where]... the process begins to control the destiny of the dispute more than the parties do. That's what we hope to stop" (Lewin, 1982).

A lawyer plays an essential role in mediation as any party who opts for mediation to resolve a dispute must know of his rights and the rules of mediation to facilitate the process. If a lawyer represents his client in mediation proceedings, it is thus the lawyer's responsibility to educate his client.

Nevertheless, lawyers heavily rely on the needs and circumstances of the parties. It is integral for lawyers to acknowledge the demands and needs of the involved parties to effectively get involved in the mediation process or to offer advice regarding the legal consequences based on the choices made.

It is important to emphasise that a lawyer is, typically, trained for adversarial-type representation. This idea proposes that the more lawyers are involved in mediation, the less chance there is to attain mutual agreement via mediation. The presence of a lawyer during the mediation session is not compulsory and it depends on the circumstances of the case. Nevertheless, it may ease the mind of some clients if a lawyer is present during mediation.

Funding: This research received no external funding.

Acknowledgement: The contributions by all are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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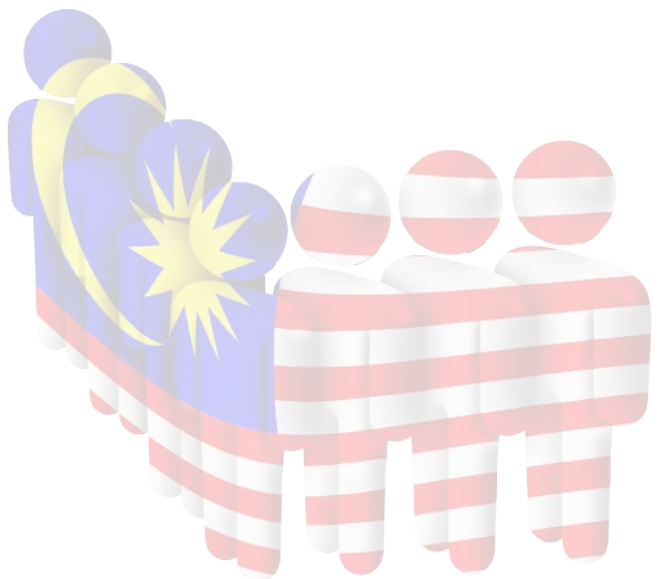
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5

Smart Homes for the Elderly: The Living Arrangement in Malaysian Society 5.0

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Abstract - Recent technological advancements- sensing, networking and ambient intelligences have resulted in the faster development of smart environments across the globe. Among these technologies, the Smart Home (SH) has gained much attention for the provision of enhanced quality of life within the home. The concept of a smart home has been formalised to assimilate the various services within a home environment by exhausting a common communication arrangement. The smart home helps the residents in their independent and comfortable living with the assistance of mechanical and digital devices. Considering the benefits as well as effectiveness, many countries in the world have taken the initiative to establish smart homes for their elderly. However, in Malaysia, the elderly living arrangements have been confined to the traditional options including living with their spouses, or on their own, with their children or siblings or staying at the old folks' homes or nursing homes for those who need medical care. In 2030, the Malaysian elderly will be composed of those from Generation X. As a nation that supports active and productive ageing, Malaysia needs to revisit these

Cite this chapter as:

Jamaluddin, S. Z., Taher, M. A., & Ng, S. Y. (2022). Smart homes for the elderly: The living arrangement in Malaysian society 5.0. In S. Z. Jamaluddin, O. S. L. Tan, S. Khan & W. M. Su (Eds.), *Malaysian society 5.0: Selected contemporary socio-legal issues* (pp. 127-156). MMU Press.

traditional living arrangements for the elderly. The living arrangement needs to be facilitated with new concepts and features. This chapter will discuss the traditional living arrangements for the elderly and the future arrangement through smart homes in Society 5.0, which will celebrate their independence and ageing in place.

INTRODUCTION

By 2030, Malaysia will be an aged nation where at least 15% of its population will constitute those who are aged 60 years old and above (Jamaluddin et al., 2017). Those who are going to be 60 in 2030 will be those who were born in 1970, generally known as Generation X or the Thirteenth Generation (Sandeen, 2008). A generation is defined as a cohort of people born within a particular period (Howe & Strauss, 2007). In Malaysia, Generation X, especially those who were born in the 70s were exposed to social and economic progress, largely due to the various government policies introduced by the then Prime Minister, *Yang Berhormat* Tun Mahathir Mohammad (Ting et al., 2018). These generation cohorts are placing a high importance on maintaining their work-life balance (Tan & Wan Yusoff, 2012). Hence, they view their families and personal time, importantly, to a level where they will be least likely to sacrifice their leisure hours to go to work. As employees, Generation X prefers organisations with flexible working schedules and continuous opportunity for professional growth. With the aid of their characteristic nature in technological literacy, they display high favour in a working environment that is filled with high technology that allows them to carry out their task independently (Tan & Wan Yusoff, 2012). This characteristic is not limited to just work-related matters but in all aspects of their lives. Suffice to say that those who are going to be 60 years in 2030 will be able to embrace the interaction of physical space and cyberspace, thus allowing them to opt for a smart home as their living arrangement and ageing in place.

The idea of establishing the smart home has been around for decades across the world (Darby, 2018). In response to the issues related to living arrangements for the elderly, smart homes have been introduced in some countries. Aside from that, policies (Quang et al., 2020) for establishing smart homes for the elderly have been adopted in some countries, such as China. In Malaysia, the concept of smart homes for the elderly is still in its initial stage. As such, not many smart homes are found across the country. In addition, presently Malaysia does not have any legislation or policy on smart homes for the elderly. The important question is whether an amendment to the current legislation or enacting new legislation is required if Malaysia wants to provide this living arrangement as an alternative to the elderly in the future. To discuss this, the chapter adopts a qualitative approach to research.

THE CURRENT LIVING ARRANGEMENT FOR THE ELDERLY

In general, living arrangements are influenced by a variety of factors. These factors are not limited to marital status, financial well-being, health status, and family size and structure. The cultural traditions such as kinship patterns, the value placed on living independently or with family members, the availability of social services and social support, and the physical features of housing stock and local communities (Velkoff, 2001). It is argued that modernisation and urbanisation have resulted in much more elderly living on their own due to their children's migration to urban areas for work (Wan Ahmad, Ismail & Redzuan, 2012). This process has forced young adults to live separately from their parents. Therefore, it will indirectly place more pressure on the children's ability to take care of family, especially their aged parents (Yusoff & Buja, 2013). The situation will become worse since the nuclear family begins to take its place. Consequently, while the children have the ability

and responsibility to take care of elderly parents, some of them get married and have journeyed to other dwellings (Tan & Wan Yusoff, 2012).

At present, the living arrangements of the elderly can be divided into 5 scenarios: staying with a spouse, staying alone, staying with the children, staying in a residential home, or nursing home for those who need medical care. If an elderly couple is still together, the normal living arrangement is for them to stay together, separately from the children. They enjoy the familiarity of their surroundings, friends, and social support in their neighbourhood. Even though they may feel emptiness when the children are away from home, nevertheless the close relationship between them and their children allows them to keep in touch through phone calls or short visits. The issue of where to stay will only arise when one of the spouses passes away and the surviving spouse has yet to re-marry (The Star, 2017). The children will be worried about letting their parent(s) stay alone, but meanwhile uprooting their own lives to stay with their parents will not be easy either. For example, it is reported that every night, one 73-year-old M. Raja loiters around the streets of Kuala Lumpur waiting for food deliveries by Good Samaritans who feed the homeless. Raja lives with his son and daughter-in-law in the city but laments that he is alone and hungry all day while they are at work. Raja moved from his hometown in *Parit Buntar* to live with his son after his wife passed away a year ago (The Star, 2017).

The issue will be more complicated when the couple is living on their own property. Who is going to care for the property if the surviving spouse opts to stay with the children in the city? Due to these issues, the surviving spouse may opt to continue staying in the same house alone (Yahya et al., 2010). Aside from that, sometimes the elderly prefers to stay on their own because they cherish their independence and

freedom. This can be seen in the case of one 90-year-old Madam Chan Yoke Hup. She could have chosen to live with her son or her daughter, however, she cherishes her freedom and independence, and she enjoys living on her own (The Star, 2015).

In some circumstances, the elderly who prefer to continue living on their own will probably be assisted by a live-in-maid or relative. The live-in-maid will normally be foreign domestic helpers (FDH). As such, it is common to see the FDH accompanying the elderly during hospital visits or hospitalisation (The Star, 2014). The demand for this service has seen an increase in the number of FDHs in Malaysia, especially from Indonesia, the Philippines, and Cambodia (Choong & Tan, 2018). This phenomenon is not only relevant to Malaysia but to the other countries in Asia too (Ho et al., 2018).

The third living option for the elderly is to reside with their adult children, whether in their homes or at the children's residence. This option is closely related to filial piety, which is part of the accepted values among eastern families. Nevertheless, this arrangement has become a less preferred option amongst the elderly because of various factors (Alavi et al., 2011) such as (i) a decline in birth rate which results in fewer children in the family sharing the responsibility of caring for their parents; (ii) increase in women's participation in the workforce, which consequently results in either their parents being left alone in the house or left to be looked after by their grandchildren; (iii) the increased divorce rate that has weakened the relationship between the children and other relatives; and (iv) the consequences of geographical relocation due to employment and economic needs that further detach elderly parents from their children and relatives.

Residential homes are provided for the caring of able-bodied elderly. This facility is offered by both the government (Social Welfare Department) and the private sectors (Care Centres Act 1993; Act 506). Nevertheless, the targeted group is different for both sectors. The government facility is meant to cater for the elderly with no families and financial provisions, while the private sector provides for those who have the means to pay for such services. The traditional concept of a residential home for the elderly provides basic facilities such as shelter, food, medical services, recreational and spiritual. Since all of them are healthy, they can take care of themselves. This concept is slowly changing, especially in the private sector, where residential homes are being replaced by retirement villages. In this regard, the benefits of a retirement village include community living, security, independence and communality, and increased quality of life (Hassan & Jiaqi, 2017).

The last option of living arrangement is specifically to cater for the elderly, who require medical attention or long-term care at a nursing home. This facility is normally provided for by the private sector for paid residence or non-governmental organisations (NGOs) for those who cannot afford to pay.

The Impact of Living Arrangements on the Elderly

The living arrangement of the elderly will have an impact on their quality of life. Quality of life is defined as the degree to which an individual is healthy, comfortable, and able to participate in or enjoy life events (Britannica). The World Health Organisation (WHO) defines quality of life as an individual's perception of their position in life in the context of the culture and values systems in which they live with their goals, expectations, standards, and concerns (Khaje-Bishak et al., 2014). As such, the quality of life is subjective and

influenced by internal and external factors, including physical, emotional, social, and financial factors. Living arrangement for the elderly is therefore also associated with social and financial factors.

A living arrangement may also have an impact on the mortality rate of the elderly. For example, older people living with other household members have a lower mortality rate than those living alone due to receiving support with their daily care, as well as physical and emotional support (Lund et al., 2002). Nevertheless, living with the family may also encourage the elderly to be dependent on the family members (Feng et al., 2017). Living with the family members may impact elderly women more, as compared to men, since women are more likely to have a strong family obligation, helping in caring for the children and grandchildren (Hu et al., 2019). Even though it may benefit both parties, under some circumstances, it may be a burden to the elderly too.

The living arrangement of the elderly may impact the general well-being of the elderly in relation to access to medical assistance and financial matters (Torut, 2018). Those who are living with other family members may receive assistance both for access to medical and financial needs compared to those who are living on their own. Nevertheless, this depends on the level of education of the elderly too. Those who are financially independent will not have issues with access to medical care or financial support, even if they are living on their own.

The change in demographic and family setting may impact the viability of the arrangement of living with the family in the future. The decline in fertility rates, the increase in individualistic, childless couples, and the number of unmarried individuals and divorcees may change the living arrangement to living alone again (Poulain, Dal & Herm, 2020). More

elderly are living alone globally, especially in France, the United Kingdom, Wales, South Korea, China and Japan (Lee & Edmonston, 2019). Malaysia will also be heading in this direction. Nevertheless, the elderly of tomorrow are different from the elderly of today, as such the suitability of living alone with the incorporation of new safety and security features to the home, such as the smart home, may become a norm.

LIVING ARRANGEMENT AND AGEING IN PLACE

The term “Ageing in place” is popular in current ageing policies and is defined as “remaining living in the community, with some level of independence, rather than in residential care” (Davey et al., 2004). This phrase covers a range of circumstances but broadly refers to “the ability to live in one’s own home and community safely, independently, and comfortably, regardless of age, income, or ability level,” with relatively preserved independence compared to living in an institutional setting (Rosenwohl-Mack et al., 2018). Ageing in place will give the elderly a sense of independence, autonomy, social support through family, friends, and the community (Wiles et al., 2011). It will also allow the elderly to stay in their own home, within the community that they are familiar with for as long as they are capable of doing so.

Ageing in place can only be successful if the place that the elderly are living in presently meets their physical, health and emotional needs. The design of the house normally reflects when the house was bought, but the needs of the occupants will change as they age. Thus, the current house needs to have these needs incorporated to support ageing in place.

Aside from the design of the house, the elderly will need to maintain the house to ensure that the house is suitable for their

needs. If they face difficulties in doing this, then the goal of ageing in place may be threatened (Fausset et al., 2011). Thus, assistance and support must be provided to ensure the elderly can continue to stay in their home for as long as possible.

The last important aspect of ageing in place is the environment. Having a suitable house, with the required safety and security, and the ability to maintain it will not completely assist ageing in place if the environment where the elderly are located does not support this. A framework called the ‘ecological model of ageing’ to describe the interaction of a person and the environment was developed (Lawton & Nahemow, 1973). According to this model, a successful interaction occurs when a person has the capabilities to meet the demands of the environment, or the demands of the environment are reduced to match the person’s capabilities. The environment here covers a broad meaning to include housing, neighbourhoods, out-of-home areas, transport issues and interactions with technology (Wahl et al., 2012).

Ageing in place requires a holistic approach to the living arrangement of the elderly, not just the infrastructure but also the connectivity, which will allow the elderly to continue to be independent. The advancement of technology allows direct and indirect connectivity, the interaction between technology and physical space.

OWNING A HOUSE

A house is defined as a home, building, or structure that functions as a habitat for humans or other creatures (Ramlan & Zahari, 2016). The term ‘house’ includes huts of nomadic tribes to complex modern structures. The ability to own a house is closely related to the ability to pay for the house. Having a fixed income is a major factor in determining the ability of a

purchaser to buy a house. As such, the purchaser will have to devise different pathways towards owning a home. There are three types of planners when it comes to buying a home. For example, the first type buys a house according to their needs without thinking about post-retirement. They will buy a house suitable for their needs at that time; if they are a young family, then buying an apartment or a condominium will be sufficient. They will upgrade their home according to their needs as the family grows. When the children leave the nest, with just the two parents left, they may decide to downsize their house to a smaller one for practical purposes while another group of planners may decide to buy a house which is suitable for all the phases in their lives including post-retirement. The third group prefers to buy or build a house for post-retirement. They would go back to their hometown, where they own lands to build a house and have a post-retirement plan to work on the land.

Due to the difference in strategies of owning the house, the housing developers in Malaysia opt to offer various types of houses to suit the needs of society. Apartment and condominium units with various facilities such as a gym and a pool are suitable for single young executives or young families with small children while senior executives with teen or adult children may opt for a bigger house with a higher price range due to the needs of their families. Those who own land will build their houses according to their needs and affordability. Nevertheless, the design of the house normally caters to the present needs of the individual and for when they are old. As such, it is normal for the individual to sell their first house and buy a new one to suit their needs when their circumstances change. Otherwise, the individual may renovate the house to address the changes in their life due to age or health factors if the house was not built with the future needs of the owner in mind. Since owning a house involves a big financial investment, perhaps the time has come for housing developers

to start building houses that will address the future needs of owners.

In Malaysia, owning a house is a part of preparation for retirement. In the private sector, the Employees' Provident Fund 1991 (Act 452) allows the contributors to withdraw their savings to purchase or to build their house before they reach the age of retirement (Section 54(6)(b) of the Employees' Provident Fund Act 1991). For the public sector employees, the *Lembaga Pembiayaan Perumahan Sektor Awam* (2016) provides for their housing financing needs. With both financing facilities available to employees in Malaysia, owning a house is a viable part of their retirement preparation. Owning a house can enhance education outcomes, increase financial returns, improve life satisfaction, and promote neighbourhood stability (Hei & Dastane, 2017). Having a house signifies security, protection, and comfort in one's old age (Mohd et al., 2016). For those who can afford to have more than one property, it becomes another form of investment that may benefit them financially when they retire.

SMART HOME AS A LIVING ARRANGEMENT FOR THE ELDERLY IN MALAYSIAN SOCIETY 5.0

The concept of Society 5.0 was introduced by the government of Japan in 2016, which would merge the physical space (real world) and cyberspace by leveraging Information and Communication Technology (ICT) to its fullest, thereby providing “a common societal infrastructure for prosperity based on an advanced service platform, to create a human-centred society (Gladden, 2019). It would be a society that balances economic progress and resolves social problems by integrating both systems, thus further improving the quality of life for the members of the society through the delivery of services in an appropriate manner. In this context, ‘appropriate

manner' refers to the availability of services, timely delivery, and equal distribution without any discrimination (Potocan et al., 2020). Even though Malaysia is only beginning its journey to achieve something like Japan Society 5.0, nevertheless it is suggested that Malaysia will benefit greatly from embracing the concept of Society 5.0. The recent experience with the COVID-19 pandemic has opened our eyes to the importance of integrating physical space and cyberspace. For the sectors that are relatively flexible enough to integrate the two mediums, it is observed that they were able to function better with minimal disruptions throughout the restrictive measures implemented by the Malaysian government. One significant instance is the tertiary education industry, where the universities utilised virtual learning methods, allowing the students to continue their studies without much disruption. The ability to integrate both physical space and cyberspace is the key to ensure that in the future, if ever Malaysia finds it again in the same position as we did with the current COVID-19 pandemic, she will not be forced to come to a halt, and she could continue to function seamlessly with the integration of both systems.

In the context of the elderly, the living arrangement in the Malaysian Society 5.0 essentially means a home that integrates both the physical space and cyberspace through a 'smart home'. A smart home allows them to live independently but still connects them with family members and service providers through cyberspace. It is also a home that is designed to address their needs for comfort, safety, and security, allowing them to age in place, within a familiar place and community.

WHAT IS A SMART HOME?

There is no one specific definition of what a smart home is. A smart home is often said to be a residence that is equipped with modern technology, such as sensors, appliances and devices that can be remotely controlled, accessed, and monitored to provide services to its inhabitants (Georgiev & Schlogl, 2018). The purpose of a smart home is to confer convenience, comfort, supports, safety, and security to the occupants through the usage of the five elements, including personal computing, home automation, entertainment, telecommunication, and security (Yeon et al., 2017). For the elderly, the smart home would ensure their safety and connectivity since the home would allow them to be connected to their family and service providers, such as the police and medical healthcare. Living alone will no longer be an issue since connectivity is part of the smart home. The ability to get assistance promptly whenever it is required would allow the elderly to be more independent, reducing the need for the family to take care of them in the traditional sense. Smart homes celebrate the autonomy and independence of the elderly.

The advantages of smart home features are multifold (Li et al., 2018), including: (1) the smart home can realise the interaction between the user and the power grid enterprise, obtain the information of electricity consumption and electricity price, set the electricity consumption plan and so, guide the scientific and rational electricity use and advocate the family's consciousness of energy saving and environmental protection; (2) smart homes can enhance the comfort, safety, convenience, and interactivity of home life, and optimise people's lifestyles; (3) smart homes can support remote payments; (4) smart homes can monitor and interact with the home through telephone, mobile phone, and remote networks, discovering abnormalities and processing them in a timely

manner; (5) smart homes realise the real-time meter reading and security service of the water meter, electric energy meter and gas meter, which provide more convenient conditions for high-quality service; (6) smart home features support “triple networks” business and the perfect intelligent service. These common features would require the design and building of the house to incorporate various key elements, such as the power service system, the key equipment, and the communication system. All these features would allow the smart home to improve the quality of life of the elderly and those with special needs (Jamwal et al., 2018). A smart home such as the ‘health smart home’ is suitable for the elderly since it focuses on assistive technologies for the independence of the elderly (Jeong et al., 2020). These smart homes provide medical care for seniors by enabling their families and carers to remotely monitor the health of seniors through technology. The ability to be connected with their family and friends through technology would also contribute to the elderly’s happiness and general well-being (Lee & Kim, 2020).

THE SMART HOME SYSTEMS

The owner of a home may decide as to the type of system she requires changing her home to a smart home. The most important thing is the system must complement and improve her general well-being. The basic smart home system includes the measuring of home conditions, managing home appliances and controlling access (Domb, 2019). This system allows the occupier to interact with the appliances within the home, controlling them at her convenience such as the temperature, humidity, light and access to the house. Whether at work or home, the smart home allows the owners to monitor the activities at home and in case of emergency, the smart home will assist the owners. For example, in the case of fire, the system unlocking the door automatically would lead the

occupiers to safety. For the elderly, the system could also assist the residents in relation to their intake of medication and would perform other relevant tasks to ensure their safety and security.

In addition, a more advanced system of the internet of things (IoT) paradigm refers to devices connected to the internet. Devices are objects such as sensors and actuators, equipped with a telecommunication interface, a processing unit, limited storage, and software applications. It enables the integration of objects into the internet, establishing the interaction between people and devices. This system allows the occupier to interact not only with what is in the house but also with those who are outside the house. The ability to interact externally will be relevant to the elderly who need to communicate with other support groups, such as family members, medical healthcare providers, or the enforcement authorities. For example, in the case of a fire, smart home systems will not only notify the owners, but also link the information to the fire department. For the elderly, the smart home system can alert the hospital in case of emergency and allow the family members who are living elsewhere to monitor and participate in the care of the elderly. This system will ensure a systematic response to chaos and uncertainty.

The adoption of the smart home system depends on the knowledge and understanding of the owners as to how to use and operate the system. Those who are savvy in the usage of ICT may be more willing to adopt the smart home system as compared to those who are inexperienced with technology. Aside from this, another factor that may hinder the wide adoption of the smart home system is the cost, which includes the cost of installation, smart repairs, and maintenance (Z. A. Rasyidah et al., 2020). The issue of privacy and data security will also influence the owners in their decisions on whether to adopt the smart home system.

SMART HOMES IN MALAYSIA

In September 2019, the Ministry of Housing and Local Government launched the Malaysia Smart City Framework as a guideline for local governments to progressively develop cities into smart cities (The Sun Daily, 2019). Such a project of developing a smart city in Malaysia involves smart mobility and connectivity of infrastructure, as well as upgrading the effectiveness of communication via strategic ICT infrastructure (Yeon et al., 2017). This would also incorporate, among others, the concept of smart homes in providing housing accommodations.

In this regard, it is observed that the concept of a smart home is relatively new in Malaysia. Nevertheless, Professor Mahendhiran Sanggaran Nair believes that, with the Malaysia Digital Economy Blueprint and the enhancement of connectivity, the resultant effect is that demand for smart homes will probably increase in the near future (The Edge Malaysia, 2021). In fact, there are already some semi-smart homes utilising smart home features in monitoring their usage of utilities, such as electricity and water. The choices as to what technologies should be included in such semi-smart homes depend greatly on the house owner's preferences at this juncture.

LEGAL FRAMEWORK ON SMART HOMES IN MALAYSIA

In Malaysia, legislation has been put in place to regulate the construction of the building to ensure that the design and construction of new buildings and additions to existing building space and renovation of existing buildings are carried out per certain standards (Zakaria et al., 2014).

In this regard, the Housing Development (Control and Licensing) Act 1966 ([Act 118] “HDA 1966”) provides for the ‘control and licensing of the business of housing development in Peninsular Malaysia, the protection of interest of purchasers and for matters connected therewith’ (Preamble of HDA 1966). A housing developer, who is licensed under section 5 of the HDA 1966, shall only deliver vacant possession of housing accommodation to the purchaser upon, among others, the issuance of a certificate of completion and compliance (*PJD Regency Sdn Bhd v Tribunal Tuntutan Pembeli Rumah & Anor and Other Appeals* [2021] 2 CLJ 441). A certificate of completion and compliance is defined as ‘certificate of completion and compliance given or granted under the Street, Drainage and Building Act 1974 and any by-laws made under that Act certifying that the housing accommodation has been completed and is safe and fit for occupation but does not include a partial certificate of completion and compliance’ as provided in section 3 of the HDA 1966.

In the same vein, the Street, Drainage and Building Act 1974 (Act 133), (“SDBA 1974”) stipulates that the said certificate of completion and compliance shall only be issued by a principal submitting person (section 3, SDBA 1974) in which it shall be his duties and responsibilities to supervise and ensure that, among others, the erection and construction of the building conform with the relevant approved plans, all technical conditions imposed by the local authorities, and that such building is safe and fit for occupation. It is perhaps also pertinent to note that Malaysia has devised certain minimum standards in respect of structural and constructional requirements under the Uniform Building By-Laws 1984, a subsidiary legislation enacted by section 133 of the SDBA 1974.

A cursory perusal of HDA 1966, SDBA 1974 and the like appears to reveal that there is a lack of provisions stipulating the concept of a smart home. In a research study, the learned authors while acknowledging the necessity of a smart home in Malaysia moving forward, aptly noted that the predicament in implementing smart homes in Malaysia is largely due to the absence of standard guidelines and framework to monitor the process and work in constructing a housing accommodation in line with the concept of a smart home (Yeon et al., 2017). It is apparent that, without a proper legal framework regulating the specification and requirement of a smart home, one may be confused by the different standards potentially introduced and implemented by the relevant stakeholders. On the premises, the safety and security of the appliances in a smart home may also possibly be compromised without due supervision. This would arguably render such building unsafe and unfit for occupation, and thereon adversely affects the issuance of a certificate of completion and compliance under the SDBA 1974.

Therefore, it appears that there is an urgent need to craft a comprehensive legal framework or to revise the existing laws to accommodate the concept of smart homes in the provision of housing accommodation by the developers. This is especially so as the concept of a smart home is likely to be the living arrangement in the Malaysian Society 5.0 moving forward. Only then would the interest of the purchasers be sufficiently and adequately protected under the social legislation.

THE CONCEPT OF SMART HOMES FROM OTHER JURISDICTIONS

To lessen the degree of dependency and enhance the safety of the elderly, various projects on smart home technologies for the elderly have been propelled across the world in the last decade

of the 20th century (Quynh et al., 2012). For example, Japan had the Welfare Techno-House project 1995. In the case of the United Kingdom, it had the Assisted Interactive Dwelling House project 1996, whereas the Aware Home project was adopted in the United States of America in 1999. In the first decade of the 21st century, some developed countries have implemented projects for smart homes for elderly people. For example, in 2002, France adopted the Health Integrated Smart Home Information System, while Italy adopted the ROBOCARE Domestic Environment in 2007. The reports of these projects suggest that these smart home projects have been successful in improving the physical as well as the mental health condition of the elderly, along with delaying the onset of serious health problems. In addition, the reports further highlight that smart home technologies have enabled continuous monitoring, improved psychosocial benefits, and enhanced the overall sense of well-being of the elderly.

The report of the Aged and Community Services in Australia states that there will be more elderly people in Australia by 2021. In this context, smart homes are deemed a suitable space for the elderly since smart homes have the potential to create an environment where the elderly can easily perform their domestic tasks as well as maintain communication with others (Quynh et al., 2012). As such, the Smart Homes Initiative consortium was established in Queensland in 2006, or also known as QSHI (Soar et al., 2009). The QSHI was adopted to promote a model of healthcare for the elderly grounded in ambient living as well as wellness management. The QSHI used a model that was “established to promote independent living, improved quality of life and reduced unnecessary hospital admissions for the frail elderly, chronic illness sufferers and people with disabilities.” A smart home demonstrator was initiated for displaying the assistive technologies so that the elderly could experience it in a real

home environment. This offered a chance for elderly people to be introduced to smart home technologies and acquire a better understanding and experience regarding the application of such technologies in their daily lives.

In China, the largest developing country in the world, smart homes for the elderly were developed in 2008. Since then, smart homes have gone through the four stages known as the “seed stage, start-up stage, development stage, and popularisation stage” (Zhang et al., 2020). The China National Working Commission on Ageing (CNWCA) in 2008 proposed the establishment of home-based care services for elderly people. In 2011, another progress was made in China regarding the establishment of elderly care services. Highlighting the establishment of a platform for the community-based elderly care services, the General Office of the State Council of China proposed the Development Plan of Social Elderly Care Service System (2011–2015). The document from 2008, as well as the document from 2011, have initiated the smart homes for elderly care in China.

China’s 427th Xiangshan Scientific Conference was held in Beijing in June 2012. Promoting smart homes for elderly care, a four-tier service framework was proposed at this conference. In the following year, a notice was issued by the Ministry of Civil Affairs along with the National Development and Reform Commission (NDRC) relating to elderly care. It has been categorically mentioned in the notice that the latest technologies, e.g., the Internet of things (IoT) could be applied to increase the management of elderly care. The year 2014 is considered as remarkable as in this year a national level demonstration project on the utilisation of smart home technology for elderly people was launched by the Ministry of Civil Affairs (Wang, 2017). Another pilot project was started in the same year under which smart care centres for elderly

people were set up under 40 pilot communities (Zhang et al., 2020). These two pilot projects indicated that smart homes for elderly people in China are not just ‘on paper’; rather, it has been put into real practice by the authorities.

In China, the 'Internet Plus Strategy' action plan was officially launched in 2015. Subsequently, instructions have been provided by NDRC and other relevant government agencies for promoting the Internet plus Plan (Quan et al., 2020). The instructions offer a detailed action plan regarding the application of the Internet plus Plan towards elderly care. The instructions provide general guidance for the advancement of smart homes for elderly people. In 2016, the General Office of the State Council issued opinions on the establishment of smart home services for the elderly. Being motivated by these above policies, nearly all the provinces issued policies at the local level to promote smart homes for elderly care.

It has been observed in the case of China that the government issued three policy documents from 2017 to 2019 intending to promote smart homes for elderly people on a large scale. In 2017, a five-year plan was issued by the National Health and Family Planning Commission (NHFPC) along with other government agencies. This plan proposes that NHFPC would make full use of the information and communication technologies to explore the new approaches of elderly care as well as the establishment of smart homes for elderly people. In 2017, the two ministries (the Ministry of Industry and Information Technology and the Ministry of Civil Affairs) of the government issued a plan known as the Action Plan for the Development of Smart Health and Elderly Care Services (2017–2020). This plan is regarded as the first specialised national policy pertaining to smart homes for elderly people. It is worth mentioning that a complete plan for the establishment of a smart home for the elderly has been clearly stated by this

policy. Besides, it sets forth specific action plans for establishing a smart care platform. Zhang et al. (2020) mention in their study that “driven by this national policy, smart home for the elderly care has mushroomed in China.”

CONCLUSION

In smart homes, the elderly can lead a full, safe, and productive life without compromising their quality of life (Financial Express, 2019). Since the elderly are physically and psychologically vulnerable, a smart home for elderly care is a good response to address their needs and could meet the desire of the elderly for their independent living. It has been observed in this chapter that some countries have already made the initiative to establish smart homes for their elderly people. China, one of the developed countries in Asia, is one step ahead in this regard, as they have implemented some pilot projects for establishing smart homes. Besides, policies on the establishment of smart homes for the elderly have been adopted by the Chinese Government.

In a tech-savvy society, the establishment of smart homes for elderly care is not a far-fetched idea, but a reality. However, in the context of Malaysia, the concept of a complete smart home is still new. Some semi-smart homes are available, focusing on the internal interaction between the owners and the home. As the elderly in 2030 will be more technologically sophisticated, it is the right time for Malaysia to embrace smart homes as an alternative independent living for them, which will suit their needs and make their lives easy and comfortable. For this to happen, there is a need for Malaysia to adopt new policies as well as to revisit the current legislations, as part of her preparation to be a 5.0 Society.

Funding: This research received no external funding.

Acknowledgement: The contributions by all are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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6

Accelerating Gender Equality and Empowering Women in Malaysia

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Abstract - In Malaysia, women represent 15.9 million persons of the total population, and nearly half of all women are active in the workforce. They have been free to participate in elections and political movements at any level of office since independence in 1957. In 2001, Article 8 (2) of the Federal Constitution was amended to outlaw gender discrimination, and women were accorded equal status and rights under the 1989 National Policy on Women. Gender equality is central to the 2030 Agenda for Sustainable Development, and Goal 5 calls specifically for gender equality and the empowerment of all women, which is central to achieving the 17 SDGs. The Malaysia Gender Gap Index (MGGI) measures the disparity between men and women in four areas: economic participation, education, health, and political empowerment. A score of 1.0 (100%) implies gender equality. In 2019, women outperformed males in the Educational Attainment sub-index (1.053). It was followed by Economic Participation and Opportunity (0.717) and Political Empowerment (0.108). The Government has and continues to undertake numerous efforts to end all discrimination against women and girls in Malaysia. Nevertheless, women still encounter discrimination and abuse. Domestic violence cases have become a major issue. Hence, the objective of this chapter is to analyse gender

Cite this chapter as:

Abdullah, R., & Hassan, M. S. (2022). Accelerating gender equality and empowering women in Malaysia. In S. Z. Jamaluddin, O. S. L. Tan, S. Khan & W. M. Su (Eds.), *Malaysian society 5.0: Selected contemporary socio-legal issues* (pp. 157-184). MMU Press.

equality and the empowerment of women, specifically in the context of Malaysia. To achieve this objective, it adopts the socio-legal method and qualitative approach. The chapter identifies and analyses measures that need to be taken in advancing gender equality and closing the existing gap, mainly in the economic and political sectors. Additionally, the chapter provides recommendations for accelerating gender equality and empowering women in Malaysia in order to attain Goal 5 of the Sustainable Development Goals and, ultimately, Society 5.0. With great hope, the findings will open the eyes of policymakers, civil society, and the community on female-related issues in this country.

INTRODUCTION

Gender is defined as the socially constructed roles and responsibilities associated with being male or female, as well as the relations between women and men, girls and boys (UN Women, 2015). Although the notion of equality between women and men has evolved over time, there appears to be some agreement that equality does not entail those men and women are identical in every way. Nonetheless, their rights, opportunities, and duties are not contingent on their gender at birth. Recognising significant roles of women, policymakers and decision-makers across the globe have accelerated their commitments to empower women by leveraging their rights and opportunities to their fullest potential. Equality between men and women is a pre-requisite for and indicator of sustainable human development.

Malaysia recognises women's equal rights under Article 8(2) of the Federal Constitution, which forbids all forms of gender discrimination. Since Independence in 1957, the women's agenda has increasingly mainstreamed into the development process and contributed to national development and prosperity in many ways. In 2001, the Ministry of Women,

Family, and Community Development (MWFCD) was established to provide a greater avenue for women to be visible in economics, education, politics, and improved health status. A national policy instrument supporting women's empowerment, the National Policy on Women, has also been in place since its introduction in 1989 and later reviewed in 2009.

Alongside its national commitments, Malaysia is also cognisant of its international obligations to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). Since 1995, Malaysia has pledged to implement the Beijing Platform for Action and safeguard the accomplishments of SDG Goal 5 to achieve gender equality and empower all women. Additionally, the role of women is critical in achieving Malaysia Society 5.0, which combines digital and physical space to tackle societal challenges. Malaysia Society 5.0 can facilitate the development of a more sustainable economy with the use of the digital economy and accelerate a better quality of life regardless of age, race, and social class (Mohamed Ariff, 2020). Nevertheless, women are still facing discrimination due to unpaid care work, limited earnings and savings, and domestic violence, which exposes them to a greater risk of poverty and unmet care needs in their old age.

Therefore, the chapter identifies and analyses measures in advancing gender equality and closing the existing gap, mainly in the economic and political sectors. The chapter also offers recommendations for accelerating gender equality and empowering women in Malaysia, in line with SDG Goal 5. In this chapter, gender equality implies equal rights, duties, and prospects for women, men, girls, and boys. Interventions to strengthen women's position in social and economic

development, representation in politics, and health issues are all elements of women's empowerment.

MALAYSIA'S EXPERIENCE IN MAINSTREAMING GENDER AT THE INTERNATIONAL LEVEL

Gender mainstreaming is a widely accepted policy for advancing gender equality. The Platform for Action which was established during the Fourth World Conference on Women in Beijing in 1995 has elicited unanimous commitment from 189 United Nations member-states to set forth an ambitious vision for change. Participating nations have come to a consensus to form the Platform of Action in pursuit of achieving gender equality and providing greater opportunity for women in all spheres. In addition, the Beijing Platform for Action (BPfA) was established in 1979, and subsequent conferences such as in Mexico (1975), and Copenhagen (1995) have been critical to promote women rights and urge that global governance are committed to taking gender equality and eradicating discrimination against women seriously (Cornwall, 2015). The BPfA requires the government to support national policies and plans for gender equality to eliminate obstacles which prevent the implementation of women's rights and eliminate all discrimination against women and girls (Paragraph 204(c), BPfA).

Furthermore, the Fourth Conference has agreed to execute gender mainstreaming strategy as a mechanism that should be applied by all countries aimed at boosting the rights of women in the development of the country. The United Nations Economic and Social Council 1997 has adopted gender mainstreaming as a concept:

“Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including

legislation, policies, or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic, and societal spheres so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal is to achieve gender equality.”

As stated in the BpFA, gender mainstreaming is the process of analysing the effects of government programs for women in all sectors. Securing the inclusion of gender viewpoints and the achievement of gender equality is the main purpose of mainstreaming. It is central to every aspect such as policymaking, education, outreach, legislation, allocation of resources, as well as program and project management (Women watch, 2001). Malaysia has developed the Action Plan for the Advancement of Women to address the BpFA's key concerns. The MWFC has established several Technical Working Groups (TWG) to tackle gender discrimination that includes TWGs in ICT, legislation, and media. The TWGs monitor and deliberate gender concerns as well as audit current laws and policies affecting women's interest to provide a workable plan of action to elevate women status. Additionally, The National Council on Women and Family Development was also established at the state, parliamentary constituency, and district levels to address women and family development issues between state and federal government. The effort to accelerate gender equality and empower women in Malaysia is also supported by developing the Gender Disaggregated Database Information System (GDIS) by the MWFC. As an instrument for developing policies, approaches, and initiatives that are gender sensitive, the GDIS expands its data collection, from time to time, from line ministries and the Department of

Statistics to provide significant data for gender analysis and planning.

Furthermore, Malaysia was appointed to establish a network for ASEAN Guidelines on Gender Mainstreaming Programmes and Project Implementation. Malaysia is working closely with the Philippines as co-chair of the Gender Mainstreaming Strategic Framework. The ASEAN Gender Mainstreaming Strategic Framework development is a corroborative project undertaken by the ASEAN Commission on the Promotion and the Protection of the Rights of Women and Children (ACWC) of Malaysia and the ASEAN Committee on Women (ACW) of the Philippines. The project seeks to identify key issues and challenges in implementing gender mainstreaming initiatives across the ASEAN Member States (AMS) and the three ASEAN Community Pillars (APSC, AEC, & ASCC). Data on existing gender and related resources, research findings, and best practices are collected from each ASEAN Member State while working closely with country gender experts and related ministry officials. The mandate for gender mainstreaming among ASEAN member countries was reiterated in the Hanoi Declaration on the Enhancement of Welfare and Development of ASEAN Women and Children.

LEGAL FRAMEWORK ON GENDER EQUALITY

The Federal Constitution, as the supreme law of the land, provides equality for everyone and guarantees equal treatment before the law (Musa & Husin, 2018). The provision holds both private and public sectors accountable to ensure that neither men nor women will be discriminated against in any way and at any place or working environment. As decided by the court in the case of *Noorfadila Ahmad Saikin v Chayed bin Basiron & Ors* [2012] 1 CLJ 769, the act of refusing to accept a woman for a temporary teaching position due to her pregnancy is

discrimination against her rights and contradicts the provision provided under Article 8(2) of the Federal Constitution. Article 8(2) reads:

“Except as expressly authorised by this Constitution, there shall be no discrimination against citizens on the ground only of religion, race, descent, place of birth or gender in any law or in the appointment to any office or employment under a public authority or in the administration of law relating to the acquisition, holding or disposition of property or the establishing or carrying on of any trade, business, profession, vocation, or employment.”

Moreover, gender discrimination has been a subject of intense debate when a few companies were obligated to adhere to the provision. The court in the case of *Beatrice a/p AT Fernandez v Sistem Penerbangan Malaysia & Ors* [2005] 3 MLJ 681 decided that Malaysia Airline is a company; therefore, a company is not required to comply with Article 8(2) because the provision only covers public authority. This decision illustrated the importance of having a specific law that will provide conclusive justice for those who grapple with discriminatory treatment. The situation has brought about open debate among decision-makers, human rights activists, as well as NGOs for women, to push for the enactment of gender equality laws. The main rationales for the need to have gender equality laws are (Musa & Husin, 2018):

- i. There is evidence that women in Malaysia do not enjoy equal status to that of men, under-represented in many fields and there are many violations of women’s rights;
- ii. To impose accountability on the state to accommodate and provide justice for women that experienced the act of discrimination in any way or at any place;

- iii. The law will fulfil Malaysia's obligation under CEDAW whereby an accession of Article 2(a) was made on 5 July 1992, providing the need to embrace the principles of equality for women and men in the national legislation and policy.

On that note, the MWFCDD formed a Special Project Team to examine the existing legal framework on gender equality and ensure that equal rights and opportunities are given to all individuals at any level. In a recent development, the Government has drafted a specific bill to facilitate gender equality and women's empowerment. This is in line with the UN General Recommendation 195 on violence against women.

Additionally, the enactment of the Domestic Violence Act 1994 (Act 521) and its implementation in 1996 is a testimony of Malaysia's stand towards the act of domestic violence. The Act was amended in 2012, to expand the definition of domestic violence to include emotional, mental, and psychological abuse as acts of physical abuse. Even though domestic violence is not provisioned as a specific crime under the Act, the prosecution of such acts is tailored to similar offenses under the Penal Code (Act 574). In addressing the issues faced by women in Malaysia, the government amended several laws across its Ministries and Agencies (Women watch, Malaysia) as the following:

- i. Article 8(2) of the Federal Constitution was amended in 2001 to explicitly prohibit discrimination on gender;
- ii. The Employment Act 1955 (Act 265) (Revised in 1981, 1994, and 1998) provides inclusive protection for
- iii. Women and men, particularly maternity and night work protection;

Accelerating Gender Equality and Empowering Women

- iv. The Income Tax Act 1967 (Act 543) (Revised 1975, 1978 and 1991) allows married women to have separate income tax assessments.
- v. The review of the Women and Girls' Protection Act 1973 in 1987 and 2000, together with the Child Protection Act 1991, whereby both Acts were streamlined into the Child Act 2000 (Act 611)
- vi. Extending protection for domestic violence victims by making provisions for an Emergency Protection Order (EPO) provided by the Domestic Violence Act 1994 (Act 521) in 2017.
- vii. The Penal Code was amended in 1989, 2002, 2003 to heighten penalties for offences involving rape, prostitution, and incest. In 2017, the Act was amended to permit whipping as a mandatory punishment for specified sexual offences.
- viii. The Immigration Act 1959/63 (Act 155) was amended in 2001 to permit foreign men married to Malaysian women to renew their social visit pass every six months until they gain employment.
- ix. The Pension Act (Act 227) was amended in 2002 to allow widows to continue receiving pensions after they remarried.
- x. The Code of Practice on the Prevention and Handling of Sexual Harassment in the Workplace was introduced on the 1st of March 1999 to provide guidelines for employers in addressing the act of sexual harassment
- xi. The Distribution Act 1958 (Act 300) was amended in 1997 to provide equal distribution of the estate to the surviving spouse in the event of the death of a spouse,

- xii. The Guardianship of Infants Act 1961 (Act 351) was amended in 1999 to legally recognise the parental rights of mothers. The Act reads: “In relation to the custody or upbringing of an infant or the administration of any property belonging to or held in trust for an infant or the application of the income of any such property, a mother shall have the same rights and authority as the law allows to a father, and the rights and authority of mother and father shall be equal.” This amendment conferred the right of equal guardianship, not only to the non-Muslims, but also to Muslims living in any states adopting the law. At the federal level, a cabinet directive was issued in September 2000 to allow mothers to sign all documents related to their children.

POLICIES AND INITIATIVES FOR GENDER MAINSTREAMING IN MALAYSIA

The National Policy on Women and its Action Plan represent the commitment of the government to increase women's participation in national policies and development programs. Regarding the above commitments, Malaysia has developed the Action Plan for the Advancement of Women, which specifies numerous programmes and projects to be undertaken by various agencies and parties. In addition, increasing the number of women in politics and decision-making has been addressed. A Cabinet Committee on Gender Equality was established in 2004 to further the Government's commitment to gender equality. This committee is the highest-level institutional framework that directs the implementation and monitoring of women development policies, initiatives, and programs.

Since the early 1980s, the Five-Year National Malaysia Plan has included empowering women to participate in, contribute

to, and gain from development. The 4th Malaysia Plan (1981-1985) included the women agenda under Culture, Community Development, Security and General Administration. The 6th Malaysia Plan (1991-1995) had a whole chapter on women's empowerment policies and programs. Incorporating a section on women in the Five-Year Malaysia Plan has raised awareness on women's contributions and rights among planners, policymakers, and implementers. The Economic Plan Unit was tasked with monitoring the Action Plan's implementation under the auspices of the Prime Minister's Department.

Considering the importance of gender mainstreaming, the government has established gender focal points for every Ministry to act as a catalyst in promoting the gender mainstreaming process and addressing gender-related issues in each government agency. The MWFCD has made strict requirements that all gender focal points must be appointed from those holding Grade 54 to ensure that they are able to decide on any issues that arise. The gender focal points are expected to play an active role in advancing gender perspective integration, particularly in policy-making, legislation and regulations; that is, the planning and implementation of programmes at their respective agencies. In compliance with the stipulated needs of the BPfA, Malaysia has listed the roles of gender focal points as the following:

- i. Assisting the government in implementing the National Women's Policy and other women's initiatives.
- ii. Ensuring that the implementation of the gender-responsive budget is executed at their respective Ministry/Agency;
- iii. Ensuring that sex-disaggregated data collection and gender analysis statistics of their respective

- Ministry/Agency is updated and expanded from time to time;
- iv. Incorporating gender mainstreaming throughout their Ministry/Agency to raise awareness on and increase the knowledge of gender issues.
 - v. Providing input for speeches/speaking notes, interventions/reports for Malaysian delegations participating in international conferences/meetings on women issues, and if required, to participate as part of the delegation for the conferences/meetings;
 - vi. Providing feedback to the MWFCDC, as the main coordinator for the development, as well as any constraints, or issues that arise pertaining to their respective Ministry and its agencies in the implementation of the National Policy on Women, National Plan of Action for the Advancement of Women, and the execution of resolution/convention adopted by Malaysia at the international level;
 - vii. Joining all assemblies related to women issues under their respective Ministry/Agency that MWFCDC organises; and
 - viii. Participating in any capacity-building programs to better understand and experience women and gender-related issues under their respective Ministry/Agency, serving as a starting point to advocate for women's issues.

Appointing gender focal points throughout all Ministries and departments is an effort to integrate gender perspective at every stage of planning, policy drafting, and the implementation of government projects/programmes. This is because accelerating gender equality and women

empowerment requires cross-cutting support, involvement, and cooperation from all Ministries and Agencies. It is with great hope that this will strengthen and widen the networking effort between the Ministry and Government Agencies and expand the networking with various civil society organisations (CSO) as well as at the international level. It will also improve the response and feedback system; capacity building, understanding, knowledge and experience of gender focal points and the Ministry on gender empowerment concerns; and intensify the development of gender-disaggregated data collection and data analysis in all spheres. The ultimate goals of this effort are to accelerate gender equality and promote fair prospects to all regardless of their gender in economic, political, as well as social development, and ultimately achieving the global aspirations of the 2030 Agenda.

MALAYSIA'S GENDER GAP INDEX (MGGI)

The MWFCD has produced a gender-related development measuring system, called the Malaysia's Gender Gap Index (MGGI), in collaboration with the United Nations Development Programme (UNDP). It is a practice of ensuring and monitoring gender inequality in Malaysia, generating accurate and relevant data that can be used to track gender-related changes in society over time. Thus, it facilitates the formulation of effective policies and measures to integrate women's perspectives into the country's development. The MGGI comprises four component sub-dimensions encompassing health and survival, education, economic participation, and political empowerment. Each of these four sub-dimensions is considered equal in the MGGI calculation, like the UNDP's Human Development Index (HDI) criteria (Malaysia's Gender Gap Index, 2007). The MGGI reflects the value of zero in the event of absent gender imbalance in society, and the value of 1 showcases that gender inequality is at a-its

maximum level. The indicators selected to measure and monitor gender disparities between men and women are based on a) internationally recommended practices; b) appropriateness to the Malaysian context; and c) availability of data. However, the MGGI may not be able to extensively measure the density of gender inequality in Malaysia because it must be examined in conjunction with its sub-dimensions and selected indicators to generate meaningful insights. Furthermore, it does not consider factors involving laws and regulations as well as gender-based violence.

Based on the MGGI, gender disparity in Malaysia was moderately high when the MGGI recorded a value of 0.340 in 1980. However, the value was relatively low in 2004 when the MGGI was registered as 0.243. The MGGI dropped by 1.9 percent per year between 1980 and 1990, then by 0.5 percent per year for the next ten years, but the rate of decline increased to 1.7% per year (1980-2004) during the first four years of the current decade. In accordance with the experience of other countries, the rise of gender equality in Malaysia is very much influenced by an increase in gross domestic product (GDP) per capita in all spheres.

Malaysia acknowledges that gender equality and the empowerment of women are vital for the country's sustainable development. In 2006, the World Economic Forum through its Global Gender Gap Index (GGGI) Report elucidated the country's achievements in terms of efforts and initiatives to narrow gender gaps. The GGGI focuses on four main areas: economic involvement, education, health and wellbeing, and political representation. Over the past 14 years, the report has provided insightful data to help stakeholders in each country to develop policies that will accelerate talent development, integration, and deployment opportunities across genders in all spheres. According to Table 6.1, increased female participation

in post-secondary and higher education has resulted in improved health status, while increased female participation in non-agricultural occupations has improved Malaysia's ranking in the Global Gender Gap Index.

Table 6.1

Global Gender Gap Index Score (2006 – 2020)

Year	Rank	Score	Economic Participation	Educational Attainment	Health and Survival	Political Empowerment
2006	72/115 countries	0.65	0.59	0.99	0.97	0.06
2007	92/128 countries	0.64	0.57	0.99	0.97	0.06
2008	96/130 countries	0.64	0.56	0.99	0.97	0.06
2009	100/134 countries	0.65	0.56	0.99	0.97	0.06
2010	98/134 countries	0.65	0.58	0.99	0.97	0.05
2011	97/135 countries	0.65	0.59	0.99	0.97	0.05
2012	100/135 countries	0.65	0.60	0.99	0.97	0.05
2013	102/136 countries	0.65	0.59	0.99	0.97	0.05
2014	107/142 countries	0.65	0.62	0.97	0.97	0.05
2015	111/142 countries	0.65	0.63	0.97	0.97	0.05
2016	106/144 countries	0.67	0.66	0.99	0.97	0.05
2017	104/144 countries	0.69	0.72	1.04	0.96	0.06
2018	101/149 countries	0.71	0.72	1.05	0.95	0.10
2019	104/153 countries	0.70	0.71	1.05	0.95	0.10
2020	104/153 countries	0.67	0.64	0.99	0.97	0.10
2021	112/156 countries	0.67	0.63	0.99	0.97	0.10

Note. [Table 6.1] Retrieved from Ministry of Women, Family, and Community Development (2006 – 2016), Department of Statistics Malaysia (2017 – 2019), and World Economic Forum (2020 – 2021)

Table 6.1 showcases that there has been a growing trend towards gender equality across all subindexes in Malaysia. The issue of lacking gender parity has received considerable critical

attention from the government since Malaysia's independence. The enactment of the National Education Policy has paved the way for boys and girls to access equal opportunities in education. Thus, women have a greater equal chance to build their careers and the right to employ their potential and be recognised as professionals in their area of interest. As a result, the initiative has paved the way for Malaysia to accelerate gender equality in subindexes encompassing health and survival (0.95) and education attainment (1.0). This was clearly seen when the Global Gender Gap Report 2020 (Department of Statistics Malaysia, 2019) highlighted that women enrolment in tertiary education is at 49.9 percent, equal to men (49.9 percent).

The largest gender disparity in Malaysia, from 2006 until the present year (2021), is the political empowerment gap. With a score of 0.10 (2021) in political empowerment, Malaysia ranks 112 out of 156 countries. Despite advances in recent years, women continue to lag behind men in political participation in positions such as ministerial, legislature in parliament as well as at state legislative assemblies. Nevertheless, there is an increased percentage of women sitting in the House of Parliament in 2021 (14.9 per cent) as compared to 10.4 per cent in 2013. The peak of women's participation in the Malaysian political landscape can be seen after Independence when Tan Sri Fatimah Hashim was lined up as a member of Cabinet and held the position of the Minister for Welfare (1969 – 1973), twelve years after Malaysia gained independence from the British. Since then, the number of women designated as full cabinet members under a single administration has not exceeded three in a single intervening period.

Likewise, sections G.1 and G.2 of the BPfA (UN Documents) outline the prioritisation of women's leadership,

which state: “take measures to ensure women’s equal access to and full participation in power structures and decision-making” and “increase women’s capacity to participate in decision-making and leadership,” respectively. The global urgency to achieve gender parity in leadership is mentioned in Target 5.5 of the SDGs; “women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.” Political equality for women (Articles 7–9) and equal involvement of women at all levels is expressly provided in Article 7b in the CEDAW: “States Parties shall take appropriate measures to eliminate discrimination against women in the political and public life of the country and, in particular, shall ensure [that] women on equal terms with men, [are given] the right to participate in the formulation of government policy and the implementation thereof and to hold public office and perform all public functions at all levels of government.” These global commitments encompassing BPfA, SDGs, and CEDAW, strongly indicated that equal representation of women in politics, particularly holding decision-making positions, is a key enabler for achieving gender equality in all spheres of life. This is especially critical given the present rate of advancement across the 156 countries; the World Economic Forum (2021) expects that gender parity in politics will take 145.5 years to achieve.

The second-largest gap in Malaysia is seen in economic participation (0.71) which is driven by lower women participation in the labour force. Numerous researches have proven that parenting is a major restraint on women’s participation rate in the labour force (LFPR). The availability of enabling strategies, such as efficient childcare facilities, paid leave policies, and monetary incentives to families with children, can make a substantial difference in how motherhood impacts women’s involvement in the current job market

(Beijing Declaration and Platform for Action turn 20). The LFPR for women in Malaysia was still low (55.6 percent) in 2019 if compared to developed countries, for example, Australia (72.5 per cent) and Singapore (68.1 per cent). In general, the LFPR for a developed nation is at the ratio of 60 per cent and above. The LFPR is described as the ratio of the labour force to the working-age population (15 to 64 years), stated as a percentage (Department of Statistics Malaysia). Female LFPR is an important component that contributes immensely to the economic development as well as the overall national wellbeing of a country. Hence, the 11th Malaysia Plan (2016-2020) explicitly set forth to accelerate female LFPR in economic development from 54.3 per cent (2016) to 56.5 per cent in 2020, attempting to increase the number of women in key decision positions. Additionally, the 11th Malaysia Plan's Mid-Term Review revealed that female LFPR has been much lower than male, while female enrolment in public universities is considerably higher. Female LFPR was notably lower in Malaysia than in other countries, including Singapore, Thailand, and Vietnam. Based on the GGGI, Malaysia stands second from the bottom in 2020, above Myanmar, and plunged to the last place in 2021 among the ASEAN countries, as showcased in Table 6.2.

Table 6.2*ASEAN Countries in the Global Gender Gap Index (2021)*

No.	Country	Global Rank	Average Score (From 4 Dimensions)
1.	Philippines	17	0.784
2.	Lao PDR	36	0.750
3.	Singapore	54	0.727
4.	Thailand	79	0.710
5.	Vietnam	87	0.701
6.	Indonesia	101	0.688
7.	Cambodia	103	0.684
8.	Brunei	111	0.678
9.	Myanmar	109	0.681
10.	Malaysia	112	0.676

Note. World Economic Forum. (2021). [Table 6.2] Retrieved from Global Gender Gap Report 2021

Pursuant to Table 6.2, Malaysia is ranked at number 10 among the ASEAN countries. The Philippines has the smallest gender gap of the Asian continent by far. Therefore, the Government should emphasise on accelerating its efforts to empower women's participation in economics and politics at all levels, particularly during this COVID-19 pandemic. The pandemic has created new barriers for global communities in realising the 2030 Agenda, in particular Goal 5 and the targets depending on it, as well as achieving other international development goals.

TOWARDS GENDER EQUALITY AND EMPOWERMENT OF WOMEN

Under the leadership of the 5th Prime Minister of Malaysia, the government announced a policy with the target of having women occupy 30 percent of decision-making positions in the public sector in 2004. Recognising the benefits that the policy brings, at least 30 percent of women holding the board of

directorship in the corporate sector were launched in 2011. Initiatives to increase the number of women leaders in the public sector have made significant headway, with women representing 37.30 percent of leadership positions in 2019, up from 36.10 percent in 2018. Malaysia has elected its first female Chief Justice, and women have assumed leadership positions in key governance institutions such as the Parliamentary Public Accounts Committee and the Malaysian Anti-Corruption Commission. In the private sector, women now account for 26.4 percent of board members in the top 100 public listed companies, up from 24.4 percent in 2018. Subsequently, for the year 2020, a target has been set by the 30% Club to achieve at least 30 per cent women in the Board of Directors, 10 per cent holding positions as Chairmen and 0 per cent all-male Board of Directors. Statistics from Bursa Malaysia showcased that the number of women holding Board of Director positions among the top 100 PLCs increased to 26.4 per cent in 2019 compared to 19.3 per cent in 2017. However, retaining women in the workforce without developing their potential will not enrich diversity in the top management or leadership positions which are crucial to achieve gender parity across all sectors.

The achievement of Malaysia's commitment to empower women can be seen through an increase in the Global Gender Gap Index score from 0.655 in 2015 to 0.677 (2021). A considerable number of measures, including the implementation of flexible work options, the extension of minimum maternity and paternity leave, and the development of facilities such as nursing rooms and childcare facilities, have contributed to this success. Nevertheless, there is still much work to be done to accelerate gender equality and empower women in economic participation, which among others, are:

1. Improving gender equality in the workplace through legislation and practices by eliminating discriminatory

legislation, enacting laws and regulations to improve women's working conditions, and establishing programs to assist women in re-entering or gaining better access to the workforce;

2. Assisting women farmers and other rural women by promoting inclusivity and the propagation of gender perspective into national agricultural or development strategies; legal reform to ensure women have equal rights to property; and expanding access to agricultural extension services, technologies, training, and financing.
3. Resolving the requirements of self-employed women and women entrepreneurs by strengthening the legislative frameworks and providing financial assistance.

The political empowerment gap between women and men in Malaysia has been reduced since the 14th General Election, which brought a new era to the country's political development. Malaysia witnessed the appointment of *Yang Berhormat* Dato' Seri Dr. Wan Azizah Wan Ismail was the first female member of parliament holding the portfolio of Deputy Prime Minister. This is followed by the appointment of five female Cabinet Ministers and four female Deputy Ministers to complete the line-up of the Malaysian Cabinet. Furthermore, the appointment of Datuk Seri Azalina Othman Said, a Member of Parliament from Pengerang, as the first woman to serve as the Deputy Speaker of the Dewan Rakyat proves that the ruling government does not discriminate based on gender. In other words, these appointments modelled the Government's commitment towards achieving the 30 per cent gender policy quota and accords women equal status and rights as provided in Article 8(2) of the Federal Constitution. It is a known fact that women representation in the Malaysian Parliament is still relatively low. However, women's political participation is

progressing and has overall increased since the First General Election, as showcased in Table 6.3

Table 6.3

Women Representation in Malaysian Parliament (1959 -2018)

General Election	Women	Men	Total	Percentage
GE-1 (1959)	3	101	104	2.9%
GE-2 (1964)	3	101	104	2.9%
GE-3 (1969)	2	142	144	1.4%
GE-4 (1974)	5	149	154	3.2%
GE-5 (1978)	7	147	154	4.5%
GE-6 (1982)	8	146	154	5.2%
GE-7 (1986)	7	170	177	4.0%
GE-8 (1990)	11	169	180	6.1%
GE-9 (1995)	15	177	193	7.8%
GE-10 (1999)	20	173	193	10.4%
GE-11(2004)	21	197	219	9.6%
GE12(2008)	24	198	222	10.8%
GE-13 (2013)	24	198	222	10.4%
GE-14(2018)	32	190	222	14.4%

Note. [Table 6.3] Retrieved from General Election Commission

Table 6.3 indicates the numbers and percentages of women seats in the House of Parliament since the 1st General Election in 1959. Women representation in parliament for the 1st and 2nd General Election remained at 3 members of parliament. However, there was an increase in the number of women representations in 1990 with 11 seats allocated for women due

to a major crisis among the UMNO leadership that led to the formation of *Parti Baharu Semangat 46*. The number of seats won by women increased tremendously in 1999 when women representation in the House rose to 20 seats. Nevertheless, the 11th General Election did not showcase a gratifying number of women representations in the House, whereby the percentage dropped to 9.6 percent (21 seats) compared to 10.4 per cent in 1999. Progressively, in the 12th and 13th General Election, the number of seats won by women in the parliament reflected the same amount, which was 24 seats.

The 14th General Election was broadly described as a “Malaysian Tsunami” when Malaysians of all ethnic backgrounds turned out to vote against the long-standing party. The political tsunami also shattered the glass ceiling for women's representation in the parliament, whereby women in the House of Representatives represent 32 seats. This is undoubtedly a significant improvement for gender equality, particularly in the Asian context, where communities mostly practise patriarchy. Women's participation in politics is critical to achieve the Shared Prosperity Vision 2030, a commitment to transform Malaysia into a nation that achieves sustainable growth while maintaining a fair and equitable distribution of wealth across income levels, ethnic groups, areas, and supply chains (Malaysian Government Portal).

While recognising this significant progress, it is nevertheless striking that women are still underrepresented at the decision-making level as speakers of parliament, ministers, heads of States, and heads of government. Furthermore, at the Cabinet level, women ministers are often given a portfolio related to social and less likely to oversee economic or foreign affairs sectors which prevent women from having autonomy in the economy due to the practice of gender-based segregation and pervasive stereotypes. Previous research has shown that,

on average, over 50 percent of the respondents from the region marked “agree” and “agree strongly” that “men make better political leaders than women do” (World Value Survey, 2014).

Hence, a comprehensive approach is needed to accelerate women’s participation in politics and for them to have a greater voice in executing policies and plans of action that will elevate women’s status in the country’s development. Such approaches should include: adopting a quota system through constitutional and legal reforms to provide explicit provisions to guarantee women’s full participation in politics; implementation of capacity-building programmes to promote networking for women parliamentarians and boosting their participation at the local and national levels; and forming cross-party women’s caucuses to strengthen women’s voices and eliminate violence against women, especially during elections and political activities.

CONCLUSION

Malaysia’s commitment to accomplish gender equality is echoed in various policies and measures taken by the government. These policies guide and monitor the execution of initiatives and programs across ministries and agencies. Efforts have been increased and strengthened from time to time to accelerate women’s status and address gender issues, including the empowerment of all women, as stated in the 2030 Agenda for Sustainable Development. Moving towards that goal, systemic barriers for women in attaining their meaningful political inclusion, including legal, political, and cultural constraints, must be eliminated at all levels: the individual, institutional, and socio-cultural.

Moving forward, Malaysia must address the barriers women face at these three levels to create an enabling environment that

would strengthen and empower women's voices towards Malaysian Society 5.0. To eradicate gender-based occupational segregation, social norms, and gender preconceptions regarding appropriate labour for women and men must be addressed. These initiatives will require collaboration between states, non-governmental organisations, the civil society, and the international community. While these changes may not happen simultaneously, they act as a stimulus for women's aspirations to be effective leaders, including those from minority groups. Similarly, this is to ensure that political environments are free from discrimination based on gender and advocate democratic governance.

Women's voices are of increasing importance to the pursuit of a Malaysian Society 5.0 since their participation is essential to the advancement of all members of the society. However, more efforts need to be explored to establish the necessary conditions for women to participate in politics, economic development, and social development. It will need concerted efforts from all agencies and the society, to create a safe and more inclusive environment for women to come forward and contribute to their fullest potential.

Funding: This research received no external funding.

Acknowledgement: The contributions by all are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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7

Online Fraud Amid the Covid-19 Pandemic

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Abstract - The COVID-19 pandemic has led to various governmental measures which limit physical freedom. In pursuance of that, virtual activities have become more lively than usual. Nevertheless, there exist irresponsible individuals who fraudulently manipulate virtual facilities and the massive online dependence and limitations of others for their own wrongful gains. This chapter will discuss the modus operandi of the fraudsters and the mechanisms to prohibit their fraudulent behaviours. The current prevention and enforcement mechanisms will be analysed, and viable recommendations will be provided to the authorities and individuals concerned.

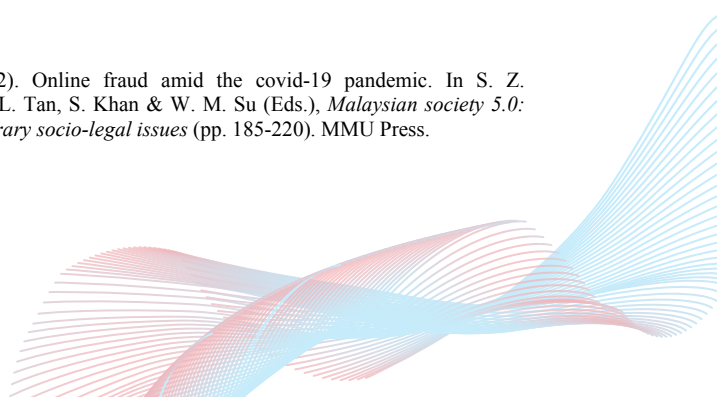
INTRODUCTION

Nobody would have expected that a virus could hold the world at its ransom. Yet the abrupt advance of coronavirus disease (COVID-19) has brought the world to a halt due to its high transmissibility.

Malaysia is no exception to the COVID-19 aftermath. To maintain the security and health of the nation, several measures

Cite this chapter as:

Rahman, R. (2022). Online fraud amid the covid-19 pandemic. In S. Z. Jamaluddin, O. S. L. Tan, S. Khan & W. M. Su (Eds.), *Malaysian society 5.0: Selected contemporary socio-legal issues* (pp. 185-220). MMU Press.



have been taken by the government *via* the National Security Council and the Ministry of Health based on the powers conferred to them under several legislation; the National Security Council Act 2016 (Act 776) and the Prevention and Control of Infectious Diseases Act 1988 (Act 342), where new regulations have been passed under the purview of the Act. In fact, a new legislation, known as the Temporary Measures for Reducing the Impact of Coronavirus Disease 2019 (COVID-19) Act 2020 (Act 829) was also *gazetted* on the 23rd of October 2020. Subsequently, the *Yang di-Pertuan Agong* also passed several Emergency (Essential Powers) Ordinances pursuant to his Declaration of Emergency on the 11th of January 2021. All the above legislations empower the government to impose specific measures in managing the COVID-19 Pandemic, including a Movement Control Order (MCO) for the whole of or specific parts of the nation.

The issuance of MCO has *inter alia* resulted in increasing numbers of virtual activities *in lieu* of their physical counterparts, especially those who must work and study online from their homes. Nevertheless, it has also opened more opportunities to fraudsters (scammers). Based on the Malaysian Cybersecurity Incident Statistics 2020, there was an increase of 82.5% of cybersecurity cases, where between 18 March to 7 April 2020, 838 cases were recorded (MyCERT, 2020). Most of the cases were related to online fraud, unauthorised access and cyber harassment as mentioned in Table 7.1.

Table 7.1

Reported Incidents based on General Incident Classification Statistics 2020

	Intrusion	Content Related	Malicious Codes	Vulnerabilities Report	Cyber Harrassment	Fraud	Denial of Service	Intrusion Attempt	Spam	#
	122	23	56	5	37	807	0	13	11	JAN
	93	23	32	7	27	725	1	8	27	FEB
	125	42	33	10	58	798	3	8	14	MAR
	144	23	40	10	65	1180	7	11	8	APR
	133	9	35	7	73	770	1	4	13	MAY
	113	7	36	11	69	626	0	1	8	JUN
	101	7	47	18	48	413	0	2	6	JUL
	102	6	72	9	32	378	1	4	7	AUG
	81	7	76	18	40	351	0	20	8	SEP
	87	11	75	10	50	411	2	14	16	OCT
	88	7	40	5	60	526	1	17	16	NOV
	255	5	51	7	37	608	0	14	11	DEC
	1444	170	593	117	596	7593	16	116	145	TOTAL

Note. MyCERT. (2020). Incident Statistics 2020. [Table] Retrieved from Cyber Security Malaysia

The reason why there was a spike in the number of these cases could be attributed to several factors, namely the increased reliance of the public on technology during the MCO period, manipulation of internet users' (netizens) fear of COVID-19, security weaknesses of personal computers and gadgets used for working, learning and electronic commerce, and a delay in upgrading the security of office computers and gadgets for those who are allowed to work from the office.

MODUS OPERANDI OF FRAUDSTERS

Ever since the COVID-19 pandemic, numerous incidents involving online fraud have been reported to the authorities. There have been instances of phishing and scam messages using topics related to COVID-19 to raise fear of internet users thus leading them to act according to the fraudster's wishes. Most of these cases involve electronic commerce activities, for example, advertising for the sale of facemasks and sanitisers at a high price, but once the buyer receives the items, they are found to be fake or very poor-quality items (Povera and Yunus, 2020). There have also been cases where people place orders for food and beverages or services online, yet no response is received (Bavani, 2020). This is mainly because the advertised food and services did not actually exist, or even if they are delivered it is found that the quality is below par.

There have also been incidents where the fraudsters manipulate the vulnerable who have been affected financially due to the COVID-19 pandemic by putting up false advertisements about work-from-home job offers and financial assistance (Lulu Press, 2020). Financial desperation has caused some people to succumb to the trap (Zainal, 2020). The above problem is further compounded by the spread of fake news and information *via* social media. Indeed, fraudsters benefit a lot from other internet users who spread false information, without

first verifying its authenticity, even when it is done with good intent.

If we look closely at the techniques used by the fraudsters, regardless of whether they are beginners, intermediate, or pros (Morgan D, 2020), their modus operandi remains the same. They use social engineering and ensure they cannot be tracked by authorities.

SOCIAL ENGINEERING

Social engineering is a skill developed by fraudsters to convince their victims that whatever the fraudster posts online is true. A fraudster preys on the victim's favour or fear (Mitnick and Simon, 2016). This is the most crucial skill of a successful fraudster. If the posts and the subsequent online conversations are not convincing, the victims will never take the bait. In the words of Kevin Mitnick, the first hacker who appeared in the United States Federal Bureau of Investigation's most-wanted list, before the interrogation by the United States Senate Governmental Affairs Committee, on the 2nd of March 2000:

“When I would try to get into these systems, the first line of attack would be what I call a social engineering attack, which really means trying to manipulate somebody over the phone through deception. I was so successful in that line of attack that I rarely had to go towards a technical attack. The human side of computer security is easily exploited and constantly overlooked.

Companies spend millions of dollars on firewalls, encryption and secure access devices, and its money wasted, because none of these measures address the **weakest link in the security chain.**”

(Emphasis added)

This is why phishing for information about the *weakest link in the chain* @ user or victim is so important to the fraudster, as only by studying the profile of the victim *via* his posts on social media, will the fraudster have sufficient points to socially engineer the conversation to his benefit and the detriment of the victim. Indeed, a scammer who has the skill to target a particular victim has the potential for massive gains (Jakobsson, 2016).

NO-TRACKING PROCESS

A fraudster must ensure that he cannot be tracked by the authorities if the victim realises that he has been subjected to fraud. In this regard, the money transfer is structured in a manner where a mule or scapegoat will be tracked instead of the fraudster (Abd Rahman, 2020).

In a structured fraud scheme (scam), one common step is where the fraudster or scammer will first recruit a mule by contacting him with an offer of a monetary commission if the mule agrees to create a bank account (we will call this Account B) under the mule’s name and surrender the bank card to the fraudster. Any potential mule facing financial problems or wishing to earn additional income will succumb to the offer as he believes that he does not have to do anything else beyond getting paid for the use of his account. How the mule gets paid is irrelevant.

In reality, the fraudsters, upon deceiving a victim will instruct payment to be made to Account B. The fraudster will not execute any monetary transfer from Account B to his own account as that will expose him, but he is at liberty to withdraw the money anywhere in Malaysia as he has possession of the mule's bank card for that account. If the victim later realizes that he has been deceived, he will lodge a report to the authorities, but the person that will be marked as the suspect is the mule as there is a clear record that the money was transferred to Account B that is under his name.

MECHANISMS AGAINST FRAUDSTERS

In dealing with online fraud, “prevention is better than cure”. Yet it is easier said than done. If prevention fails, the victim must seek a cure through enforcement. Hence there is a need to understand both the prevention and enforcement mechanisms to see what must be done in managing online fraud.

PREVENTION MECHANISMS

Vigilance, delayed decisions, healthy scepticism, awareness, and background knowledge are the essential traits an internet user should have before engaging in any online communication or transaction with a person for the first time (Dove, 2020). Hence the two major key points for prevention are “reference” and “privacy”. Regarding “reference”, it is pertinent upon the internet users to always try to get a second opinion before agreeing to any transaction done online (Milhorn, 2007). Perhaps the person whose opinion is sought has the knowledge of online fraud, most likely because they, or someone they know, were cheated *via* the same method previously, hence their advice will assist the would-be-victim from falling into a similar trap set by the fraudster.

Another method of 'referencing' is by referring to an original source. Some fraudsters will simply copy information from a legitimate website and paste it on social media as if it were their own. Such an impersonation will convince ill-informed users that the information is legitimate. Had the users done a simple search online of the products or services offered, they might have discovered, for example, that the company did not appoint any agent to act on its behalf *via* social media.

In addition to a users' own search of the original source, several official websites can be used to identify common frauds. Among those websites are *Sebenarnya*, an initiative of the Ministry of Communication and Multimedia to alert the public about any false and fraudulent information which has gone viral (MCMC, 2022), Cybersafe, an awareness portal by CyberSecurity Malaysia (CyberSecurity, 2022), and the Commercial Crime Investigation Department (CCID) Portal of the Royal Malaysian Police (PDRM), where users can check if the account numbers shared with them for the purpose of online payment have been marked as scam accounts by PDRM.

As for "privacy", it is pertinent for internet users not to share any personal information before getting an affirmative answer upon completing the above reference check. This is because even if the transaction is not completed, fraudsters can store this information for future frauds (Canada Competition Bureau, 2012). For instance, the fraudster may later impersonate the victim to entice his family members and friends to the fraudster's trap.

ENFORCEMENT MECHANISMS

Although there are many enforcement mechanisms available to deter online fraud, the number of cases is still high. From January to May 2021, a total of 3229 online frauds were

reported, ranking it the highest compared to cyber harassment, spam, denial of service, intrusion, intrusion attempt, content-related, malicious codes, and vulnerabilities reports (MyCERT, 2021).

One would think that online fraud only happens because victims are ignorant. However, in reality, the victims include educated and professional people (The Fraud Examiner). This is due to manipulation by fraudsters *via* social engineering, utilising the fear or favour of their victims (Benjamin, 2021). According to Button and Cross (2017):

“Traditional understandings of crime risk and exposure are no longer adequate to explain the potential targeting and victimisation of an individual in the virtual environment. Indeed, there are now persons who, 20 years ago, were designated at a very low risk of crime victimisation, that are now regularly exposed to the risk of crime in the form of cyber-enabled fraud.”

The most common question the victims ask upon realising that they are a victim of fraud is “who can help me now?”. Thus, it is important to understand the existing enforcement mechanisms in place that a victim can resort to in the case of such an unfortunate incident.

INTERNAL MECHANISMS

The first thing a victim should do upon discovering that he has been cheated is to communicate with the fraudster. Although it can seem like a waste of time, it is unknown at first glance if the “fraud” is intentional. It is possible that what happened was simply a mistake or miscommunication. For example, if A discovers that the set of facemasks that he purchased from B does not have the correct quantity as advertised, can A

straightaway assume that he has been cheated? Perhaps if he brings the matter to B's attention, he will find that there is simply a mistake in the delivery which can be remedied by B, perhaps with some compensation for the inconvenience. If A chooses not to ask for clarification, he does not give B a chance to remedy what may simply be a mistake.

If the initial communication does not work, then the victim should resort to the internal reporting facility in the online marketplace if the alleged fraudster sells from within one. Online marketplace providers like Shopee (Shopee PH Help Center, 2022), Lazada (Lazada Help Center, 2022) and Facebook Marketplace (Facebook Help Center, 2022), just to name a few, have the facilities for complaints for those affected by fraudulent sales practices. However, if the fraudulent transaction occurs on other online platforms, for instance, *via* social media applications like WhatsApp and WeChat, it will be quite tricky since these platforms were not initially developed for electronic commerce.

GOVERNMENT MECHANISMS

If the above internal mechanism does not work, there are several avenues provided by the government to assist the victims. Most of these mechanisms can be accessed online making them convenient and easy to use.

When it comes to online fraud involving electronic commerce, an online complaint to the Ministry of Domestic Trade and Consumer Affairs can be done *via* e-Aduan (KPDNHEP, 2022). If the online fraud is related to security, an online complaint can be lodged at the MyCERT (Malaysia Computer Emergency Response Team) portal *via* Cyber999 (MyCERT, 2022).

If the complaint lodged to the Ministry of Domestic Trade and Consumer Affairs has merit, an investigation will be conducted by the personnel from the Ministry. This is done in accordance with the power given to them under the Consumer Protection Act 1999 (Act 599). There are situations where the alleged fraudster is willing to negotiate but needs someone to manage the negotiation. In this situation, the victim can also lodge his complaint to the National Consumer Complaints Centre (NCCC, 2022). If negotiations are not successful, the NCCC will propose for the matter to be brought before the Consumer Claims Tribunal.

Notwithstanding the above mechanisms, a victim is never deprived of his right to lodge a police report. In this regard, when such a report is filed and found to have merit, an investigation will usually be conducted under sections 415, 416 or 420 of the Penal Code (Act 574). Section 415 of the Code provides:

“Whoever by deceiving any person, whether or not such deception was the sole or main inducement, -

- (a) fraudulently or dishonestly induces the person so deceived to deliver any property to any person, or to consent that any person shall retain any property; or
- (b) intentionally induces the person so deceived to do or omit to do anything which he would not do or omit to do if he were not so deceived and which act or omission causes or is likely to cause damage or harm to any person in body, mind, reputation, or property,

is said to “cheat”.”

The provision further explains that dishonest concealment of facts is a deception within its meaning (Explanation 1, section 415 of the Penal Code), but a mere breach of contract is not of itself proof of an original fraudulent intent (Explanation 2, section 415 of the Penal Code). The representation shall also be deemed to have been made by the person even if it is conducted through any person acting as an agent, or otherwise (Explanation 3, section 415 of the Penal Code). If the fraudster masquerades as another person, section 416 of the Code provides:

“A person is said to “cheat by personation” if he cheats by pretending to be some other person, or by knowingly substituting one person for another, or representing that he or any other person is a person other than he or such other person really is.”

It does not matter whether the individual personated is a real or imaginary person (Explanation, section 416 of the Penal Code).

If the act involves cheating and dishonestly inducing delivery of property, section 420 of the Code provides:

“Whoever cheats and thereby dishonestly induces the person deceived, whether or not the deception practiced was the sole or main inducement, to deliver any property to any person, or to make, alter, or destroy the whole or any part of a valuable security, or anything which is signed or sealed, and which is capable of being converted into a valuable security, shall be punished with imprisonment for a term which shall not be less than one year and not more than ten years and with whipping, and shall also be liable to fine.”

Several cases can be referred to relating to the application of the above provisions. For example, in *PP v Innocent Uchechukwu Christian*, Kuala Lumpur Sessions Court (31/12/2020), the accused, a Nigerian citizen, was charged and convicted under section 420 of the Penal Code before the Sessions Court of Kuala Lumpur for cheating a real estate company manager. Masquerading as a Malay person on Facebook, he managed to deceive the victim who fell in love with him to invest in a fictitious AS\$3 million marine supply project, in which the victim transferred RM339,610 to 11 different accounts provided by him.

The above kind of fraud is also known as the love, or 419, or Nigerian scam. The reason why it is named the latter is because it was made commonly perpetrated by Nigerian fraudsters, while the number 419 refers to the provision of fraud; under section 419 of the Nigerian Criminal Code (Tive C, 2006).

In *PP v Rustina Egong & Anor*, Kuala Lumpur Magistrate Court (09/07/2019), the accused, a Nigerian citizen, and his wife, were charged and convicted under the same section before the Magistrate Court of Kuala Lumpur for cheating a nurse *via* parcel scam. Masquerading as doctors from a European country, they managed to deceive the victim who transferred RM1550 to them. The accused were sentenced to a fine of RM4500.00 each.

In *PP v Norshafika Ab Wahab*, Kuala Lumpur Magistrate Court (03/03/2017), a housewife was charged and convicted under the same section before the Magistrate Court of Kuala Lumpur for cheating 3 victims by deceiving them to transfer a total of RM5000.00 to her account for the sale of a fictitious 75 units of baby diapers as advertised on Facebook. She was sentenced to three years imprisonment.

In *PP v Mohamad Azmil Mohd Diah*, Gua Musang Magistrate Court (02/02/2017), an unemployed person was charged and convicted under the same section before the Magistrate Court of Gua Musang for cheating a fast-food outlet supervisor regarding the sale of a smartphone (iPhone 6) advertised on WeChat. He was sentenced to three years imprisonment and five strokes of the cane.

In *PP v Siti Latifah Mohd. Said*, Ayer Keroh Magistrate Court (20/09/2016), a part-time computer application engineer was charged and convicted under the same section (seven charges) before the Magistrate Court of Ayer Keroh for masquerading as Khalisya Najwa on Facebook and deceiving the victim to transfer over RM75,750 to her for the cost of their fictitious marriage. She was sentenced to three years imprisonment for every charge.

In *PP v Peace Okotie*, Kuala Lumpur Magistrate Court (24/03/2009), a Nigerian student was charged and convicted under the same section before the Magistrate Court of Kuala Lumpur for cheating a government officer *via* email about a \$ 1 million winning prize, where the victim transferred USD27(RM9969.85) to her account. She was sentenced to sixteen months imprisonment.

In *PP v Mazrin Abd Aziz*, Kuala Lumpur Sessions Court (09/12/2015), an unemployed accused was charged and convicted under the same section for cheating a couple regarding the sale of a house which was not even his property for a price of RM280,000 on the Mudah.my platform. He was sentenced to five years imprisonment and four strokes of the cane.

It should be noted that an incident of fraud does not necessarily involve the act of unauthorised access to computer

programs or data. However, if such an act is initiated for the purpose of committing fraud, it is considered as malicious unauthorised access, rendering higher punishment compared to a non-malicious one. In this context, section 4(1) of the Computer Crimes Act states that:

“A person shall be guilty of an offence under this section if he commits an offence referred to in section 3 with intent--

(a) to commit an offence involving fraud or dishonesty or which causes injury as defined in the Penal Code [Act 574]; or

(b) to facilitate the commission of such an offence whether by himself or by any other person.”

Note that section 4(3) imposes a fine not exceeding one hundred and fifty thousand *ringgit* or to imprisonment for a term not exceeding ten years or to both, while section 3(3) imposes a fine not exceeding fifty thousand *ringgit* or to imprisonment for a term not exceeding five years or to both.

Based on the earlier discussion, a fraudster will normally rely on his mule’s bank account to carry out the online fraud process and avoid tracking by the authorities. If the mule is detected by the authorities, sections 411, 414 or 424 of the Penal Code are applied against them. Section 411 provides:

“Whoever dishonestly receives or retains any stolen property, knowing or having reason to believe the same to be stolen property, shall be punished with imprisonment for a term which may extend to five years or with fine or with both; and if the stolen property is a motor vehicle or any component part of a motor vehicle as defined in section 379A, shall

be punished with imprisonment for a term of not less than six months and not more than five years, and shall also be liable to fine.”

While section 414 of the Code further provides:

“Whoever voluntarily assists in concealing or disposing of or making away with property which he knows or has reason to believe to be stolen property, shall be punished with imprisonment for a term which may extend to seven years or with fine or with both; and if the stolen property is a motor vehicle or any component part of a motor vehicle as defined in section 379A, shall be punished with imprisonment for a term of not less than six months and not more than seven years, and shall also be liable to fine.”

Section 424 of the Code further provides:

“Whoever dishonestly or fraudulently conceals or removes any property of himself or any other person, or dishonestly or fraudulently assists in the concealment or removal thereof, or dishonestly releases any demand or claim to which he is entitled, shall be punished with imprisonment for a term which may extend to five years or with fine or with both.”

There are many cases in which the mules were charged and convicted under the above provisions. Below is Table 7.2 of such cases:

Table 7.2

List of Cases

PP v Mohd Shalam [2019]	Loan/investment/ scam
PP v Lim Chau Ching [2019]	
PP v Karundendran Poopalan [2019]	
PP v R. Muniandy [2018]	
PP v Nurliyana Mohd Sahari [2017]	
PP v Syed Ahmad Nashrul Sayed Othman [2017]	
PP v Rafidah Che Mat Zain @ Zainuddin [2018]	FBI/police scam/ <i>Macau Scam</i>
PP v Muhamad Sahrizal Ismail [2018]	
PP v Tay Siao Leng [2017]	
PP v Mastura Othman [2021]	love/parcel scam
PP v Kasumawati Mohamad [2019]	
PP v Sabariah binti Adam [2018]	
PP v Tee Chiu Hang [2018]	
PP v Gollneer Roshandin [2017]	
PP v Rose Suraya Ideris [2017]	

PP v Minah Anak Nyangat [2017]		
PP v Erick Andrew Mbwambo [2014]		
PP v Muhammad Lukmanhakiem Soekanto Pura [2019]	credit card usage alert scam	
PP v Mohd Nadzrin Zaidel [2018]		
PP v Lai Fook Fatt [2017]		
PP v Chin Wei Yong [2019]	lucky draw scam	
PP v Wong Kar Man [2020]	Mudah sale scam	facemask
PP v Ng Chee Wei [2019]		car
PP v Mohd Sazmey Mohamed Asri [2018]		car
PP v Jamalulhisham Jusoh [2017]		iPhone
PP v Jazrina Jaapar [2016]		camera
PP v Musli Buntar @ Ali [2020]		facemask
PP v Nor Azri Rosli [2020]	other online sale scams	car
PP v Haslina Mohd Dewa [2020]		watch
PP v Chew Meng Chong [2020]		iPhone
PP v Nur Nirmal Manoj Kumar [2018]		

PP v Shaarani Mohd Abas [2018]		motorcycle
PP v Khairunnisa Ab Rahim [2017]		baby stroller

There have also been cases where the mules were charged but found not guilty. In *Sarimah binti Peri v Pendakwa Raya* [2019] MLJU 230, it was held that there was no *prima facie* case against the accused while in *PP v Charles Sugumar a/l M. Karunnanithi* Kota Bharu High Court (07/09/2017), it was held that the prosecution failed to prove the case beyond reasonable doubt against the accused.

As one element of online fraud is false information, a complaint can also be lodged to the Malaysian Communication and Multimedia Commission *via* its online platform (MCMC, 2010). The Commission is empowered with the right to investigate under the Communication and Multimedia Act 1998 (Act 588). If the investigation by the police fails to discover any incident of fraud, but there is evidence that there has been a spread of false content by the alleged fraudster, it is also possible for an action to be taken under the purview of the above Act.

Section 211 of the Act provides that:

“(1) No content applications service provider, or other person using a content applications service, shall provide content which is indecent, obscene, **false**, menacing, or offensive in character with intent to annoy, abuse, threaten or harass any person.

(2) A person who contravenes subsection (1) commits an offence and shall, on conviction, be liable to a fine not exceeding fifty thousand ringgit or to imprisonment for a term not exceeding one year or to both and shall also be liable to a further fine of one thousand ringgit for every day or part of a day during which the offence is continued after conviction.”

(Emphasis added)

Section 233 of the same Act further provides that:

“(1) A person who—

a) by means of any network facilities or network service or applications service knowingly-

(i) makes, creates, or solicits; and

(ii) initiates the transmission of,

any comment, request, suggestion, or other communication, which is obscene, indecent, false, menacing, or offensive in character with intent to annoy, abuse, threaten or harass another person; or

b) initiates a communication using any applications service, whether continuously, repeatedly, or otherwise, during which communication may or may not ensue, with or without disclosing his identity and with intent to annoy, abuse, threaten or harass

any person at any number or
electronic address,

commits an offence.

(2) A person who knowingly—

- a) by means of a network service or applications service provides any obscene communication for commercial purposes to any person; or
- b) permits a network service or applications service under the person's control to be used for an activity described in paragraph (a),

commits an offence.

(3) A person who commits an offence under this section shall, on conviction, be liable to a fine not exceeding fifty thousand ringgit or to imprisonment for a term not exceeding one year or to both and shall also be liable to a further fine of one thousand ringgit for every day during which the offence is continued after conviction.”

It should however be noted that the above mechanisms will only be viable if the fraudsters are currently based in Malaysia. The process towards bringing foreign fraudsters before the authorities in Malaysia is not as straightforward as cases involving locally-based fraudsters, as the former would require a procedure of mutual legal assistance and extradition between Malaysia and other countries (Rahman, 2012). For example, the police were able to nab the Macau Scam syndicate, which had been in operation for 2 years, masquerading as *Pos Laju*

officers and police, the moment it shifted its operation to Perak due to the COVID-19 pandemic (Astro Awani, 2021). Nevertheless, it does not mean that overseas based fraudsters are exempted from liability.

NON-GOVERNMENT MECHANISM

It is also possible that some victims will refuse to use government mechanisms for various reasons such as, ignorance of the mechanisms available, fear of being exposed, or when there is a delay or no visible action done by the authorities. This is where the non-government mechanisms come in handy. Some popular mechanisms in this context are the Federation of Malaysian Consumers Association (FOMCA) and the Malaysian Cyber Consumer Association (MCCA).

As far as FOMCA is concerned, it is a voluntary, non-profit, non-political, and civic oriented national non-governmental organisation, operating as a central, coordinating entity representing all Malaysian consumer associations. It was set up on 10 June 1973, and ever since then it works on issues that affect consumers not only throughout Malaysia but also across national borders

For example, when the Ministry of Domestic Trade and Consumer Affairs announced in 2021 that a special licence for online businesses should be introduced to cater to the rising numbers of such business amidst the Covid-19 pandemic, FOMCA applauded the move as the fact that people resort to online business is becoming a norm. Hence such a licence will be a benchmark of the legitimacy of the trades and makes it easier for authorities and consumers to track them to resolve their disputes. FOMCA also collaborated with the said Ministry and other relevant bodies and agencies in various programs to

raise awareness on online fraud for example the #TakNakScam Campaign on 14 July 2021.

As far as MCCA is concerned, it was officially established on 8 October 2018 and registered under the Department of Registration of Societies Malaysia (ROS). Its main objectives are to educate, advocate and defend cyber users, mainly by voicing out their rights while providing diverse education to all levels of users. A complaint can be lodged to MCCA via its online platform at <https://www.cyberconsumer.my/aduan/> (MCCA, 2022).

As more than 90 percent of Malaysians actively rely on social media, Malaysian Cyber Consumers Association (MCCA) President, Mr. Siraj Jalil, in an interview with Media Prima suggested that the government immediately introduce a compulsory syllabus of cyber use for various levels of education, especially in primary and secondary schools. This is so that the foundation can be used as a basis to educate the public about the importance of being a smart user in cyberspace (Harian Metro, 2022).

CLAIM FOR LOSSES

The most popular question upon being cheated online is “Can I get my money back?”. The answer to this question is possible but not guaranteed. If the identity of the fraudster is known, upon conviction in a criminal court, the court will sentence the person to either a fine or imprisonment, or both. However, the fine is paid by the convicted fraudster to the government, not to the victim, as the crime is an offence against the State.

When it comes to electronic commerce, online fraud renders the contract voidable at the option of one party i.e., the victim. This is mainly due to the absence of one essential element of a

contract: free consent. It is worth mentioning that contractual principles under the Contracts Act 1950 (Act 136) apply equally to electronic commerce (Radhakrishna, 2010). Section 6 of the Electronic Commerce Act 2006 (Act 658) provides an assurance that:

- “(1) Any information shall not be denied legal effect, validity, or enforceability on the ground that it is wholly or partly in an electronic form.
- (2) Any information shall not be denied legal effect, validity, or enforceability on the ground that the information is not contained in the electronic message that gives rise to such legal effect, but is merely referred to in that electronic message, provided that the information being referred to is accessible to the person against whom the referred information might be used.”

Section 7 of the Electronic Commerce Act 2006 further provides that:

- “(1) In the formation of a contract, the communication of proposals, acceptance of proposals, and revocation of proposals and acceptances or any related communication may be expressed by an electronic message.
- (2) A contract shall not be denied legal effect, validity, or enforceability on the ground that an electronic message is used in its formation.”

The application of the above provisions can clearly be seen in *Chwee Kin Keong v Digilandmall.com Pte Ltd* [2004] 2 SLR(R) 594 where the court stated that:

“... It is not really an issue that contracts can be effectively concluded over the Internet and that programmed computers sending out automated responses can bind the sender.”

It was held by the court in *Chwee Kin Keong v Digilandmall.com Pte Ltd* [2005] 1 SLR(R) 502. that:

“It is common ground that the principles governing the formation of written or oral contracts apply also to contracts concluded through the Internet...”

In addition, the Electronic Commerce Act 2006 also clarifies that any legal requirement indicating that certain information should be in writing is fulfilled if the information is in electronic form. Section 8 of the Act provides that:

“Where any law requires information to be in writing, the requirement of the law is fulfilled if the information is contained in an electronic message that is accessible and intelligible so as to be usable for subsequent reference.”

The application of section 8 was explained by the Federal Court in the case of *Yam Kong Seng & Anor v Yee Weng Kai* [2014] MLJU 476 that:

“In a word a message from an SMS, with all the attributes of s.8 being present viz. accessibility, intelligible and extractable for subsequent reference, such an electronic message is as good as in writing.

... the ECA was legislated in order to deal with some of the latest technological strides, apart from contributing to business efficacy and building the confidence of investors and public at large.”

Although the form of the contract is not an issue for a claim against online fraud, one big concern for some victims is the amount that they need to spend if they wish to file civil claims in court against the fraudsters for the loss(es) incurred, and whether it is worth filing such an action.

To answer the above concern, if a victim cannot afford the cost, he can seek free legal assistance from the Legal Aid Department of Malaysia or other Legal Aid Centres throughout Malaysia operated either by the Malaysian Bar or non-government associations. To be eligible for free legal assistance, the applicant needs to pass the means/eligibility test of the respective department or centre.

However, if the loss incurred due to online fraud is RM50,000.00 and below, there is another option (Section 98(1) of the Consumer Protection Act 1999 [Act 599]). The Tribunal for Consumer Claims which operates under the Ministry of Domestic Trade and Consumer Affairs can be resorted to by the victim without having to go through a formal court process, and the claim can also be filed online for a mere fee of RM5.00 (*E-Tribunal*). This tribunal has been established under section 85, Part XII of the Consumer Protection Act 1999 and it also has the jurisdiction to hear any consumer claim arising from electronic transactions, as long as the course of action occurs within three years of the claim (Section 99(2), Consumer Protection Act 1999). Although the award by the Tribunal is final and binding on all parties (Section 116, Consumer Protection Act 1999), a dissatisfied party can still apply to the High Court for a judicial review of the award.

It is also important to note that although the tribunal does not have any authority to issue any warrant to the fraudster for non-compliance of the award, a copy of the award is required by law to be sent by the Secretary of the Tribunal to the

Magistrate's court having jurisdiction in the place in which the award relates or in the place where the award was, and it will be kept in the record of that Court. Hence, in the event of non-compliance after 14 days have passed, the person commits an offence and shall on conviction be liable to a fine not exceeding five thousand ringgit or to imprisonment for a term not exceeding two years or to both (Section 117(1), Consumer Protection Act 1999). If the offence continues, he shall even be liable to an additional fine not exceeding one thousand *ringgit* for each day or part of a day during which the offence continues after conviction (Section 117(2), Consumer Protection Act 1999).

In addition to the above, to ensure the reliability and adequacy of the information provided so that users can avoid fraudsters, the Consumer Protection (Electronic Trade Transactions) Regulations 2012 provides through Regulation 3 that:

- “(1) Any person who operates a business for the purpose of supply of goods or services through a website or in an online marketplace shall disclose on the website where the business is conducted the information specified in the Schedule.
- (2) Any person who contravenes sub regulation (1) commits an offence.
- (3) Any person who discloses or provides any information as specified in the Schedule that he knows or has reason to believe is false or misleading, commits an offence.”

According to the Schedule in the above Regulations, information that must be disclosed are as follows:

1. The name of the person who operates a business for the purpose of supply of goods or services through a website or in an online marketplace, or the name of the business, or the name of the company.
2. The registration number of the business or company, if applicable.
3. The e-mail address and telephone number, or address of the person who operates a business for the purpose of supply of goods or services through a website or in an online marketplace.
4. A description of the main characteristics of the goods or services.
5. The full price of the goods or services including transportation costs, taxes, and any other costs.
6. The method of payment.
7. The terms and conditions.
8. The estimated time of delivery of the goods or services to the buyer.

If the amount of losses incurred due to online fraud is RM5000.00 and below, the victim also has the option of filing a claim at the Small Claims Court which operates within the Magistrate Court. However, a lawyer is not necessary for the claim to be heard.

Since many online frauds are anonymous, victims always find it appealing to discover the identity of the fraudsters and the reasons why they have been targeted as the victims (Button et al., 2015). However, for each claim above, whether initiated *via* a court process or tribunal, the possibility of success of the case can only be guaranteed if the victim knows the identity

and whereabouts of the fraudster against whom the claim is filed.

RECOMMENDATIONS

When goods or services are advertised to be of excellent quality but with extremely low prices, in most cases, it is too good to be true. Online-buyers should always practice “buyer beware” caution (Karo Karo & Sebastian, 2019). Likewise, all online relationships should also be approached with similar caution. Verification of the other party’s authenticity (identity and intent) should be established by making delayed decisions and prolonging the relationship before making major or financial decisions which involve said party. For people who are engaged in a virtual relationship, the refusal of the other party to participate in a live-video meeting can be a possible sign of fraud. If there is cause for suspicion, the above mechanisms should be attempted in the order they were given.

It should always be kept in mind that the evidence of the online communication between the victim and the fraudster is required by the authorities before pursuing any action. The Government faces problems in collecting evidence and tracking fraudsters if no details are provided by the victims (Stringham, 2005). Hence it is very important for anyone conducting any online transaction to ensure that there is a record of such a transaction. For example, if it is conducted *via* WhatsApp, the messages should never be deleted, and a copy of the screenshot of the messages should also be kept in another place other than in the device in which the conversation takes place. This is prudent if the device encounters technical problems or is lost. It is important to remember that the best evidence are documents rather than mere verbal allegations of online fraud.

Social media service providers, for instance, Facebook and Instagram, and online marketplace operators like Lazada and Shopee should also update their internal mechanisms from time to time. For instance, they need to constantly enhance their monitoring system against fraudsters masquerading on their platforms and supply relevant information to the users about possible fraud so that users can always be on their guard. Although it would be disproportionate to demand that they verify the legality of every single piece of information posted by users in their system (Badescu, 2013), those providers with a stable financial capacity, should at least have certain filtering algorithms in place.

For certain types of fraud, for example, love scams and the Macau scam, some victims are traumatized and need to be treated as vulnerable victims (Badescu, 2013). If a love scam occurs on an internet dating website, the provider should also incur some liability (Gray, 2011). Hence for the authorities, in addition to providing enforcement against the fraudsters, a clear support system for the victims should also be in place.

CONCLUSION

Perhaps one of the only silver linings of Covid-19 is the great leap forward in technological use, a key component of a full Malaysia Society 5.0. From the grim beginnings of the Covid-19 spread, people who were not conversant with technology have had no option but to resort to technology to continue with their daily lives, work, and transactions, hence becoming digital immigrants.

Some of the newcomers might have been reluctant at first, but when they saw the benefits where economic advancement could be balanced with the resolution of social distancing, for instance, increased production and cost reduction, it became

too impractical to relinquish it. This has contributed to the increased integration of cyberspace and physical space. Thus, now along with the digital natives, an amplified wave of digital immigrants made their way online.

However, lurking behind this integration are opportunistic fraudsters waiting to manipulate their victims, especially digital immigrants with their lack of savvy. Indeed, potentially more sophisticated online-fraud schemes will be seen in the future, especially as we become more technology integrated as a Malaysian Society 5.0. It is impossible for us to avoid this development as the industrial revolution 4.0 will eventually demand a full 5.0 societal commitment, integrating physical and cyberspace.

While typical, prevention and enforcement will always be relevant when dealing with online fraud. What is important is that the awareness of the public should be made the priority, and perhaps most crucial; all victims should be advised that there is always an avenue for assistance if they need it. The law alone will not have an adequate effect to manage online fraud, hence a combination of all mechanisms is needed (Hache & Ryder, 2011).

As fraudsters formulate more complex social engineering and no-tracking processes, it is not possible to completely eradicate cases of online fraud, but it is possible to reduce the numbers. This, however, can only be achieved if the above prevention and enforcement mechanisms are efficiently executed.

Funding: The research leading to the publication of this chapter is funded by a research grant from Universiti Kebangsaan Malaysia (DPK-2019-002).

Acknowledgment: The contributions by all are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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8

E-Learning and the Importance of Implementation of Policies and Regulations: A Case Study of Multimedia University

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Abstract - Ever since March 11, 2020, when the World Health Organisation (WHO) declared Covid-19 as a pandemic, the whole world has faced a drastic change. The crisis has affected many sectors badly, including the economy, social life, and politics. Many activities were shut down during this pandemic, including educational activities. After more than a year in this pandemic, the Government slowly started to re-open the sectors with strict Standard Operating Procedures (SOPs). Meanwhile, for the educational system, the schools and universities opted to convert their normal face-to-face learning interactions to e-learning or online-learning. While this seems to be the best solution, academics are struggling to ensure that the quality of the education remains the same. Complaints from the

Cite this chapter as:

Sulaiman, N. F. A. R., Ahmad, A., Abu Hassan, N., Amernudin, A. N. I., & Adzmi, P. S. A. M. (2022). E-learning and the importance of implementation of policies and regulations: a case study of Multimedia University. In S. Z. Jamaluddin, O. S. L. Tan, S. Khan & W. M. Su (Eds.), *Malaysian society 5.0: Selected contemporary socio-legal issues* (pp. 221-266). MMU Press.

public started to pour in, criticising the poor management of education systems during e-learning. The objectives of this chapter are to explore the challenges faced by educators in conducting online-learning and to find the solution by proposing a framework for policy implementations for e-learning in the Malaysian education system. Quantitative and qualitative research methods are adopted in preparing this chapter. The results from the respondents' responses are analysed to put forward recommendations for improvement to the e-learning experience.

INTRODUCTION

What is e-learning? Defining what e-learning is not as easy as it might first appear (Tamm, 2019). In November 1999, Elliott Masie coined the word “eLearning” at his TechLearn Conference at Disneyworld. It was the first time that the term was used in a professional context. During the time, others referred to this mode as online-learning. There are many definitions of e-learning; “e-learning is defined as instruction delivered on a digital device (such as a desktop computer, laptop computer, tablet or smartphone) that is intended to support learning” (Clark & Meyer, 2016). In the Cambridge Dictionary, e-learning is defined as learning done by studying at home using computers and courses provided by the internet. The general conclusion is, in the 21st century, e-learning is part of the new dynamic of educational systems that result from the merge of different disciplines, such as computer science, communication technology, and pedagogy. (Sangrà et al., 2012).

In Malaysia, higher education institutions began implementing e-learning in the late 1990s (Hussin et al., 2009). Although the development of e-learning in Malaysia started during the pre-e-learning era when the Education Technology Division was set up by the Ministry of Education in 1972

(Asirvatham et al., 2005), much needed to be done since the technology was very new and literacy was still improving in many developing countries. However, the acceptance of the

technology was rapid, hence, the acceptance of e-learning in universities started to develop, especially for distance learning programmes. With e-learning, researchers suggested that the costs of infrastructure and network facilities would be much lower in comparison to the millions of ringgit required to build a physical campus. The learners would now be able to access the campus from their home without much travelling and being away from their families. This not only reduced costs but learning time too (Goi & Ng, 2009). As such, many universities in Malaysia have started to develop their own web-technology system to accommodate service-learning.

E-learning is not new in universities. Previously, it was the method used for specific programmes. Open University Malaysia (OUM) for example, was one of the earliest e-learning institutions since it started operation in 2001.

E-learning was tested when the unexpected Covid-19 pandemic was detected in late 2019. The outbreak of the pandemic has contributed to the increase of e-learning in higher learning and secondary schools. As Professor Dr. Abdul Karim Alias, Director of Centre for Development of Academic Excellence (CDAE) from *Universiti Sains Malaysia* (USM) emphasised, “Online-learning and online education are no longer an option – it’s a must.” The full implementation of home-based learning for schools was announced in November 2020, when the Ministry of Education decided to temporarily close all schools to prevent the spread of Covid-19. Meanwhile, according to the Ministry of Higher Education, most universities adopted the e-learning system earlier than that.

When the first MCO (Movement Control Order) was implemented in March 2020, the Multimedia University (MMU) decided to shift its mode of study to full based e-learning. While other universities were still struggling to continue with their usual mode of study, MMU converted fully to an e-learning system in order to ensure that the learning process was not affected by the MCO. The university continued with e-learning and then changed it to hybrid e-learning (a combination of e-learning and physical learning) when the situation was improving. Nevertheless, when the pandemic took a turn for the worse, MMU reverted to e-learning fully.

The pandemic not only changed the mode of study fully to online-learning but the mode of assessment, including all examinations, were also conducted in the same mode. This had led to restless complaints and feedbacks. Academics were concerned with the quality and fulfilment of the courses' learning outcomes, while the students, on the other hand, were facing challenges like poor internet connection and less personal interaction, making the learning seem draggy and impossible at times. Meetings and discussions were held in order to ensure guidelines and procedures for e-learning classes, assessments, and examinations to be properly recorded and conducted.

This chapter aims to look at how e-learning has affected MMU's students from the Faculty of Law. The discussion will also include the mode of assessment, as the mode of study for the university during the MCO (at the time when the chapter is written) is e-learning in its entirety. The research methods adopted in preparing this research are qualitative and quantitative. A survey was conducted of the law students from MMU. The findings will show their responses towards e-learning and the assessment. Their responses are analysed herein. At the end of this discussion, the authors hope to

propose policies and regulations that will benefit both students and the academics in embracing e-learning as the new norm in the future.

LITERATURE REVIEW

E-learning and the Covid-19 Pandemic

The deadly and infectious disease, Covid-19, has vehemently increased the need for social distancing, thus negatively impacting long-term viability of physical learning and learning opportunity at the educational organisations. School closures negatively impacted children's health, education, and development, due to the inability to complete their studies and access essential services such as nutrition and welfare (WHO, 2020). Such measures are affecting over 1.2 billion children globally (Li & Lalani, 2020). It means that physical face-to-face teaching will have to be discontinued and there is an urgent need to identify the other options to deal with such challenges (Dhawan, 2020). Undeniably, school closure will put pressure on education policy makers and academics to find alternatives for face-to-face interactions, until effective vaccines for this infectious disease become available (OECD, 2020). This scenario calls for planning by academic institutions to protect and assist the students and their studies.

Due to the unexpected wake of Covid-19, the situation has forced educators worldwide to shift from the traditional method of physical face-to-face interaction to e-learning overnight (Dhawan, 2020). One of the main reasons for the decision-makers to turn to e-learning is its flexibility and easy connectivity-thus maintaining social distancing and reducing the risk of Covid-19 spreading within educational organisations. E-learning can be done anywhere and anytime without any physical face-to-face interaction (Satheesh, 2021).

This method can now be considered the “holy grail” in upholding the right to education despite the current situation and has been implemented worldwide, including in Malaysia. One of the best examples within Malaysia has been the new educational channels such as TV Okey and EduwebTV, which aim to deliver educational programmes to all Malaysian students, especially those without internet access (The World Bank, 2020). Another good example is ‘Digital Educational Learning Initiative Malaysia’ or DELIMa, which offers digital learning where the technologies and resources are available for both teachers and students within the Malaysian school system (BOTS Team, 2020).

Challenges Faced by Students and Academics

The COVID-19 pandemic has changed the activities landscape of people worldwide caused by the limitation of movement and the shutdown of many physical activities, which has also affected the education sectors. Almost all industry players in the education field are left with no choice but to migrate to online-learning. We agree that e-learning was not a novel phenomenon. However, the rapid changes into e-learning somehow have left a substantial impact and challenges for educational activities globally.

A study by Adedoyin and Soykan (2020) points out several key challenges that happened during the period of the COVID-19. Priorities are related to technological infrastructure and digital competence, followed by socio-economic factors (for example education inequality), where we can see that not everyone is computer-accessible due to financial difficulties. Next is assessment and supervision, heavy workload, and compatibility (some subjects such as sports sciences require physical interactions) due to lack of physical invisibility and interaction. Also, a survey by Alsoud and Harasis (2021),

conducted on 463 students from Jordanian universities, shows that during the lockdown, students were suffering from mental health illness such as anxieties. This was due to not having devices in order to attend the online classes, not having a proper place to study at home and issues on connectivity to the internet.

(a) Digital Competence

The success of e-learning depends on the availability of technological devices, digital online teaching platforms, and the internet. The ability to use the devices varies depending on the experience of the individual. Familiarity with technology is the most crucial challenge faced by students and academics in regard to e-learning, especially if they are not digitally competent, inexperienced, or insufficiently trained to handle technology. The demographic of an individual, such as their age, level of exposure to technology, and their learning environment, will contribute to the level of competency they have when participating in online-learning.

Jalli (2020) argues that students from Southeast Asia, especially those from poor countries, face great challenges due to the lack of internet access. For example, in Cambodia, especially in rural areas, teachers and students were very much limited in using and relying on internet access, making e-learning fail to practise.

(b) Socio-Economic Factors

The replacement of physical classrooms with online-learning creates the possibility of vulnerable students falling behind in their studies due to their socio-economic status. Kimkong and Koemhong (2020) state that students from low socio-economic family groups will be unable to follow

the online-learning process due to being unable to afford internet access and technology devices such as tablets, laptops, and computers to support their online classes. Thus, for solutions, they turn to smartphones to continue accessing lessons and learning materials, completing assignments and taking exams (Chea et al., 2020).

(c) Assessment and Supervision

As part of an outcome-based learning process, assessments and supervision play vital roles in evaluating a student's performance and understanding. However, Adedoyin and Soykan (2020) argue that due to the implementation of online-learning, assessment methods have been converted into online-based ones which are more complicated. Teachers will have limited control over their students' activities and work and the lack of face-to-face supervision results in an inability for the teachers to regulate cheating and to ensure the students complete assessments by themselves.

(d) Heavy Workload

A sudden shift from the conventional teaching method to the online-learning method has caused an unexpected increase in workload for educators. Among the new workload requirements are the need to prepare online teaching materials, to familiarise themselves with and later to build e-learning platforms, attend trainings, and integrate new external applications into their existing systems in a timely manner, just to name a few (Adedoyin & Soykan, 2020; Heng & Sol, 2020). Academics and teachers who are involved with the conversion of course content and determine how the new courses suit the e-learning approach are pressured by the extra workload, which causes stress and anxiety (MacIntyre et al., 2020; Winthrop, 2020).

(e) Compatibility

As Adedoyin and Soykan (2020) note, the compatibility issue is another considerable challenge linked to online-learning. They were of the view that due to the varieties of educational disciplines available today, not all of them are suited to online-learning systems. Some disciplines need hands-on sessions with students, especially for vocational disciplines. Other disciplines, such as sports, engineering, and medical studies, share similar challenges due to the fact that the nature of learning in these fields requires hands-on experience as part of their instructional activities (Adedoyin & Soykan, 2020).

(f) Anxiety Level

A study of challenges faced by Malaysian university students was conducted during the pandemic and the results show that 25.9% of the students surveyed mentioned that feeling anxious was one of their main challenges (Sundarasan et al., 2020). From the sample, 6.6% experienced a severe level of anxiety while 20.4% experienced a minimal to moderate level of anxiety. It was followed by 2.8% who experienced the most extreme level of anxiety. These numbers are very concerning, considering that they are experiencing this at a very delicate age and have an effect on their psychological state. The factors were distributed among others; genders, age, academic specialisation and living conditions. The study suggested that loneliness appears to have a detrimental effect on student's education and performance.

How E-learning Affects Students Mentally, Physically, and Economically

(a) Performance during Assessment & Mode of Assessment

The worry that a lack of contact and consultation hours with the academics during e-learning the students' performance is likely to drop as they will find it challenging to understand difficult topics (Sintema, 2020). A study by Hossain et al. (2021) found that more than 82 % of students were suffering from fear of exams due to the infrastructural barriers, particularly in regard to technological challenges and the transition to open book exams.

Nevertheless, when comparing students' performance before and during the COVID-19 pandemic, it is found that there were no substantial differences. The students performed equally well during the affected semester and earned higher grades than students in the previous semester (Engelhart et al., 2021). However, due to the COVID-19 pandemic, several main exams were deferred, such as the entrance exams, state or university level exams and recruitment exams (Pokhrel & Chhetri, 2021).

Pokhrel and Chhetri (2021) draw attention to students' assignments and examinations which are carried out at home. It is difficult for lecturers to mark or grade actual learning and distinguish its authenticity. Furthermore, lecturers are not able to determine if the parents have guided and provided support for their children during the learning process. Craig O (2021), discovered how the online-learning experience has affected international students studying in Russia at the St. Petersburg University during the COVID-19 pandemic. One student shared that their Russian language examination was conducted in writing, with the camera switched on throughout the whole

examination. However, another student highlighted that during their online examinations, there were disruptions due to the internet connection and the hardware used.

(i) Mental Health

Lisa (2020) and Cao (2020) highlighted the concerns of students in China during the COVID-19 pandemic not only economically and changes in day-to-day life but also the potential deferment in studies for students and their higher level of anxiety. It was also found that for some students; the pandemic required them to think about necessities for family care and not their studies despite facing huge challenges to study online (Aboagye, Yawson and Appiah, 2021). Suliman et al. (2021) found that students experience helplessness and burnouts. The constant pressure of completion of assignments induced extreme stress on the students, causing them to feel that they were not learning anything or acquiring any knowledge (Nambiar, 2020). A study on fear of academic delay (FAD) found that Bangladeshi university students have been suffering from significant psychological stress symptoms with the onset of FAD during the COVID-19 pandemic (Hossain et al., 2021).

One other key factor which hinders the implementation of e-learning is that some students are accustomed to the conventional approach of learning (Aboagye et al., 2021). Students who have a fixed mentality will not be able to adapt (Pokhrel & Chhetri, 2021) and, as a consequence, the implementation of e-learning may fail. Steinmayr and Spinath (2009) identified that the lack of motivation from the students will affect their learning. Thus, if the students are not prepared and willing to acclimatise to studying online, they will be uninterested to learn (Aboagye et al., 2021). However, Tang et al. (2021) suggested that students

at the tertiary level have higher academic expectations of their achievement and were significantly more inclined to learn online as compared to pre-tertiary level. Furthermore, students who are inherently motivated are not affected as they require minimum supervision and support, while students who are academically weak will be vulnerable (Pokhrel & Chhetri, 2021).

(ii) Social

Classroom and campus setting raises social skills and awareness. In a study conducted by Craig O (2021), a lack of physical interaction is one of the factors that affects students the most during lockdown. When asked about studying from home, students highlighted that interaction with people, making friendships and building networks are lost. With online classes, students spend additional time on virtual platforms and thus expose students to potentially harmful content, making them vulnerable to online exploitation and a higher risk of cyberbullying (Pokhrel & Chhetri, 2021). Online-learning clearly has several potentially negative social and psychological effects on students' lives.

(iii) Economical & Infrastructure – Digital Divide

As internet connectivity and access to portable devices to navigate the internet are key elements in e-learning (Muilenberg & Berge's, 2005), the pandemic has created a persistence of the digital divide. Students who are financially constrained are unable to access the internet with sufficient bandwidth and afford online-learning devices such as laptops or smartphones (Pokhrel & Chhetri, 2021). Thus, students who are poor will be at a disadvantage as face-to-face online classes consume a large amount of data and it will be an extra financial burden to increase a

household's internet quota (Amir et al., 2020). Nworie (2021) stated that students from disadvantaged backgrounds who do not have adequate technology, such as internet connections and bandwidth, are marginalised from the prospects of education.

Inadequate devices, accessibility, and affordability for online-learning makes the e-learning process more difficult for some students (The Star, 2020). Among the challenges for students in rural areas are a low internet bandwidth, fewer access points, and expensive data packages (Berita Harian, 2020; The Star, 2020; Selvanathan, Mohamed Hussin & Nor Azazi, 2020). Other factors that have affected students' studies are difficulties participating in their lectures, a lack of communication with friends, and access to the campus facilities (Lee S, 2020; Selvanathan, Mohamed Hussin & Nor Azazi, 2020).

METHODOLOGY

For this research, the authors adopted survey and short-answer methods. The surveys were answered by 104 law students from foundation to final year level at Multimedia University. The survey was conducted from 23rd June 2021 to 1st July 2021, a total of 10 days. A Google link was shared with the students for them to answer the survey. A low number of respondents were expected as the students were not physically in the campus. In the survey, short questions were given, allowing the students to elaborate their answers and raise their opinions. Research suggests that the habitual "any other comments" general open question at the end of structured questionnaires has the potential to increase response rates, allows for elaborate responses to closed questions, and allows respondents to identify new issues not captured in the closed questions (O' Cathain & Thomas, 2004). The authors believed that these

methods are wise since both methods are complimentary in strengths and will generate in-depth understanding and outcomes (Goodwin & Goodwin, 1996). Discussions from the legal perspectives were also made in between the findings in order to seek ways to resolve the challenges faced by the students in e-learning. Hence, a mix of legal research methodologies is used by discussing and observing any existing policy and regulations from reliable authorities. The discussion is important to identify the best method to solve the shortcomings faced. The study is helpful in formulating policies, nevertheless, a more structured policy is best dealt with by the policy makers (Etzioni & Amitai, 2008). The data from the survey is analysed and shared in the findings therein.

RESULTS AND FINDINGS

The survey was conducted through a Google online questionnaire shared through a Google link to the respondents at the Faculty of Law, MMU, Melaka Campus. The survey was answered by a total of 104 respondents aged between 17 to 22 when the survey was conducted. In this regard, we analysed the students' perception regarding online-learning, their capacity to assimilate the information given during online-learning, and the use of e-learning platforms. The survey started with enquiring the background of the respondents such as their gender, age, level of their study and location of online learning during the pandemic. The discussion of the findings is divided into four phases; Phase 1, is the basic information of the respondents. Phase 2 is the online-learning platform used by the respondents during the lockdown and followed by Phase 3; the challenges and factors faced in their e-learning during the lockdown, and finally Phase 4; the respondents' views on improving e-learning at their location of study.

Phase 1: Background of Respondents

Figure 8.1

Respondents' Current Years of Studying

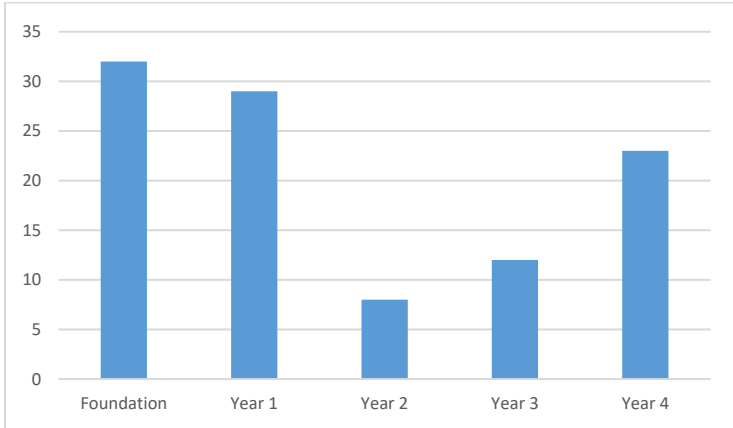
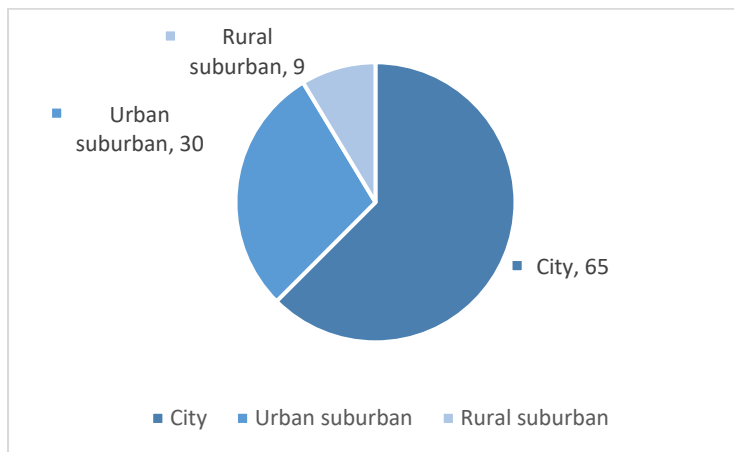


Figure 8.1 shows the respondents' year of study at the faculty during the lockdown. Out of the total number, 32 respondents are in the Foundation in Law programme, 29 are in the First Year, 8 are in the Second Year, 12 are in the Third Year and 23 are in their Final Year.

Figure 8.2

Respondents' Current Residence



Meanwhile, Figure 8.2 shows that the majority of the respondents resided in the city i.e., 65 respondents, followed by a total of 30 respondents from urban suburban residences and another 9 are from a rural suburban area.

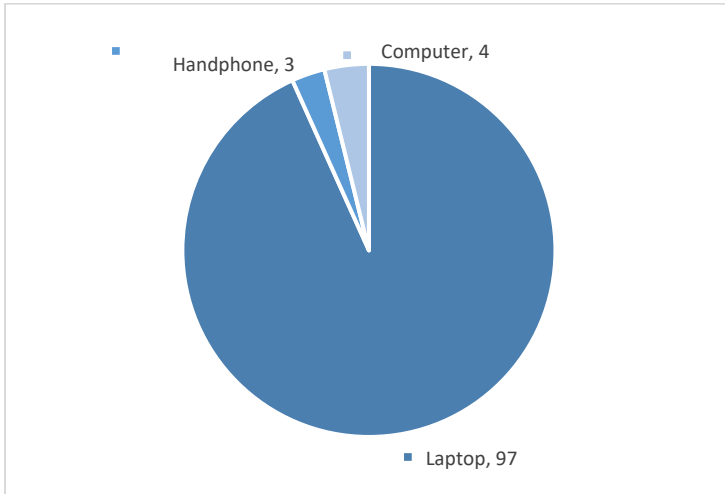
Summary from Phase 1 Findings

In Phase 1 of the survey, it is found that most respondents commenced their online learning from home and resided in cities where they have easy access to the internet.

Phase 2: E-learning and Teaching Platforms

Figure 8.3

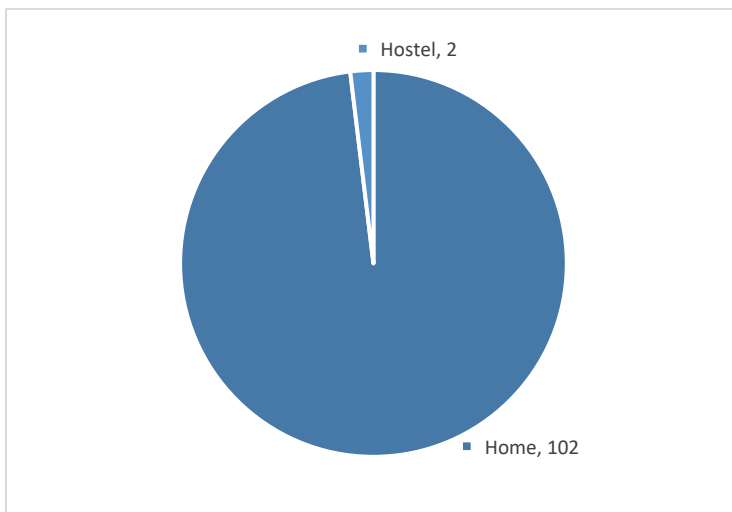
Types of Gadgets Used by Respondents' in Accessing their E-learning



From the Figure 8.3, it can be summed up that 97 respondents use laptops in their e-learning. Meanwhile, 4 respondents use computers while another 3 are using handphones.

Figure 8.4

Respondents' Location in Assessing their E-learning



The above Figure 8.4 indicates that only 2 respondents do their e-learning from the MMU hostel and the balance 102 respondents' study from home.

Figure 8.5

Response on Platform Normally used by the Academician for E-learning

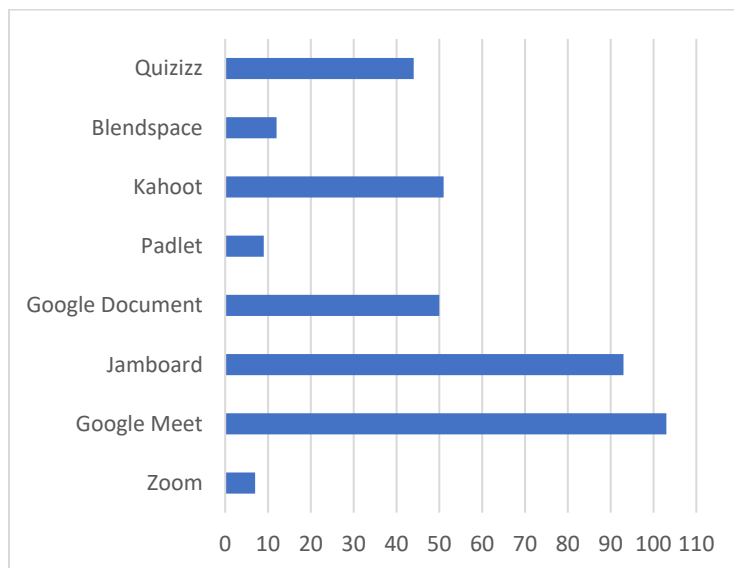


Figure 8.5 shows the responses regarding the platforms that are normally used by academicians at MMU for e-learning during lock down. The respondents may pick more than one option that is given in the table. The responses show that the most famous platform that is usually being used is Google Meet and followed by Google Classroom. Possibly this is due to the access given by the University where every other community in the University is using the university's main address, which makes it easier for sharing links. Respondents also show that academicians used some apps to interact with their students, and the most famous would be Kahoot, followed by Quizizz, Blendspace and Padlet.

Summary from Phase 2 Findings

Findings in Phase 2 involved the e-learning and teaching platforms used by lecturers in teaching their courses to the respondents. It is found that majority of the respondents are using three different types of gadgets in accessing their studies from home. For instance, laptops and computers, but some respondents are using mobile phones.

Meanwhile, lecturers use Google Meet and Google Classroom to teach their students, as these are the official online-teaching platforms of MMU. The rest of the platforms (Jamboard, Blendspace, Quizizz, Padlet, Kahoot and Zoom) are probably utilised for other means of e-learning, like tests, assignments, and projects.

Phase 3: Challenges and Factors Affecting E-learning**Table 8.1***Students' Responses on Challenges Faced During E-learning*

	Never	Often	Occasionally	Always
Poor internet connection	12	56	35	1
Academician lack of technical skills	38	23	42	1
Lack of interaction with the academician	28	32	37	7
Learning tools are not suitable to the courses	60	17	25	2
Lack of motivation to study	28	21	41	14
Learning environment is not conducive	38	25	33	8
Difficulty in getting responses when having issues	31	33	33	7
Lack of engagement with coursemates	34	26	32	12
Difficulty in completing assignments due to lack of facilities	52	24	23	5
Unable to find interest to study during e-learning	39	23	28	14

The above table shows the various challenges that occurred during E-learning. The respondents must rate their answers on a scale from 'Never' to 'Always'. A rating scale usually defines the graduations out of a continuum, such as agreement, intensity, frequency, or satisfaction (Menold et al., 2018). Meanwhile, the selection of questions was based on studies and research regarding the 10 major challenges faced by students

during E-learning. From the figure above, the challenges faced with an “Always” rating can be summarised as follows: -

1. Lack of motivation to study and unable to find interest to study.
2. Lack of engagement with the course mates.
3. Learning environment is not conducive.
4. Lack of interaction with the academician and difficulty to have a response when having issues.
5. Difficulty in completing assignments due to lack of facilities.
6. Learning tools are not suitable for the courses.
7. Academics lack technical skills and poor internet connection.

The survey also showed that issues on internet connection and academicians lacking technical skills are not the major challenge during e-learning. It is good to note that most of the respondents have no problem accessing the internet, showing that the internet connection in one area is reliable. Further, from the survey, it has been proven that the academicians have adopted the new skills and almost no issue in dealing with e-learning. It is also good to note that the University has provided a thorough training and skills for the academicians in order to prepare them for a new environment in teaching.

Figure 8.6

The Excitement of Students in Attending E-learning Classes

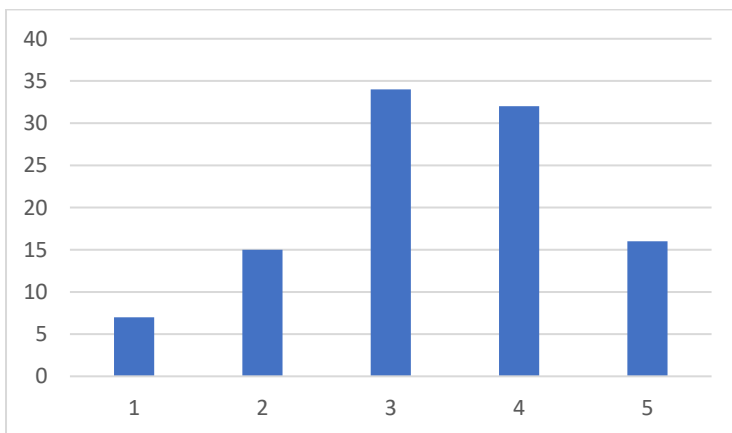


Figure 8.6 shows the respondents' responses in answering the questions on their excitement in attending the e-learning classes. The response is selected from a scale of 1 (not at all) to 5 (very excited). The table shows that from 104 responses, only 22 respondents had a lack of excitement in attending e-learning classes.

If we were to cross-refer Table 8.6 and Table 8.7, we can see that the major challenges from the respondents during e-learning is lack of motivation to study and inability to find interest to study which leads to lack of excitement to attend the e-learning classes.

Figure 8.7

The Responses from Students on Participating in E-learning Classes

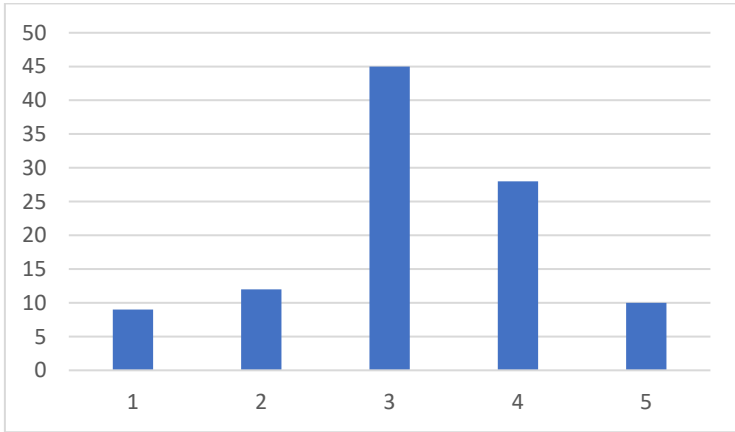


Figure 8.7 shows the respondents' responses in participating in e-learning classes. The response is selected from a scale of 1 (not at all) to 5 (very eager). Again, looking at the table, majority of the respondents have no issue in participating in e-learning classes.

A brief comparison can be made to Table 8.6 whereby, challenges that fall at first place are lack of motivation to study and inability to find interest to study, which leads to lack of excitement to attend the e-learning classes. In other words, the challenge is individual participation rather than technicalities or academicians' issues.

Summary from Phase 3 Findings

Phase 3 deals with the respondent's experience with e-learning during the pandemic. Based on the responses, it can be stated that poor internet connection is no longer the main challenge

for e-learning. While students are able to overcome internet connection issues, the main obstacles for the students were the inability and lack of interest to study via e-learning. Lin et al. (2017) found that participants' extrinsic and intrinsic motivation was lower in online education compared to face-to-face education due to the lack of interaction with peers and teachers.

Phase 4: Short Answers

In phase 4, the respondents were given seven short-answer questions in which the respondents were able to explain and elaborate their answers. From these questions, two questions will be discussed as findings herein. The first question was 'what contributes to the failure of e-learning?' and the second, 'can the e-learning courses be improved?'. For the first question, twenty top answers were selected as follows: -

“Mostly internet connection which brings lack of interaction and loss of focus”, (Respondent 1, 2021)

“Internet Connection as well as lack of interaction. I believe that sources like books etc is not the main issue as there are tons through the online library but getting the main interaction with lecturers n friends physically is the key to a stable and yet fruitful outcome. That’s what I believed. Because your lecturers help you to keep in check of whether you are wrong or right. Your friends keep your motivation level stable. So, with lacking of that I believed that is one of the things that can be considered as the cons for e-learning”, (Respondent 8,2021)

“The lack of engagement and spontaneity in class”, (Respondent 9, 2021)

“Poor discipline”, (Respondent 14, 2021)

“Can’t concentrate at all and my place has no internet connection. Using hotspot and waste money on phone bills,” (Respondent 15, 2021)

“Lack of communication, inadequate supply of materials”, (Respondent 16, 2021)

“No communication between the lecturer and student”, (Respondent 17, 2021)

“No interest in studying”, (Respondent 21,2021)

“Lack of communication,” (Respondent 22, 2021)

“Lack of interaction between the lecturers and students,” (Respondent 25, 2021)

“Lack of interactions,” (Respondent 26, 2021)

“Lack of motivation, distraction and pressure from family members”, (Respondent 27, 2021)

“Lack of interaction”, (Respondent 35, 2021)

“Lack of understanding between the lecturers and students”, (Respondent 37, 2021)

“Lack of focus to study”, (Respondent 39, 2021)

E-learning and the Implementation of Policies and Regulations

“Lack of direct communication or face-to-face interaction with the educator as well as friends as well as the usual internet connection difficulties that some might face”, (Respondent 43, 2021)

“No motivation”, (Respondent 48, 2021)

“Lack of discussion amongst course mates”, (Respondent 51, 2021)

“Difficult to communicate with course mates or lecturers,” (Respondent 54, 2021)

“There are no direct communications between the course mates and also the lecturer,” (Respondent 57, 2021)

Meanwhile, for the second findings, fifteen top answers that can be discussed herein are as follows: -

“It can be improved by reducing non-online friendly assignments and increase work on online accessible mode,” (Respondent 1, 2021)

“By having more interaction with the lecturers and fellow course mates”, (Respondent 14, 2021)

“We are not able to communicate to lecturer directly and it takes longer time for lecturer to reply us,” (Respondent 16, 2021)

“Compact deadlines,” (Respondent 22, 2021)

“More interactive activities”, (Respondent 25, 2021)

“Educational institutions can update their teaching material to suit the new questions that come with e-learning”, (Respondent 38, 2021)

“I believe that lecturers should allow students to only ask questions during the Questions and Answers session or after class as it would drag the lesson, and that the class would not be able to complete on what has been stated in the teaching plan,” (Respondent 40, 2021)

“Over the time, both educators as well as students will be more adaptable to the e-learning mechanism hence, providing a more improved e-learning environment for everyone,” (Respondent 43, 2021)

“I am not sure how it can be improved. But I am sure that online-learning should be just 10% or maximum 15% of the learning mode. However, due to pandemic it is not possible though”, (Respondent 48, 2021)

“Participations during tutorial classes can be very low at times, perhaps conducting fun activities such as quizzes would be beneficial,” (Respondent 68, 2021)

“Maybe the university or lecturer could make it a compulsory for the students to consult their lecturer at least once in their semester,” (Respondent 75, 2021)

“Mode of assessments should be reconsidered”, (Respondent 85, 2021)

“In my opinion, having more weekly research and presentations during the tutorials would be beneficial and effective. These weekly assignments should also assess. Moreover, I would consider having more individual assessments.” (Respondent 87, 2021)

“Perhaps more interactive sessions and smaller group to make it more effective. To capture interest perhaps pop quiz to break out the fizzle and mental block and then colourful slides or just simple words to engage attention of the students,” (Respondent 90, 2021)

“By encouraging open camera,” (Respondent 93, 2021)

Summary from Phase 4 Findings

The responses from students can be summarised into a few points. Firstly, the respondents understand the need for the sudden change to e-learning as the new norm during the pandemic. Secondly, respondents agreed to adapt from face-to-face learning mode to e-learning in order to continue their studies. Thirdly, the main challenge that they face during e-learning courses is a lack of motivation to study due to a lack of interaction not just from the academics but also from their course mates.

Most of the respondents did not feel that their lecturers lacked technical skills. During the second question of phase 4, a majority of the respondents suggested that more interaction should be allowed between them with the academician for them to have a better understanding of their studies during e-learning.

DISCUSSION AND RECOMMENDATION

The results of the research revealed that the Faculty of Law at Multimedia University was not entirely prepared for exclusive online-learning. Thus, the advantages of online-learning identified in the study of law seem to diminish in value, while the disadvantages become more prominent.

The pursuit of e-learning during the pandemic was fortuitous, as it offered an option for students and academics who desired a continuous, flexible, and continuous learning. An array of e-platforms and mediums were utilised and were made available for modern teaching and learning. These tools have led to an increase in the number of universities offering online courses and degrees since the early millennium. Nevertheless, with the proliferation of e-learning in higher education, it was important to have an in-depth discussion to tackle the challenges which are associated with the mode of delivery for both the academics and students. Since the drastic beginning of the implementation of e-learning due to the pandemic, some concerns were raised, such as technical issues, followed by issues on the quality of teaching (academics' lack of technical skills and that their teaching style is not adapted for the online environment), educational materials and resources, cheating during online examination, a lack of interaction between student peers, and poor interaction between students and academicians, among others.

The comments by the respondents indicate that online classes had made them less likely to participate in collaborative learning activities, have a lack of discussions with their colleagues and students–academics interactions, compared to their counterparts who had to face-to-face interactions. Hence, communication, interpersonal and practical skills among students, along with training and support to effectively use

online technologies and address technical issues, are seen as major challenges for online education. Below is the discussion on the issues identified and recommendations to tackle the concerns raised.

Tighten Policy on Plagiarism and Online Cheating

Plagiarism and cheating in education are not something new and have been more prevalent during the pandemic when the study has to be conducted online. This issue has been a matter that has been scrutinised even before the pandemic, where the academic integrity itself is at risk; both the educators and students. For example, most universities in Malaysia including MMU, has a strict policy on no plagiarism and cheating during examination, however, this issue is noticeable upon marking that many exam scripts were plagiarised which the student can be subjected and charged for the offence of cheating. A habit of cutting and pasting from the internet, websites, online articles, or references is not something new, and it has been done in an assignment and academic presentation and the action seems to be easier to be committed at this pandemic period where nobody is monitoring closely due to the fact that many exam scripts needed to be marked. Nobody would have such a luxurious time to check on plagiarism on hundreds of scripts with stringent of time to mark. Students are taking their studies into their hands by taking a shortcut so long as the dateline is met, or the answer can be copied from online materials. With the current and advanced technology, the students becoming lazy and free software available online made their life easier. According to Ryan (1988), “the laziness that prompts students to cheat can also prompt them to do a terrible job with their plagiarism”. As a result, the assignment and the exam scripts will appear to make no sense because the words and sentences are spliced together from many kinds of sources. This situation is quite alarming when many students

have neglected their academic performance and at the same time, the university's aim to produce graduates with ethical intellectuals is glitched.

It is such an unfortunate situation when we have some of the students who manipulate and take advantage of the online education system and they are still escaping liabilities and are irresponsible. It is admitted that it is not easy to eliminate the students from continuously committing online plagiarism and cheating despite the policy which has been made clear to them on its consequences, therefore it is of the view that there must be a concerted effort between faculties and the administration is important to ensure these heinous actions can be totally discarded and rebuilding the academic integrity and quality of the education. As educators, it is also a responsibility to inform them that references can be made to the internet, online references etc. but there should be a limitation and teach or show them of conducting ethical research and citing references in internet sources for their assignments. The administration unit, on the other hand, plays its part in making sure that the policy on plagiarism and cheating is complied with, such as having a constant reminder in the library, resources rooms, computers and student handbooks. In the University, cheating and plagiarism are treated as serious offences. Warning to the students were always reminded by posting and sharing the warning together with the sanctions on every online platform. This is to ensure that the student is aware of the policy.

Unfortunately, the conduct of cheating is still unavoidable in any higher education. While it is difficult to control the offence, we believe that this can be lessened if there is full cooperation between the faculty and the administration. While the Faculty is responsible for informing the students (verbally and written in the course syllabi) on the offence, it is also useful to inform students that the internet can (and will) be used to

check on plagiarism by conducting ethical searches. Meanwhile, the administration must start drafting a policy on plagiarism and cheating to make it apparent in the catalogue, student handbook, and during orientation weeks. 'It takes two to tango'. Thus, the administration unit and the faculties must be willing to support each other in order to send a clear message that the offence will no longer be entertained.

Optimising Academics' Online Teaching Adaptation

Another issue that is pertinent to be addressed here would be the methods of online teaching. The total switch on the mode of online teaching and learning platforms had affected both educators and students. Lack of studying interest and motivation was quite overwhelming among the students. Difficulties in understanding the subject matter were quite apparent despite online academic consultation, but the online avenue has proven to be insufficient. Sometimes the educators were unable to cater their time wholeheartedly or unavailable, hence contributing to the feelings of isolation among the students and less communication with their classmates. This issue can be considered a contribution that affected the students' learning process when the students' feedback is being ignored, delayed when the educators are not always available for them when needed. Perhaps one way to resolve the issue can be done by changing or altering teaching methodologies for a better understanding of the subject taught. However, not all educators are familiar or experienced in handling online teaching as a new method, but lack of e-learning and teaching tools, experience and understanding will be a hurdle to both parties in adjusting themselves to the new style of teaching and learning. It does not take just one day to adapt to the new online education system and tools. Although universities had taken steps in having workshops and sessions on e-education tools even before the pandemic, mostly we are not ready for a fully

online education experience. Therefore, it is suggested for a good policy and governance on e-learning and teaching to be properly drafted before implementing them so that it can overcome any obstacles or problems much earlier. However, with the current pandemic situation, it was evident that most universities were able to cope with minimal issues and there is still some room for improvement.

Students Centred Approach

It has been a traditional way of how the education system in Malaysia was moulded, i.e., academic- centred, that made it difficult for students to accept when a student-centred approach was introduced. A student-centred approach includes students in planning, implementation, and assessments. The educators are part of the cycle as being one of the members in the discussion, but more work on the students, which can be a good thing. The students will lead the discussion rather than take a directive from the educator. This approach is appropriate and better to be implemented as it can produce better quality and intellectual graduates, but students are still hesitant to accept such an approach as it may reduce their enthusiasm for their studies. They felt too much pressure as more burden for them due to the massive number of tasks they were expected to do, as well as less productivity and delay. This approach is reflected in students' perceptions in the online educational evaluation process, with the overall score scale indicating modest results: an average level of satisfaction. The overall findings in this regard were that students have a negative perspective toward online learning. Hence, in this regard, the academic-centred is very much significant and opted by the students rather than the student-centred approach. Hence, when the student-centric approach was tried to be implemented in online education, it faced was difficulties as the adaptation

issue faced by students who were used to the traditional approach.

Institutional Support

Institutions can play a role to ensure that there are no inadequacies in the technology infrastructure to support students' needs in terms of funding and investment in essential technologies for e-learning (Nworie, 2021). Before adopting e-learning, universities should also consider the business environment, technology, content, training procedure, culture, human resources, and financial considerations (Aboagye et al., 2021). A structured orientation to e-learning will also greatly help to prepare those who lack technical knowledge or experience, self-discipline, and time management skills for the new learning ecosystem (Nworie, 2021).

The Future of E-Learning in the Malaysian Educational System

Minister of Health, *Yang Berhormat* Khairy Jamaluddin has announced on 1 September 2021 that Covid-19 will be considered endemic and the country will move away from a total-containment approach. He said that it was time for Malaysians to accept the fact that Covid-19 would be part of normal life, and thus we should learn to live with the virus to the best of our ability (Hariz Mohd, 2021). For a start, *Universiti Kebangsaan Malaysia* (UKM) has announced that they will allow at least 50 to 75% of its students to return to campus and continue their studies in physical classes for the new academic year. Does this mean that education will revert to traditional face-to-face teaching systems?

E-learning has been in the educational system for decades but has only played a major role in the past two years when the

pandemic struck. Many Malaysians have changed their view of online learning as a result of their experience during lockdown and this has continued throughout the recovery period. They see that they can perform a lot of the tasks they would in a physical classroom, without the distractions and inconveniences (Stocker, 2021). E-learning has been part of the “new norm”. For the past two years, students and academicians have learned to adapt to their new environment, and the mindset regarding e-learning has changed. There is evidence that e-learning may be more effective in some ways. Could this mean that e-learning will be the preferred mode of choice for education in the Malaysian education system?

The answer is not entirely. There is room for improvement regarding online-learning. Physical classes still play a critical role in moulding and training students, especially in courses that need physical attention from their academics. Students need social contact to develop personal skills and that cannot be done by hiding behind a computer screen. However, e-learning can no longer be rejected, it must stay. Thus, the new challenge is to combine traditional and online learning to complement each other in the education system.

Courses and syllabuses need to be engineered to both modes to equip the students with their education using various teaching approaches. Educational institutions must redesign the curriculum to incorporate e-learning into existing courses. Academicians must be trained to be tech-savvy in order to thrive in the new norm. They have to be creative in teaching and creating a comfortable learning environment to achieve the objective of learning, which is to ensure that students are equipped with a good foundation in their career path. Whether by e-learning or physical classes, the objective must be achieved.

Access to information these days is fundamental, thus, institutions must invest in improving IT facilities to facilitate this. The government must be quick in finding solutions to provide better internet connections, access to gadgets and IT tools and the cyber security system.

The pandemic has taught us a lot. Corporations, both large and small, are all evolving to suit the technology evolution. Even a conventional system, like the judicial system, has started to approve virtual appearances. Similarly, e-learning will stay to equip students in this new norm. E-learning has in many ways helped mitigate issues like time, safety, costs, and fees. All that is needed now are adjustments so that it can be complementary to physical learning.

The main activities of Society 5.0 are focusing on modification of technological resources and introducing innovative changes in order to improve the standard of living of society and achieving sustainable development (Sułkowski et al., 2021). E-learning may well become the main method of learning in Society 5.0, with emphasis on ‘smart learning’ which requires the relevant software and hardware, the outcome of which depends on how these are both used synergistically in the classroom or online. Malaysia should utilise the experience gained during this pandemic as a way to further propel the development of e-learning as part of the preparation for its Society 5.0.

CONCLUSION

Converting from a traditional classroom to online-learning for higher education must be accepted as the new norm if students are expected to continue and complete their tertiary studies. The conversion might have happened suddenly, but with proper training and support, the challenges can be duly overcome.

Accepting this conversion is not just about surviving the pandemic but to ensure that the objectives of learning are achieved in the long-run. Academics must be open-minded in exploring new techniques in engaging with their students. By the same token, students must be understanding of the circumstances and adapt as best as they can, as this is simply the beginning of learning to deal with life's challenges.

Funding: This research received no external funding

Acknowledgement: The contribution of 104 students from Faculty of Law, Multimedia University (2021/2022) are acknowledged.

Conflicts of interest: There is no conflict of interest to be declared.

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INDEX

A

- AI, 1-3, 12, 16, 18, 20, 26, 57-60, 62, 102, 111, 114, 116, 119
- Annoying, 48-49
- Assisted Reproductive Technology, 71-73, 77, 91
- Adoption, 3, 10, 86, 141
- Alternative Dispute Resolution, 102, 119
- Alternative Online Dispute Resolutions, 118
- After mediation, 114
- Aged nation, 128
- Autonomy, 134, 139, 179
- Ageing in place, 128, 134-135
- Action plan, 147-148, 161, 166-167
- Assessment, 107, 165, 224, 226, 228, 230, 248-249, 254

C

- Covid-19 pandemic, 1, 7, 14, 17-18, 31, 33-34, 39, 47-48, 50, 101-102, 115, 119, 138, 175, 185-186, 188, 206, 223, 225-226, 230-231
- Cybersecurity, 1-2, 22-23, 26, 60, 186, 192
- Censorship, 47
- Consent, 77, 84, 86-91, 93, 95, 195, 208

- Conceive, 72-73, 75, 90
- Conception, 88, 90-94
- Caucus session, 113
- Claim, 200, 207, 210, 212-213

D

- Digital Economy Blueprint, 6-7, 9-10, 142
- Disinformation, 31-39, 42, 47, 52, 54, 59-60, 62
- Domicile, 79
- During mediation, 104, 111, 117, 121
- Design, 21-22, 134, 136, 140, 142, 161
- Dewan Rakyat, 177
- Discrimination, 138, 157-161, 163-164, 173, 181
- Digital Competence, 226-227
- Digital divide, 7, 232

E

- E-mediation, 115-118
- Environment, 2, 7, 18, 20, 22, 25, 27, 55, 58, 118, 127-128, 135, 145-146, 162, 180-181, 241-242, 248, 256
- Equality, 157-164, 166, 168-173, 175-176, 179-180, 226
- Equal rights, 158-159, 164, 177
- Empowerment, 157-160, 164, 167, 169-172, 175, 177, 180
- Enforcement, 22, 26, 52, 141, 185, 191-193, 214-215

E-learning, 221-234, 237-245, 248-250, 253-257

F

Fintech, 7, 13-15, 55
Fake news, 31-39, 42, 47-55, 59-60, 62, 188
Fact-checking ecosystem, 39
Freedom of information, 43
Federal Constitution, 45-46, 49-50, 52, 109, 157-158, 162-164, 177
Facebook, 40, 51, 59, 194, 197-198
Fertility preservation, 71, 74-78, 84, 87-89, 92-95
Fraudster, 189-196, 199, 203, 207, 210, 213
False information, 34, 36, 40, 53-54, 59, 188, 203

G

Generation X, 127-128
Gender, 12, 90, 166-173, 175-177, 179-181, 234
Gender equality, 157-164, 166, 168-173, 175-176, 179-180
GGGI, 170, 174
Google, 17, 116, 233-234, 239-240

H

Human Tissues, 78
House, 79, 130-131, 134-137, 140-141, 142, 145, 172, 178-179, 198

I

Infrastructure, 3, 21-22, 26, 55, 77, 135, 137, 142, 223, 226, 232, 255
Industrial Revolution, 2, 10-11, 27, 57-58, 215
International Covenant on Civil and Political Rights, 43
Information technologies, 2
Islamic Fintech, 13-14
Infodemic, 31-35, 38-39, 46-47, 52-53, 55, 59-62
Infodemic hazards, 52
Indecent, 46-47, 203-204
Illegitimate, 78-81, 83, 93
Internet of things, 1, 57, 141, 146
Initiatives, 3, 5, 12, 23, 31, 61, 161-162, 166-167, 170, 176, 180-181
Internal, 57, 133, 148, 193-194, 214
Institutional support, 255

J

Jamboard, 240

L

Legal factor, 22
Legitimacy, 71, 78-85, 89-91, 206
Lineage, 84, 87-88, 93
Legitimate, 35, 40, 44, 78-87, 89-90, 93-95, 192
Lawyers, 101, 103-107, 109, 113-115, 120-121
Legal framework, 119, 142, 144, 162, 164

Living arrangement, 127-130,
132-135, 137-138, 144

M

Medicine, 16, 18-19, 75, 82,
117

MyCERT, 8, 24-25, 186-187,
193-194

Misinformation, 31-39, 42,
47, 52, 54-55, 59-60, 62

Malaysian Medical Council,
77, 88

Maintenance, 80, 111, 141

Mediation, 101-121

Middleman, 106

Mediator, 102-103, 105, 108-
110, 112-118, 120

Mainstreaming, 160-162,
166-168

MGGI, 157, 169-170

Malaysian Tsunami, 179

Modus operandi, 185

Mode of assessment, 224,
230, 248

Mental health, 145, 227, 231

N

Negotiation sessions, 106,
113

Negotiation, 102, 105, 108,
115- 116, 119

Nursing homes, 127

O

Obscene, 47, 203-204

Offensive, 47-48, 203-204

Ordinance, 49-52

Online communication, 191,
213

Online platform, 203, 207,
252

Online fraud, 25, 186, 188,
191-194, 199, 203, 207,
210, 212-213, 215

Optimising, 253

P

Proclamation, 49-50, 52

Privacy, 141, 191-192

Parenthood, 71-72, 92

Posthumous conception, 90-
94

Presumption of legitimacy,
71, 80-82, 84,

Power balance, 108

Pre-Mediation, 104, 106-107,
117

Policies, 58, 128-129, 134,
147-148, 160-161, 166-
167, 169-170, 173, 180,
221, 225, 234

Phishing, 25, 188, 190

Prevention, 18, 165, 185-186,
191, 215

Q

Qamariah, 84

Quality of life, 27, 75, 92,
105, 127, 132, 137, 140,
145, 148, 159

Quizizz, 239-240

R

Right to inheritance, 79

Registration of birth, 79

Rebuttable presumption, 81,
90

Retirement villages, 132

Residential homes, 132
Retirement, 132, 136-137
Ransom, 185

S

Society 5.0, 1-13, 15, 18-19,
21-23, 26-27, 31, 33-34,
43, 55-61, 71-74, 76, 92-
93, 95, 101-105, 107,
118-119, 127-128, 136-
138, 144, 148, 158-159,
169, 181, 214-215, 257
Social acceptance, 5
Small Medium Enterprises,
11
STEM, 16
Sebenarnya.my, 39-41, 61
Self-regulatory, 52, 54, 61
Surrogacy, 76, 78, 85-87, 90-
92, 94
Surrogate, 76, 85-87, 94
Settlement agreement, 106,
110, 112, 114, 116
Smart home, 127, 128-129,
134, 137-142, 144-178
Scam, 188, 190, 192, 197,
201-202, 205, 207, 214
Scammer, 190
Social engineering, 189, 193,
215
Supervision, 144, 226, 228,
232
Socio-economic, 7, 14, 226-
227

T

Teaching platforms, 227,
237, 240

U

Universal Declaration of
Human Rights, 43

V

Vision 2020, 22-23
Violence, 46, 157, 159, 164-
165, 170
Virtual activities, 185-186

W

Women representation, 177-
179

Z

Zygote intrafallopian
transfer, 73
Zoom, 17, 116, 240

MALAYSIAN SOCIETY 5.0: SELECTED CONTEMPORARY SOCIO-LEGAL ISSUES

Malaysia is in the process of turning into a Smart Nation with the aid of Society 5.0, which sprang from Industrial 4.0. According to Future Job Report 2020, 85 million individuals worldwide are anticipated to lose their employment and be replaced by machines by 2025. This is because the advancement of society and technologies has eliminated millions of occupations. This book seeks to discuss the impact of technology transformation on society and the law in Malaysia. Chapter 1 - Malaysia from Industry 4.0 to Society 5.0: The Way Forward to Societal Transformation. Chapter 2 - Infodemic Laws in Malaysia: Lessons, Challenges and Suggestions for the Future in Light of the Covid-19 Pandemic. Chapter 3 - Presumption of legitimacy in Malaysian Society 5.0: Embracing Fertility Preservation Technology. Chapter 4 - Mediation Process in Malaysia During the Covid-19: The Role of Lawyers. Chapter 5 - Smart Homes for the Elderly: The Living Arrangement in Malaysian Society 5.0. Chapter 6 - Accelerating Gender Equality and Empowering Women in Malaysia. Chapter 7 - Online Fraud Amid the Covid-19 Pandemic and Chapter 8 - E-Learning: The Importance of Implementation of Policies and Regulations: A Case Study of Multimedia University. The main objective of this book is to accentuate the inevitable challenges for Malaysia relating to legal and societal issues in its journey towards society 5.0 while welcoming the advantages of a tech-oriented society in various aspects of the nation including socio-economic, security and privacy, healthcare, and education sectors.

PUBLISHED BY
MMU PRESS
RESEARCH MANAGEMENT CENTRE
MULTIMEDIA UNIVERSITY
2ND FLOOR, CHANCELLERY BUILDING
PERSIARAN MULTIMEDIA
63100 CYBERJAYA
SELANGOR DARUL EHSAN

 **PRESS**
MULTIMEDIA UNIVERSITY

e ISBN 978-629-97040-2-7

