



Social Sciences in the Emerging Uncertainties

3/12
2020 Abstract submission

7/12
2020 Abstract acceptance

15/12
2020 Registration

17/12
2020 Online seminar

17/1
2021 Full paper submission



Online Seminar

12th SOCIAL SCIENCES POSTGRADUATE INTERNATIONAL SEMINAR 17th DECEMBER 2020

FOR FURTHER INFORMATION :



www.sspis.usm.my



SSPIS2020



sspis@usm.my



ORGANISED BY
SCHOOL OF SOCIAL SCIENCES, USM
"Social Science Matters!"

**SOCIAL SCIENCES POSTGRADUATE
INTERNATIONAL SEMINAR (SSPIS) 2020
CONFERENCE PROCEEDINGS**

**(This Proceeding contains all submitted full papers and was accepted by
the Secretariat. Facts and language accuracy was not edited)**

CD-Rom Version

Compiled by

Jane Lee Wern Hui

Soh Bee Hui

Tina Tang Yi Ting

e-ISBN 978-967-15440-5-1



UHM UNIVERSITI
SAINS
MALAYSIA



**SOCIAL SCIENCES POSTGRADUATE
INTERNATIONAL SEMINAR (SSPIS)**



**Pusat Pengajian Sains Kemasyarakatan,
Universiti Sains Malaysia.
2020**

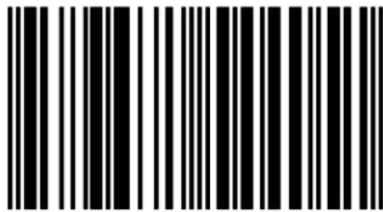
Copyright © 2020 by Pusat Pengajian Sains Kemasyarakatan, Universiti Sains Malaysia

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other non-commercial uses permitted by copyright law. For permission requests, write to the publisher, addressed “Attention: Permissions Coordinator,” at the address below.

Available in CD format

e-ISBN 978-967-15440-5-1

ISBN 978-967-15440-5-1



9 7 8 9 6 7 1 5 4 4 0 5 1

Details of Publisher

Pusat Pengajian Sains Kemasyarakatan, Universiti Sains
Malaysia Universiti Sains Malaysia, 11800 Pulau Pinang
Malaysia

Ordering Information: Contact the publisher at the address above.

TABLE OF CONTENTS

NO.	TITLE OF PAPERS	PAGE
ANTHROPOLOGY AND SOCIOLOGY		
1.	Analyzing the Role of Graphology in Determining the Youths Criminal Behaviour in Saudi Arabia <i>Mohammed Al-khamsan & Sundramoorthy Pathmanathan</i>	1-6
2.	Perspektif Neurosains Budaya dalam Akulturasi Etnik Minoriti <i>Nasir Yusoff & Audrey Antoine</i>	7-12
DEVELOPMENT & MANAGEMENT		
3.	Pentafsiran Semula Konsep Kemiskinan Dari Perspektif Multidimensi. Satu Kajian Konsep. <i>Muhammad AlNaufal & Parthiban S.Gopal</i>	13-18
ARTS, MEDIA & COMMUNICATION		
4.	Eksplorasi Gabungan Tanah Liat Soneware dengan Kulit Telur dan Cengkerang Laut bagi Menghasilkan Formula Tanah Liat Metod Line Blend <i>Noor Mustaqim Bin Mohamed & Shamsu Mohamad</i>	19-26
ECONOMICS		
5.	Islamic Finance and Sustainable Finance: A Convergence? <i>Anas Budiharjo & Nor Asmat Ismail</i>	27-34
6.	Export Performance and Competitiveness of Malaysian Furniture Industry <i>Bee Hui Soh</i>	35-43
SOCIAL WORK		
7.	Masalah Sosial Yang Dihadapi Komuniti: Kerja Komuniti Terhadap Isu Sosial Kemiskinan dan Intervensi Yang Boleh Diambil Sebagai Pekerja Sosial Daripada Perspektif Global <i>Prabu A/L Daymudoo</i>	44-49

EDUCATION

8. Efficacy of blended learning in promoting learning outcomes and student achievement
Lim Cheow Nee & Elisha Nasruddin 50-57
9. The Effects of Integrating GeoGebra on Students' Images of Mathematics: A Systematic Review using PRISMA
Ziham Zawawi Bin Mazlan & Muhammad Faizul Bin Abdul Hamid 58-68
10. Pendekatan Model *Flipped Classroom* Dengan Sumber Digital Bagi Penjanaan Kekekalan Amalan Kemahiran Pemikiran Sejarah
M. Kaviza 69-73
11. Penggunaan Sumber Teks Dan Pengekalan Motivasi Intrinsik
M. Kaviza 74-79

POLITICAL SCIENCE

12. Iran: Defense and Dominance in The Middle East
Cristina Cabrejas-Artola 80-84
13. The Legalization Process Of Persons Of Indonesian Descents (PIDs) In Mindanao And Their Reasons To Remain In Mindanao After Nationality Awarding
Putrie Agusti Saleha & Benny Teh Cheng Guan 85-91

PSYCHOLOGY

14. An Investigation On Character Strengths And Well-Being Among Adolescents In Penang And Kedah
Cheng Chiau Chui & Intan Hashimah Mohd. Hashim 92-99

OTHERS

15. Malaysian Online Pharmacy Market Analysis: Initial Insights After The COVID-19 Pandemic Outbreak
Mohamad Saleem Anis & Mohamed Azmi Hassali 100-105

PREFACE

The Social Sciences Postgraduate International Seminar (SSPIS) was held on 17th December 2020 at School of Social Sciences, Universiti Sains Malaysia (Main Campus), Penang, Malaysia. Like the past seminars, SSPIS 2020 focused on three main disciplines of pure arts, applied arts and applied sciences. Social Sciences is not a stand-alone discipline but transdisciplinary, encompassing several fields including anthropology, sociology, social work, development, planning and management, economics, political science, psychology, education, language, humanities, communication, mass media and housing, building and planning. The trans-disciplinary nature of social sciences allows for the weaving of new knowledge, and at the same time, allows researchers to move beyond known boundaries, as society's problems are far too complex and cannot be solved only within the domain of one discipline. Hence, SSPIS is the right platform for all participants to share knowledge, findings, and ideas across many different fields.

We would like to take this opportunity to convey our appreciation to all authors and participants for their contribution and support. We would also like to thank all paper reviewers for their invaluable input and constructive comments in reviewing the papers. Finally, we would like to extend our deepest gratitude to the staff and post graduate students of School of Social Sciences, USM for having supported and successfully organized the SSPIS 2020.

Thank you

Professor Dr. Azlinda Azman
Professor Dr. Intan Hashimah Mohd Hashim
Dr. Paramjit Singh Jamir Singh
Arina Charansarn
Gayathri Sathyanarayanan
Hamad Hasul Khan
Hasrina binti Masaud
Imran Ali
Jane Lee Wern Hui
Mohamad Al Hakim
Muhammad Nuruddeen Koko
Noorshahira binti Bakri
Norbiha salasiah bt Busu
Sodiq Jimoh
Soh Bee Hui
Teoh Ker Hsin
Tina Tang Yi Ting
Uzma Rani
Yusuf Bala Zaria
Zaenal Abidin
Siti Rayuan Sapar
Siti Nur Faezah Ahmad
Nazrul Fitri Ahmad
Nurul Farhana Amir Hamzah
Muhammad Fikri Ali Yasah
Norazrina Jabarullah

About the School of Social Sciences



The School of Social Sciences at Universiti Sains Malaysia has played a key role in establishing and developing the discipline of social sciences in Malaysia. It is one of the oldest school in Universiti Sains Malaysia and also one of the first social sciences school in the country. It was established in 1970 with the main mission of knowledge advancement to understand and facilitate desirable social transformation to Malaysian society at that time.

Today we remain committed to provide quality teaching, and to research and scholarship that will contribute to nation building.

We offer three undergraduate programmes which are Bachelor of Social Sciences, Bachelor of Economics and Bachelor of Social Work. At the post-graduate level, we offer Master of Public Administration (coursework programme), Master of Economic Management (coursework programme), Master of Social Work (mixed mode programme) and Master of Social Sciences (research mode). Our Ph.D. programme is by research in the discipline of Social Sciences.

There are 53 academic staff and about 1500 undergraduate and postgraduate students in our school.

We collaborate with major universities and scholars from around the world. We also have good links with local businesses, public and third sector organizations, policy makers and practitioners

Committee Members

Advisors

Professor Dr. Azlinda Azman
Professor Dr. Intan Hashimah Mohd Hashim
Dr. Paramjit Singh Jamir Singh

Committee

Arina Charansarn
Gayathri Sathyanarayanan
Hamad Hasul Khan
Hasrina binti Masaud
Imran Ali
Jane Lee Wern Hui
Mohamad Al Hakim
Muhammad Nuruddeen Koko
Noorshahira binti Bakri
Norbiha salasiah bt Busu
Sodiq Jimoh
Soh Bee Hui
Teoh Ker Hsin
Tina Tang Yi Ting
Uzma Rani
Yusuf Bala Zaria
Zaenal Abidin

Supporting Committee

Siti Rayuan Sapar
Siti Nur Faezah Ahmad
Nazrul Fitri Ahmad
Nurul Farhana Amir Hamzah
Muhammad Fikri Ali Yasah
Norazrina Jabarullah

Analyzing the Role of Graphology in Determining the Youths Criminal Behaviour in Saudi Arabia

Mohammed Al-khamsan^{a*}, Sundramoorthy Pathmanathan^{b}**

^aSchool of Social Sciences, Universiti Sains Malaysia, Penang, Malaysia

*Email: moalkhamsan8547@gmail.com

^bSchool of Social Sciences, Universiti Sains Malaysia, Penang, Malaysia

**Email: moorthy@usm.my

Abstract

This paper aims to examine the role of graphology in determining youth's deviant behaviour in Saudi society. Graphology is the study of handwriting. It is an experimental science that reveals the natural graphic gestures, character, disposition, intellectual nature, professional and social abilities of an individual, and the obsessed inner talents of a person through handwriting. Its specific analysis results in a psychosocial-behavioral picture. The study used document analysis to review the behaviour and character of juvenile crime with a graphology system. The past scholarly literature that has been review and analyzed shows the strong relationship between graphology and youths' criminal conduct. The results indicate that handwriting specialists analyze significant handwriting portions from various sample sources to establish handwriting characteristics that conform to unique features. In addition to human examination to analyze handwriting samples, newly advanced technologies have been developed to help handwriting practitioners perform this tedious task. The study recommends that youth socialization and environment play a vital role in shaping their character and behavior.

Keywords: Graphology, Criminal Behaviour, Deviance, Youth, Saudi Arabia.

1. Introduction

Graphology is the study of handwriting. It is an experimental science that reveals an individual's natural graphic movements, personality, temperament, intelligent behavior, professional and social abilities, and a person's obsessed inner talents through handwriting. Its specific analysis results in a psychosocial-behavioral portrait. It is, also, resembles psychologists' work, which only focuses on the interaction between the psychological and biological components reflected in an individual's handwriting (Seifer, 2008; Iulia, 2011).

Modern versions of graphology are rooted in the late 19th and early 20th centuries. For centuries, handwriting has been known for character detection. Meanwhile, the first known book of graphology was found in Spain in 1552 (Wulansari, Primiana, & Kusman, 2019). Thus, the Germans used graphology in psychiatric experiments using handwriting (Schäfer, 2016). Furthermore, handwriting examination was part of an ensemble of diagnostic tools (Schäfer, 2016).

Forensic investigators use handwriting patterns and technology to determine the personality traits of an individual. In different agencies, graphology is used for many purposes, such as; checking and motivating different employees and child behaviour. Others include developing

applications for jobs recruitment procedures, compatibility for marriage, and career guidance (Huber, & Headrick, 1999). The same authors have proven in a comprehensive handwriting analysis study that "examined forensic evidence." That is done by analyses of handwriting from physical evidence due to physical evidence's crucial vitality (Harralson & Miller, 2017).

Therefore, researchers argued that by observing some handwriting basics like size, slant, and letter formations, it is possible to identify the personality traits and psychology (Tang, 2012). Consequently, in all languages, all people have their fingerprints in handwriting. Regardless of the individual's handwritten words, the characters remain the same (Fisher, Maredia, Nixon, Williams, & Leet, 2012).

When using individual factors to explain deviant behaviour, experts consider the construction of individual's personality, the level of a person's self-control, behaviour, and social environment. This is paramount because the individual's social development is one of the essential elements in predicting violent criminal behaviour (DeLisi & Conis, 2008). The assessment of the relationship between low social behaviours for the cause of criminal conduct is done by examining social practices and social ties formed within non-traditional or traditional systems of an individual's social status (Fisher, Maredia, Nixon, Williams, & Leet, 2012).

Handwriting experts' study large portions of handwriting, from different sample sources to determine handwriting traits that correspond to particular characteristics. Apart from the human analysis to examine handwriting samples, technologies have been developed recently to assist handwriting experts in carrying out this tedious task. Various studies using experiments and scientific techniques have validated handwriting analysis as a personality assessment method (Mishra, 2017).

Experimental studies of manual calligraphy are relatively long but were typically carried out before some new sharpening tools were developed. Lewison-Zubin presented working analytical research that made experimental studies more robust. This factor analysis was performed by Lorr, LEPINE, and Golder in 1954, who identified four factors: breadth of letters in the lower and upper regions, length of the letters in the lower and upper areas, the height of the letters in the middle area, and the inclination to write in an upward direction on the page.

The investigator can use more sophisticated measuring instruments and experimental designs and may choose judges to provide ratings when determining certain handwriting indicators or characteristics such as writing pressure or font size. Still, the temptation is to replace objective judges with measuring instruments, if possible. Such as compression, speed, size, and character width. These were usually mechanical or electronic instruments for recording pressure and speed, photographic equipment, or the manual method used in a study (Fluckiger, Tripp, & Weinberg, 1961).

In Saudi Arabia and other Arab countries, crime is significantly different from type, frequency, and crime motivation in the West and the United States. Meanwhile, western European researchers classify crimes of all kinds and focus on religious crimes and cultural ramifications and their association with police organisations for each type.

However, crimes within Arab countries are mostly cantered on cross-cultural types. And they are being handled by police stations in the affected areas. While these crimes overlap,

there are significant differences in the modus operandi, spatial and temporal allocations, and socio-economic drivers (Alotaibi, Evans, Heppenstall & Malleon, 2019).

This paper aims to examine the role of graphology in determining youth's deviant behaviour in Saudi Arabia.

2. Methodology

This study used document analysis method, that is review of relevant literature were carry out in the area of criminology and psychology by the researcher on Role of Graphology in Determining the Youths Criminal Behaviour. The critical analyses were made and reported.

3. The Role of Graphology in Determining Youths Criminal Behaviour

Graphology is used to assess individuals' personality characteristics by studying their handwriting. Different approaches and strategies are used for the analysis (e.g., Graphoanalysis, which is a copyrighted method and, therefore capitalisation), depending on the graphologist's aims. Still, all have some underlying theoretical assumptions (Driver, Buckley & Frink 1996).

McNeal (1967 in Driver et al., 1996) Says that, in essence, handwriting traits manifest personal characteristics and offer information about the writer under the scrutiny of an experienced graphologist.

They went ahead to outline three-point procedures that provide an excellent example of graphologists' general activities when conducting an analysis.

- Obtain a handwriting specimen. Ideally, this specimen should contain variety, that is, most alphabet letters, capitals, etc., and should be 5-100 words in length.
- Analyse the handwriting specimen according to a set of criteria. The specific standards differ somewhat according to which school the graphologist belongs to.
- Interpret the results of the handwriting analysis through comparison and summation of the measures obtained. (Driver et al. 1996).

Organisational use of graphology as an aid in employment decisions occurred when evaluating individual characteristics carried out. Similar to that described above, it is used alone or in part to decide issues. Such as who should be employ, who should be fire, who should be promote, who should be send to school for training, and who should be move to another position or place of employment? The standard approach is to make personality characteristics correlations with job performance, then pick applicants with the highest likelihood of success based on the match between the role and their personality. (Roberts, Kuncel, Shiner, Caspi & Goldberg, 2007).

Antony & Cap (2008) research shows that your handwriting reflects your physiological and psychological roles. Your writing act involves spontaneous acts intended to express your ideas. In your handwriting, there's a variety of script features with their repeatable and accurate graphometric measurements. Therefore, your writing is an expressive activity and expresses the characteristics of your personality. Writing is a learned skill. Your style of writing is the look and feel of your work. Our hands and fingers move faster as we write than we can consciously manage them. But they are under our influence in drawing or in painting. The majority of graphometric measurements are typically reliable and time-consistent, from

test to test. No one can ever replicate the rhythm you write because your pen-stroke construction and speed without detection are practically impossible to replicate.

The authors went ahead to study some of the primary handwriting traits. It is good to know that it is possible to learn various characteristics and combinations of traits. Any written specimen depicts descriptions of personality and predictions of behaviour. Nevertheless, a specimen written cannot explain why this is so. It has been recognised that there is a therapeutic benefit in destroying a written specimen where you have express emotionally charged issues and concerns (Antony & Cap, 2008).

Personality change by thinking behavioral traits can be achieved through controlled writing, which is a repetitive act. What is typically recommended for behavior change is to follow a similar written plan for thirty days for twenty minutes each day. Handwriting relies on the effects of drugs, sickness, anxiety about the situation, menstruation, electrical shock therapy, traumatic experiences, maturity, hypnosis, and exhaustion. Apparently, they change personality (Antony & Cap, 2008).

The Second International Self-Reported Delinquency Study is being launched (ISR2). Though self-report delinquency surveys have been a staple of delinquency research for more than half a century, these studies have usually been restricted to one or a few countries at most (e.g. Wikström and Svensson, 2008, concentrating on Sweden and England). One of the aims of the ISR2 follow-up project, is to define the scale of child and youth crime, in the European context in a comparative way. In addition to the definition of the prevalence and incidence of self-reported crime, and youth victimization between 12 and 15 years of age (paralleling grades 7, 8 and 9), However, the international heterogeneity of delinquency patterns must be clarified and the generalizability of various hypotheses must be checked. The ISR2 data allows the study of the causes of crime and the assessment of the hypotheses of crime causation across nations. Therefore, knowledge on lifestyle, social bonding and regulation, community contexts and other risk factors is important if the causes of delinquency are to be investigated. (Enzmann, Marshall, Killias, Junger-Tas, Steketee & Gruszczynska, 2010).

This study used a large, nationally representative, and a longitudinal sample of adolescents and their parents to examine the association between parental control and delinquency in adolescence and parental control in adolescence and young adult criminal behavior.

Regression analysis results showed that lack of parental influence positively linked delinquency to young adulthood both simultaneously and longitudinally. When evaluating delinquency in young adulthood, females showed a lower level of delinquency and more delinquent activity was associated with younger ages. The findings suggest that parental control is still influential through adolescence, and early parental control is still influential in young adulthood. (Harris-McKoy & Cui, 2013).

Handwriting analysis is an operation that has been carried out for decades to centuries. But its effectiveness when analyzing an individual's behavior and personality traits is still a debate from the old days. Forensic graphology is the study of handwriting. It is a unique meaning and has many things for the study. Different agencies use graphology to check application for jobs, recruitment procedures, compatibility for marriage, career guidance, motivating different employees, and child behavior and development. To determine handwriting traits that correspond to particular characteristics, forensic experts study large portions of

handwriting samples from known/control and unknown/suspect sources. Apart from examining handwriting samples by a person, there have been numerous technologies/methods developed to help handwriting experts carry out this mind-numbing task (Mishra, 2017).

In this study, we discussed that forensic graphology helps analyze handwriting on ransom notes in kidnapping cases or blackmailing letters or in the cases of pen poison letters. It helps in an investigation by determining the writer's psychological state, identifying the writer, and assisting in criminal profiling (Mishra, 2017).

4. Conclusion

This study discloses how graphologists use their expertise to conduct forensic investigation on criminal behaviour of individuals with handwriting analysis. They also study personality traits of youths in determining their criminal tendencies. The results indicate that parental control during adolescence is still important and early parental control in young adulthood is important especially in developing countries like Saudi Arabia. The study recommends the need for emerging nations specifically Saudi Arabia to employ the service of graphologists to determine the youths' criminal behaviour and proffer a possible solution in reducing crime.

5. References

- Alotaibi, N. I., Evans, A. J., Heppenstall, A. J., & Malleson, N. S. (2019). How Well Does Western Environmental Theory Explain Crime in the Arabian Context? The Case Study of Riyadh, Saudi Arabia. *International Criminal Justice Review*, 29(1), 5-32.
- Antony, D. J., & Cap, O. F. M. (2008). Personality Profile Through Handwriting Analysis. *International Journal of Computer Science and Technology*.
- DeLisi, M., & Conis, P. J. (2008). *Violent offenders: Theory, research, public policy, and practice*. Jones & Bartlett Learning.
- Driver, R. W., Buckley, M. R., & Frink, D. D. (1996). Should we write off graphology? *International Journal of Selection and Assessment*, 4(2), 78-86.
- Enzmann, D., Marshall, I. H., Killias, M., J., Stekete, M., & Gruszczynska, B. (2010). Self-reported youth delinquency in Europe and beyond: First results of the Second International Self-Report Delinquency Study in the context of police and victimisation data. *European Journal of Criminology*, 7(2), 159-183.
- Fisher, J., Maredia, A., Nixon, A., Williams, N., & Leet, J. (2012). Identifying personality traits, and especially traits are resulting in violent behaviour through automatic handwriting analysis. *Proceedings of Student-Faculty Research Day, CSIS, Pace*
- Fluckiger, F. A., Tripp, C. A., & Weinberg, G. H. (1961). A Review of Experimental Research in Graphology, 1933–1960. *Perceptual and Motor Skills*, 12(1), 67-90.
- Harralson, H. H., & Miller, L. S. (2017). *Huber and Headrick's Handwriting Identification: Facts and Fundamentals*. CRC Press.
- Harris-McKoy, D., & Cui, M. (2013). Parental control, adolescent delinquency, and young adult criminal behaviour. *Journal of child and family studies*, 22(6), 836-843.
- Huber, R. A., & Headrick, A. M. (1999). *Handwriting identification: facts and fundamentals*. CRC press.
- Iulia, C (2011). The Writing of Criminal Minds Criminology and Handwriting Analysis. *International Journal of Criminal Investigation*, 01(04), 163-175.
- Mishra, A. (2017). Forensic Graphology: Assessment of Personality. *Forensic Res Criminol Int J*, 4(1), 00097.

- Roberts, B. W., Kuncel, N. R., Shiner, R., Caspi, A., & Goldberg, L. R. (2007). The power of personality: The comparative validity of personality traits, socio-economic status, and cognitive ability for predicting important life outcomes. *Perspectives on Psychological science*, 2(4), 313-345.
- Schäfer, A. (2016). Graphology in German psychiatry (1870–1930). *History of psychiatry*, 27(3), 307-319.
- Seifer, M. (2008). *The definitive book of handwriting analysis: the complete guide to interpreting personalities, detecting forgeries, and revealing brain activity through the science of graphology*. Red Wheel/Weiser.
- Tang, T. L. P. (2012). Detecting honest People's lies in handwriting. *Journal of Business Ethics*, 106(4), 389-400.
- Wulansari, R. C. D., Primiana, I., & Kusman, M. (2019, May). Graphology for Employee Recruitment. In *Proceeding Interuniversity Forum for Strengthening Academic Competency* (Vol. 1, No. 1, pp. 89-93).

Perspektif Neurosains Budaya dalam Akulturasi Etnik Minoriti

Nasir Yusoff^{a*}, Audrey Antoine^b

^aJabatan Neurosains, Pusat Pengajian Sains Perubatan, Kampus Kesihatan, Universiti Sains Malaysia 16150 Kubang Kerian, Kota Bharu, Kelantan, Malaysia

*Email: nasirff@usm.my

^bJabatan Neurosains, Pusat Pengajian Sains Perubatan, Kampus Kesihatan, Universiti Sains Malaysia 16150 Kubang Kerian, Kota Bharu, Kelantan, Malaysia

Abstrak

Fenomena akulturasi yang berlaku dalam kalangan etnik minoriti diulas berpandukan kepada model interaksi neuro-budaya yang mempunyai tujuh fasa. Berpandukan kepada model interaksi neuro-budaya, etnik minoriti telah melalui satu proses akulturasi yang panjang dan berperingkat serta berevolusi. Mereka telah membina satu sistem neural yang teguh yang mendasari tingkahlaku budaya mereka hasil daripada pengaruh budaya etnik majoriti dan seterusnya mengembangkan generasi.

Kata kunci: Akulturasi, interaksi neuro-budaya, etnik minoriti, neurosains budaya

1. Pendahuluan

Akulturasi adalah satu konsep di dalam bidang sosiologi yang merujuk kepada satu proses pembentukan budaya atau identiti kumpulan etnik tertentu, hasil daripada pergabungan atau pengaruh dari budaya-budaya yang berbeza. Ianya merupakan satu proses fenomena sosial yang berevolusi yang mengambil masa yang panjang dan berperingkat. Seseorang individu itu dikatakan melalui proses akulturasi apabila seseorang itu datang dari budaya yang berbeza dan mengalami sesuatu budaya baru secara langsung dan berterusan (Ben-Shalom & Horenczyk, 2003; Cote, 2006). Ahli sosiologi juga menyatakan bahawa akulturasi adalah satu proses perubahan dalam kepercayaan dan amalan apabila sistem budaya sesuatu kumpulan etnik mengambil alih sistem budaya kumpulan etnik yang lain hasil daripada pertembungan dua budaya yang berbeza (Berry, 2005; Padilla & Perez, 2003; Sam & Berry, 2010).

Budaya difahami sebagai satu konsep yang mempunyai pelbagai elemen iaitu sikap, kepercayaan dan aspek-aspek kognitif sosial yang lain termasuk ciri-ciri sosial dan kebersamaan sosial. Bahkan, budaya juga merangkumi amalan-amalan tertentu budaya, sistem interaksi dan institusi sosialnya (Kitayama et al., 2010; Macionis & Gerber, 2011). Manakala neurosains budaya adalah satu perspektif yang melihat perhubungan atau interaksi persekitaran budaya dengan sistem neurobiologi. Perspektif neurosains budaya adalah satu konsep yang menggabungkan idea dan perspektif dari bidang-bidang yang berbeza seperti antropologi, psikologi dan kognitif dalam memahami pengaruh sosio-budaya terhadap tingkahlaku manusia (Aggarwal, 2013; Bhui, 2018; Chiao et al., 2013; Kitayama & Tompson., 2010; Kim & Sasaki, 2014; Lorusso et al., 2018). Justeru, perspektif neurosains budaya adalah satu pendekatan yang praktikal dan inovatif yang berupaya menjelaskan interaksi dwi-arah antara budaya dan sistem biologi melalui pengaplikasian kaedah dan teori dari bidang-bidang yang berbeza pendekatannya.

Perspektif neurosains budaya dianggap sebagai satu kerangka kerja yang teguh kerana cirinya yang empirikal, praktikal dan meta-teoritikal (Kitayama & Thompson, 2010). Pespektif neurosains budaya dikatakan berciri empirikal dan praktikal kerana menyediakan satu ruang yang penting untuk pembangunan teori yang lebih ampuh. Penggunaan *functional Magnetic Resonance Imaging (fMRI)* dan *Event Related Potential (ERP)* dalam kaedah penyelidikan neurosains budaya dapat menyalurkan satu informasi yang penting tentang bagaimana dimensi budaya berperanan di dalam sistem otak manusia.

2. Model Interaksi Neuro-Budaya di Dalam Proses Akulturasi

Model interaksi neuro-budaya adalah satu model yang menjelaskan secara sistematik tentang proses yang berlaku dalam pengambilan dan pengamalan sesuatu budaya baru oleh sesuatu kelompok sosial (Kitayama & Thompson, 2010; Kitayama & Uskul, 2011) (Sila lihat Gambarajah 1). Model ini mengutarakan tujuh fasa yang menjelaskan tentang tahap-tahap yang berbeza berhubungan dengan fenomena budaya akulturasi seperti mana yang ditunjukkan di dalam Gambarajah 1. Di bawah ini diuraikan tentang fasa-fasa yang terlibat di dalam proses akulturasi berdasarkan kepada model interaksi neuro-budaya.

Fasa 1- Tahap Makro (Faktor Ekologi dan Sosial)

Pada peringkat awal, sesuatu amalan budaya adalah dicetuskan oleh pelbagai faktor peringkat makro seperti ekologi, survival, kepadatan penduduk, mobiliti penempatan, sistem politik dan sosial serta sistem institusi sesuatu kawasan geografi. Faktor-faktor inilah yang kemudiannya menyumbang kepada ideologi-ideologi seperti ciri keindividuan, kolektifan dan nasionaliti. Dalam pengertian lain, fasa ini adalah merupakan faktor-faktor luaran yang mendorong kepada terjadinya sesuatu tingkahlaku atau amalan budaya. Fasa pertama ini adalah penting kerana ia merupakan fasa permulaan yang menjelaskan fasa-fasa seterusnya.

Fasa 2: Amalan Dipilih dan Dilakukan Untuk Mencapai Tujuan Budaya

Pada fasa ini, seseorang membuat pilihan terhadap sesuatu budaya yang ingin diikuti berpandukan kepada pertimbangan-pertimbangan psikososial yang dicetus oleh faktor-faktor makro tersebut. Pertimbangan-pertimbangan psikososial ini adalah seperti aspek 'nilai' selain dari faktor 'integrasi dan penolakan'. Pertubuhan Penyelidikan Sains Sosial atau *Social Science Research Council* (1954) sejak beberapa dekad yang lalu telah menekankan faktor 'sistem nilai' yang menjadi elemen penting dalam akulturasi yang menyediakan dua asas penting iaitu (1) individu memilih jenis budaya yang ingin ditinggalkan dan (2) individu memilih budaya baru yang ingin diterapkan. Manakala di dalam pendekatan integrasi dan penolakan pula, Berry (1980) mengutarakan hakikat bahawa individu mempunyai pilihan sama ada mengambil atau menolak sesuatu budaya baru tertentu. Ini melibatkan pilihan-pilihan iaitu (1) terlibat dengan satu budaya sahaja (sama ada budaya sendiri atau budaya orang lain) atau (2) terlibat dengan ke dua-dua budaya (iaitu budaya sendiri dan budaya orang lain) atau (3) tidak terlibat dengan sebarang amalan budaya.

Fasa 3: Penglibatan Yang Berulang-ulang Dalam Amalan Budaya Yang Dipilih

Fasa ini mencadangkan bahawa seseorang yang telah memilih dan melakukan sesuatu amalan budaya, akan melalui satu fasa di mana sesuatu amalan budaya itu dilakukan secara berulang-ulangan. Pada tahap ini, dikatakan, seseorang itu telah mencapai fasa penyesuaian terhadap sesuatu tingkahlaku budaya setelah melalui fasa perhubungan. Apabila seseorang itu telah

mecapai tahap penyesuaian, sesuatu amalan budaya akan lebih kerap dilakukan. Fasa perhubungan dan penyesuaian sebenarnya telah diperkenalkan oleh Pearson (1987) di dalam model tiga tahapnya yang mana akulturasi dilihat sebagai satu isu budaya yang mempunyai tahap-tahap yang berbeza iaitu tahap perhubungan, tahap penyesuaian dan barulah akulturasi. Sebelum berlakunya akulturasi, tahap 'perhubungan' atau kontak yang diikuti dengan 'penyesuaian' adalah fasa-fasa yang perlu dilalui oleh seseorang yang mengalami fenomena pertembungan budaya. Tahap pertama iaitu 'perhubungan' adalah kritikal kerana ia merupakan satu fasa yang penting untuk meminimalkan konflik dan memberikan satu keadaan yang stabil di antara kumpulan etnik, sebelum terjadinya satu keadaan 'penyesuaian' yang membolehkan sesuatu amalan budaya itu dilakukan secara berterusan atau berulang-ulangan.

Fasa 4: Pembentukan Sistem Neural Berkaitan Amalan Budaya

Fasa seterusnya ini menjelaskan bahawa amalan budaya yang dilakukan berulang-ulang akan memberi kesan kepada sistem perhubungan neuron otak. Perubahan terhadap sistem perhubungan neuron di otak boleh terjadi akibat daripada satu bentuk tingkahlaku budaya yang bersifat sukarela, aktif dan berkekalan untuk tempoh yang lama. Ini bermakna jika matlamat terhadap sesuatu tingkahlaku mereka dibangunkan dari sesuatu norma luaran iaitu norma yang tidak diamalkan, tindakbalas terhadap agen rangsangan persekitaran tidak akan berhasil. Tingkahlaku budaya berlaku berpandukan kepada sesuatu agen rangsangan persekitaran yang jelas, dengan usaha yang minima dan tidak melibatkan rangsangan dalaman. Ini selaras dengan cadangan bahawa fungsi otak kurang terangsang dan kurang mengalami perubahan apabila sesuatu tingkahlaku itu berbentuk kawalan.

Fasa 5: Tingkahlaku Budaya Yang Spontan

Rentetan dari fasa-fasa sebelumnya, fasa ini menjelaskan bahawa perubahan terhadap sistem perhubungan neuron otak akibat dari satu tingkahlaku budaya yang berbentuk sukarela, aktif dan berterusan akan menghasilkan satu keadaan atau satu fasa pengamalan budaya yang bersifat spontan. Walaubagaimanapun, sekiranya sesuatu tingkahlaku itu tidak konsisten dengan norma sesuatu masyarakat, maka tingkahlaku tersebut tidak akan berterusan. Sistem hubungan neuron yang termodifikasi oleh budaya hanya akan memacu sesuatu tingkahlaku yang didapati bersesuaian dengan budaya yang diterima oleh sesuatu masyarakat tersebut. Namun begitu, hakikat amalan budaya yang spontan ini juga bergantung kepada faktor 'kesedaran budaya' dan 'kesetiaan etnik' atau dikenali juga sebagai model dwi-dimensi (Padilla, 1980; Keefe & Padilla, 1987). Menurut model ini, kesedaran budaya adalah satu pengetahuan bersifat dalaman (*implicit*) yang dimiliki oleh seseorang terhadap budaya asal dan budaya baru. Pengetahuan berciri dalaman ini adalah seperti kecekapan bahasa, sejarah, nilai artistik budaya, muzik serta tingkahlaku dan juga nilai yang mejadi piawai dan pegangan sesuatu kelompok sosial. Mengikut model ini lagi, seseorang yang terakulturasi dengan sistem budaya di luar kelompok etniknya, biasanya memiliki lebih pengetahuan tentang kelompok etnik luar tersebut. Begitu juga bagi faktor kesetiaan etnik yang mana pada kebiasaannya seseorang yang kuat kesetiannya (dilihat pada identiti sesuatu etnik pada diri seseorang individu, jenis kelompok etnik rakan-rakannya dan kecenderungan mengambil budaya sebagai aktiviti rekreasi) terhadap kelompok etniknya sendiri menyebabkan kurangnya berlaku proses akulturasi.

Fasa 6: Penguikuan Identiti Budaya Dan Reputasi di Dalam Komuniti

Untuk fasa seterusnya ini, dijelaskan bahawa sesuatu tingkahlaku (yang diterima oleh sesuatu norma budaya) yang berbentuk spontan yang dilakukan dengan berterusan adalah merupakan kriteria yang boleh digunakan untuk menentukan bahawa seseorang itu adalah ahli budaya yang bagus. Pengiktirafan sebagai seorang ahli budaya yang bagus akan membentuk dan memperkukuhkan identiti budaya seseorang dan komitmen terhadap nilai budaya. Pada masa yang sama, penerimaan dari orang lain akan meningkatkan reputasi diri di dalam komuniti budaya sebagai seorang ahli budaya yang bagus dan berdedikasi. Seseorang yang berjaya mengukuhkan identiti budaya dan reputasi di dalam komuniti adalah merupakan seorang yang berkeupayaan untuk berfungsi dalam kontek budaya yang selari dengan nilai, kepercayaan, norma dan juga bahasa yang diamalkan oleh kelompok majoriti dalam sesuatu budaya itu. Menurut Padilla dan Perez (2003), apabila seseorang itu dilihat sebagai ‘orang dalam’ oleh ahli-ahli kelompok budaya majoriti maka seseorang itu sebenarnya telah mencapai kompetensi yang sempurna dalam sesuatu budaya baru itu. Penerimaan kelompok majoriti terhadap pendatang baru adalah satu perkara yang sangat penting kerana ia melibatkan isu hubungan di antara golongan minoriti dan majoriti sebagai satu unit sosial. Kelompok minoriti yang tidak berada seiring dengan norma kelompok majoriti akan menyebabkan kelompok minoriti berpotensi untuk tidak diterima oleh persekitaran sosial mereka (Celeste et al., 2016).

Fasa 7: Adaptasi Biologikal (Kejayaan Reproduksi)

Pada fasa yang terakhir ini, dijelaskan bahawa dalam jangkamasa yang panjang, penerimaan sesuatu amalan budaya di dalam sesuatu kelompok sosial menghasilkan kesan yang positif terhadap sosial, ekonomi dan pengembangan generasi (reproduksi). Ini berlaku kerana sesuatu amalan budaya (yang diterima) tersebut terpaku pada sistem neural yang teguh dan kukuh sebagai asasnya. Ini menyebabkan ahli sesuatu kelompok sosial itu bertingklaku dengan suatu amalan budaya yang memberikan impak yang penting terhadap pengembangan generasi (reproduksi) yang seterusnya menyumbang kepada pertumbuhan populasi bagi generasi tersebut.

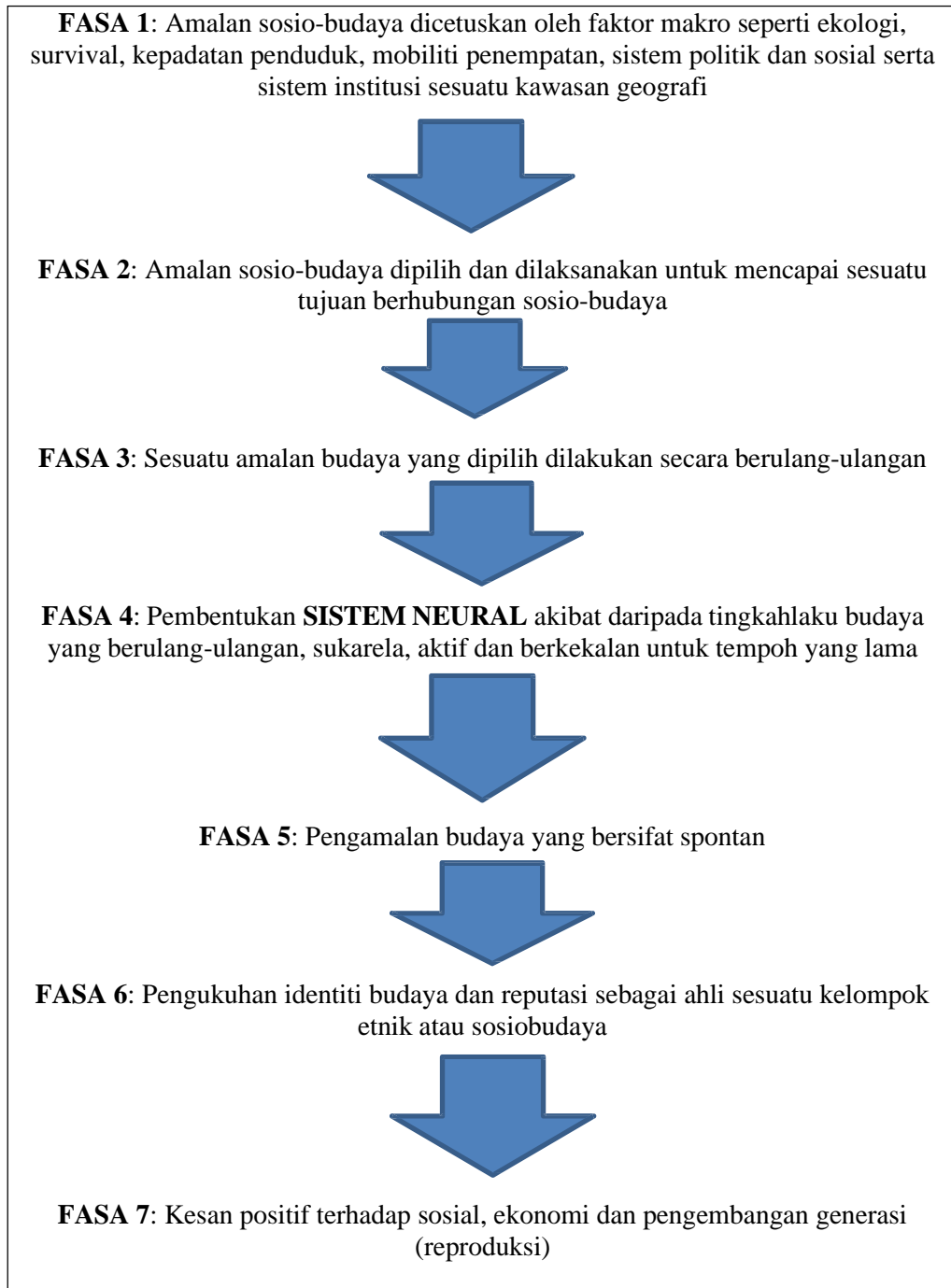
3. Kesimpulan

Satu intipati penting yang perlu diberi perhatian di dalam model interaksi neuro-budaya ini ialah sistem neural atau sistem perhubungan neuron yang mengalami perubahan akibat dari suatu tingkahlaku budaya yang berbentuk sukarela dan spontan yang dilakukan secara berterusan. Sistem perhubungan neuron atau sistem neural pada kelompok minoriti ini telah menapak dan mendasari pembentukan identiti mereka sebagai etnik minoriti yang berupaya untuk berdiri teguh dan mengembangkan generasi.

4. Rujukan

- Aggarwal, N. K. (2013). Cultural psychiatry, medical anthropology, and the DSM-5 field trials. *Medical Anthropology*, 32, 393–398.
- Ben-Shalom, U. & Horenczyk, G. (2003). Acculturation orientations: A facet theory perspective on the bidimensional model. *Journal of Cross-Cultural Psychology*, 34 (2), 176-188.
- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29 (6), 697-712.

- Berry, J. W. (1980). Acculturation as varieties of adaptation. In A.M. Padilla (Ed.), *Acculturation: Theory, models and some new findings* (pp.9-25). Boulder, CO: Westview.
- Bhui, K. (2018). Cultural neuroscience: ideas worth knowing. *Nordic Journal of Psychiatry*, 72 (*sup1*), S5-S8.
- Celeste, L., Meeussen L., Verschueren K. & Phalet, K. (2016). Minority acculturation and peer rejection: Costs of acculturation misfit with peer-group norms. *British Journal of Social Psychology*, 55, 544–563
- Chiao, J. Y., Cheon, B. K., Pornpattananangkul, N. & Mrazek, A. J. (2013). Cultural neuroscience: progress and promise. *Psychological Inquiry*, 24, 1–19.
- Cote, J.E. (2006). Acculturation and Identity: The Role of Individualization Theory. *Human Development*; 49, 31–35.
- Keefe, S. & Padilla, A.M. (1987). *Chicanoethnicity*. Albuquerque: University of New Mexico Press.
- Kim, H. S. & Sasaki, J. Y. (2014). Cultural neuroscience: biology of the mind in cultural contexts. *Annual Review of Psychology*, 65, 487-514.
- Kitayama, S., Conway, L.G., Pietromonaco, P. & Park, H. (2010). Ethos of independence across regions of the U.S.: The production-adoption model of cultural change. *American Psychologist*, 65 (6), 559-74
- Kitayama, S. & Tompson, S. (2010). Envisioning the future of cultural neuroscience. *Asian Journal of Social Psychology*, 13, 92–101.
- Kitayama, S. & Uskul, A. (2011). Culture, mind, and the brain: Current evidence and future directions. *Annual Review in Psychology*, 62, 419-449
- Lorusso, L., Piccolino, M., Motta, S., Gasparello, A., Barbara, J.G. & Bossi-Régner, L. (2018). Neuroscience without borders: Preserving the history of neuroscience. *European Journal of Neuroscience*, 48 (5), 2099-2109.
- Macionis, J. J. & Gerber, L. M. (2011). *Sociology*. Toronto: Pearson Prentice Hall.
- Padilla, A. M. (1980). The role of cultural awareness and ethnic loyalty in acculturation. In A.M. Padilla (Ed.), *Acculturation: Theory, models and some new findings* (pp. 47-84). Boulder, CO: Westview.
- Padilla A.M. & Perez W. (2003). Acculturation, social identity, and social cognition: A new perspective. *Hispanic Journal of Behavioral Sciences*, 25 (1), 35-55.
- Pearsons, S. (1987). *Ethnic studies at Chicago: 1905-45*. Urbana: University of Illinois Pr
- Sam, D.L. & Berry, J.W. (2010). Acculturation when individuals and groups of different cultural backgrounds meet. *Perspectives on Psychological Science*, 5 (4), 472.
- Social Science Research Council. (1954). Acculturation: An exploratory formulation. *American Anthropologist*, 56, 973-1000.



Pentafsiran Semula Konsep Kemiskinan Dari Perspektif Multidimensi. Satu Kajian Konsep.

Muhammad AlNaufal^{a*}, Parthiban S.Gopal^{b*}

^aPusat Pengajian Sains Kemasyarakatan
Universiti Sains Malaysia, 11800 Penang, Malaysia.

*Email: naufalrahman12@student.usm.my

^bPusat Pengajian Sains Kemasyarakatan
Universiti Sains Malaysia, 11800 Penang, Malaysia.

*Email: parthi@usm.my

Abstrak

Kemiskinan merupakan satu kekangan individu untuk melangsungkan kehidupan seperti masyarakat yang normal. Hal ini kerana keupayaan individu sihat dan cergas untuk terus berfungsi amatlah penting dalam memastikan kestabilan dalam pembangunan negara. Oleh itu pembasmian kemiskinan penting dalam mengekang isu kemiskinan yang berlaku. Namun begitu isu kemiskinan seringkali ditafsir menurut perspektif unidimensi yang hanya melihat pendapatan sebagai faktor utama seseorang itu jatuh miskin. Sesungguhnya tafsiran kemiskinan secara unidimensi adalah tidak menyeluruh dan ini akan memberi kesan yang tidak efektif dalam membasmi kemiskinan. Kemiskinan perlu dilihat pada sudut multidimensi supaya kemiskinan dapat ditafsirkan sebagai isu yang menyeluruh. Perspektif yang melihat kemiskinan sebagai masalah multidimensi akan membentuk pengukuran kemiskinan yang lebih komprehensif. Pengukuran kemiskinan yang komprehensif seperti indeks kemiskinan multidimensi dapat mengukur kemiskinan secara tepat dan boleh membasmi kemiskinan secara efektif. Oleh itu kajian konsep ini akan menerokai mengapa pentingnya pentafsiran kemiskinan multidimensi dan kepentingan indeks kemiskinan multidimensi dalam membasmi kemiskinan. Kajian ini akan meneroka konsep pengukuran multidimensi berdasarkan data sekunder.

Kata kunci: Kemiskinan, kemiskinan unidimensi, pengukuran kemiskinan dan kemiskinan multidimensi.

1. Pengenalan

Pertumbuhan ekonomi saling berkait dengan pembangunan kesejahteraan manusia, walhal pertumbuhan ekonomi bukanlah faktor yang utama dalam mencapai kesejahteraan manusia. Hal ini kerana, terdapat beberapa negara yang mempunyai pertumbuhan ekonomi yang tinggi dan sumber yang banyak tetapi memiliki pembangunan manusia yang tidak memuaskan. Malah pertumbuhan ekonomi yang pesat tidak menjamin bahawa pengagihan kekayaan negara diagih secara sama rata kepada semua golongan terutamanya golongan miskin (Omar, 2016). Menurut Rigg (2015) individu yang miskin bukan sahaja disebabkan ketinggalan malah diancam oleh pertumbuhan ekonomi. Hujahan ini membawa maksud pembangunan yang mengutamakan pertumbuhan ekonomi akan mengancam kesaksamaan, keseimbangan ekologi dan maruah seseorang (Bader et al., 2017).

Pembangunan negara perlu dilihat secara holistik supaya situasi pembangunan dapat difahami secara menyeluruh. Brundtland Report (1987) mendefinisikan pembangunan sebagai memenuhi keperluan masa kini tanpa menjejaskan keperluan generasi masa depan. Menurut Coccia (2019) pembangunan ialah proses multidimensi yang membentuk sosial, ekonomi, teknologi untuk membantu kekayaan negara dan kesejahteraan masyarakat. Jurnal ini menekankan pada aspek kemiskinan kerana golongan miskin perlu memenuhi hak mereka supaya dapat keluar dari kemiskinan dan menjalani kehidupan seperti masyarakat yang normal (Imperatives, 1987).

Takrifan kemiskinan mengalami perubahan dari konsep miskin pendapatan ke konsep miskin multidimensi. Penyelidikan kemiskinan bukan sahaja untuk memberi tumpuan dalam membasmi kemiskinan, tetapi lebih kepada mengenalpasti pengukuran dan konsep kemiskinan. Konsep dan pengukuran kemiskinan merupakan subjek yang selalu dibincangkan oleh pemegang taruh dan pembuat dasar (Laily Paim, 2017). Ada yang mempertahankan pengukuran kemiskinan unidimensi lebih baik dari pengukuran kemiskinan multidimensi, menurut Walker (2015) hujahan seperti ini sering didebatkan kerana pemerintah negara tidak ingin dilihat gagal dalam membangunkan masyarakatnya dengan menunjukkan laporan kecemerlangan membasmi kemiskinan berasaskan pertumbuhan ekonomi.

Isu kemiskinan merupakan isu yang sukar dan subjektif untuk ditafsir. Pengukuran kemiskinan unidimensi hanya mengukur pendapatan sahaja terhadap individu yang miskin. Manakala pengukuran kemiskinan multidimensi mengukur kemiskinan selain aspek pendapatan seperti kesihatan, pendidikan, taraf hidup, jangka hayat dan kematian bayi. Tafsiran kedua-dua konsep ini menunjukkan perbezaan dari segi bagaimana individu yang miskin dilihat. Pengukuran unidimensi tidak menggambarkan secara jelas dalam mengukur individu yang miskin malah hal ini disokong oleh ahli ekonomi (Jamil & Mat, 2014). Menurut Sen (1999) kesejahteraan individu dapat dicapai dengan pemerksaan keupayaan seseorang yang miskin. Pemerksaan keupayaan manusia perlu dipertingkatkan dengan akses pendidikan, kesihatan, taraf hidup, pekerjaan dan segala usaha pembangunan manusia.

Oleh itu perspektif kemiskinan yang ditafsir secara menyeluruh akan membentuk pengukuran kemiskinan yang komprehensif.

Penerangan awal yang telah dibincangkan ini mengutamakan aspek dalam mentafsir erti pembangunan pada sudut holistik dan definisi kemiskinan. Perbincangan seterusnya akan menekankan pada definisi kemiskinan pada sudut unidimensi dan multidimensi. Malah pengukuran Indeks Kemiskinan Multidimensi juga akan diteroka dengan lebih lanjut.

2. Pentafsiran Kemiskinan Multidimensi

Tafsiran kemiskinan secara multidimensi dapat membantu dalam memantapkan pengukuran kemiskinan. Manakala konsep kemiskinan berdasarkan aspek pendapatan tidak jelas dalam menggambarkan realiti situasi yang dihadapi oleh orang miskin (Jamil & Mat, 2014). Kemiskinan juga bukan sahaja disebabkan masalah faktor kewangan tetapi disebabkan pelbagai dimensi yang menyebabkan individu miskin sukar untuk keluar dari kemiskinan (Walker, 2015). Tafsiran kemiskinan secara multidimensi juga ditafsirkan oleh United Nation (2010) kemiskinan adalah satu bentuk kekurangan seperti kelaparan, malnutrisi, kesihatan merosot, kekangan akses pendidikan, peningkatan kematian, gelandangan, diskriminasi sosial dan dipulaukan. Selain itu golongan miskin juga tidak berupaya untuk mempunyai hak

seperti masyarakat yang tidak miskin. Penindasan sering berlaku terhadap golongan miskin malah dieksploitasi kerana mereka tidak berupaya untuk membendunginya. Oleh itu perspektif kemiskinan perlu difahami untuk menentukan pengukuran kemiskinan. Bagi mengenalpasti isu kemiskinan secara multidimensi terdapat beberapa kategori kemiskinan yang akan dibincangkan dalam jurnal ini.

Jenis kemiskinan yang pertama adalah miskin tidak kelihatan (*invisible poor*), menggambarkan sesebuah keluarga yang mempunyai pendapatan yang cukup dan dapat menampung keperluan serta akses seperti pendidikan, air dan api (Talib, 2016). Sebaliknya, mereka tidak mempunyai simpanan untuk ditampung pada masa hadapan. Oleh itu mereka akan terdedah kepada pelbagai ancaman seperti muflis dan risiko dihalau oleh pemberi sewa kerana tidak mampu untuk membayar. Menurut laporan dari Khazanah Research Institute separuh dari pendapatan golongan berpendapatan rendah B40 Malaysia digunakan untuk berbelanja keperluan asas sahaja dan tidak berupaya untuk menyimpan (Hamid, Son, & Ismail, 2019). Golongan B40 juga mengalami masalah hutang berbanding kumpulan pendapatan yang lain seperti M40 dan T20. Faktor peningkatan kos sara hidup dan kadar peningkatan gaji yang perlahan memberi tekanan kepada golongan B40 untuk menyimpan duit (Record et al., 2019).

Bentuk kemiskinan yang seterusnya adalah golongan yang mudah terdedah (*vulnerable*) untuk jatuh miskin sebagai contoh warga emas, orang kurang upaya dan bapa tunggal (Talib, 2016). Golongan ini berhadapan dengan masalah untuk jatuh miskin kerana kekurangan yang dihadapi menyebabkan mereka sukar untuk mendapatkan pekerjaan ataupun bantuan dari pelbagai pihak. Sebagai contoh golongan tua di Malaysia mengalami masalah untuk mengakses bantuan kemiskinan hal ini kerana proses permohonan adalah rumit yang melibatkan penggunaan komputer (Rabi et al., 2019).

Kemiskinan yang seterusnya adalah miskin kronik dihadapi oleh seseorang yang berada dibawah paras garis kemiskinan untuk tempoh masa yang lama (Hulme et al., 2001). Lazimnya kemiskinan jenis ini diwarisi dari satu generasi ke satu generasi. Ketua isirumah yang tidak mampu untuk memenuhi keperluan asas seperti pendidikan, makanan, pakaian, rumah dan sebagainya akan kekal dalam kitaran ganas kemiskinan jika tiada tindakan yang akan berlaku untuk mereka keluar dari kitaran ganas kemiskinan. Kitaran ganas kemiskinan diasaskan oleh Nurkse pada tahun 1953 bagi merujuk kepada ketua isirumah yang miskin di negara sedang membangun. (Hashim et al., 2016).

Oleh itu kemiskinan merupakan bentuk yang merangkumi pelbagai sudut. Hal ini kerana kemiskinan tidak terhad pada aspek pendapatan sahaja. Ketepatan dalam menyasarkan golongan miskin amatlah penting agar program pembasmian kemiskinan dapat membasmi kemiskinan dengan berkesan.

3. Kepentingan Indeks Kemiskinan Multidimensi

Antara pengukuran kemiskinan yang terkini digunakan ialah Indeks Kemiskinan Mutldimensi (*Multidimensional Poverty Index*) merupakan pengukuran yang menekankan aspek kemanusiaan dengan mengukur dimensi pendidikan, kesihatan dan taraf hidup. Menurut Alkire & Foster (2011) IKM merupakan indeks kemiskinan mengukur siapa yang miskin. Malah IKM mengukur ketersisihan yang dialami oleh seseorang seperti malnutrisi ataupun kematian dan bukan sahaja pendapatan. IKM juga merupakan pengukur kemiskinan yang mampu mengukur merentas sempadan negara bukan sahaja

pada peringkat mikro (individu) malah makro (global) (Alkire & Foster,2011). Secara teknikalnya IKM akan mengukur bilangan individu yang mengalami ketersisihan dalam pelbagai aspek dan beberapa had ketersisihan dialami secara purata dalam sesuatu masa. Komponen IKM terdiri dari 3 dimensi dan 10 indikator yang setiapnya mempunyai pemberat untuk mengira nisbah. Menurut Alkire & Foster (2011) komponen dimensi IKM boleh diubahsuai mengikut keadaan sesebuah negara. Model komponen dimensi dipaparkan seperti di rajah 3:

Jadual 3: Indeks Kemiskinan Multidimensi

Dimensi Kemiskinan	Indikator	Ketersisihan isirumah
Pendidikan	Tempoh persekolahan	Tiada ahli isirumah menamatkan tempoh 5 tahun persekolahan.
	Kehadiran ke sekolah	Tiada ahli isirumah yang menghadiri ke sekolah dari tahun 1 ke 8.
Kesihatan	Kematian kanak-kanak	Jika ada kematian kanak-kanak dalam isirumah.
	Nutrisi	Jika ada ahli yang terdiri dari kategori dewasa dan kanak-kanak yang mengalami malnutrisi.
	Elektrik Air minuman	Rumah tiada bekalan elektrik.
Taraf hidup	Sanitasi	Tidak memiliki akses sistem air dalam rumah atau terpaksa mengambil air sejauh 30 minit perjalanan ke tempat sumber akses air.
	Lantai	Sistem tandas yang daif.
	Minyak masak	Lantai dibuat dari tanah, pasir atau najis.
	Perolehan aset	Isirumah memasak menggunakan kayu api, arang batu ataupun najis. Isirumah tidak memiliki lebih dari satu aset seperti radio, TV, telefon, basikal, motorsikal, peti ais, kereta ataupun traktor.

Sumber: Alkire & Foster (2011)

IKM mengandungi 3 dimensi utama iaitu kesihatan, pendidikan dan taraf hidup, individu yang diklasifikasikan sebagai miskin multidimensi jika individu mempunyai jumlah ketersisihan yang sama atau melebihi garis pemisah daripada 1/3 indikator. Setiap pemberat merujuk kepada kadar ketersisihan yang dialami oleh individu (Alkire & Foster).

Wabak Covid 19 memberi kesan berganda yang negatif secara multidimensi ke atas golongan miskin seperti dibuang kerja, kematian seorang penyara keluarga dan aspek negatif yang lain. Malah golongan miskin multidimensi ini amatlah berisiko untuk jatuh ke arah miskin yang lebih parah. Indeks Kemiskinan Multidimensi (IKM) mampu untuk mengenalpasti golongan terjejas dari Covid 19 ini. IKM dapat mengenalpasti individu yang mempunyai risiko untuk dijangkiti Covid 19 hal ini kerana salah satu dimensi dalam IKM untuk mengukur kemiskinan adalah kesihatan. Sebagai contoh penggunaan kayu api dan arang untuk memasak boleh menyebabkan pencemaran udara berlaku dalam rumah dan boleh mengganggu kesihatan ahli isirumah yang miskin (Alkire et al., 2020). Oleh itu penggunaan

pengukuran IKM dalam mengenalpasti orang miskin secara tepat boleh membantu dalam menjimatkan bajet kewangan negara dengan hanya mensasarkan program pembasmian kemiskinan ke arah golongan miskin multidimensi. Selaras dengan Matlamat Pembangunan Mampan (Sustainable Development Goals) untuk membasmi kemiskinan pelbagai bentuk menjelang 2030 maka IKM merupakan pengukuran terbaik dalam membentuk program pembasmian kemiskinan (UN DESA,2016).

4. Kesimpulan

Pentafsiran kemiskinan berasaskan perspektif multidimensi membantu dalam memahami isu kemiskinan dengan lebih holistik dan menyeluruh. Isu kemiskinan adalah berbentuk multidimensi terdiri dari faktor kemanusiaan (pendidikan, keupayaan, kesihatan dan taraf hidup) dan faktor pendapatan. Sedangkan isu kemiskinan dari perspektif unidimensi (pendapatan) tidak menggambarkan secara menyeluruh. Perancangan dalam pembasmian kemiskinan haruslah diteliti dengan sebaik mungkin agar bajet negara yang perlu disalurkan untuk usaha tersebut adalah optimum dan mengelakkan dari sebarang pembaziran. Hal ini sudah tentulah amat penting dalam memastikan ketepatan dalam membasmi kemiskinan. Oleh itu, IKM merupakan pengukuran kemiskinan yang mampu untuk mengukur secara multidimensi (kesihatan, pendidikan dan taraf hidup). Selaras dengan konsep keupayaan oleh Amartya Sen untuk memperkasakan pembangunan manusia iaitu pendidikan, kesihatan dan taraf hidup. Usaha untuk membasmi kemiskinan juga merupakan satu matlamat yang dituntut dalam Matlamat Pembangunan Mampan (Sustainable Development Goal) dalam menamatkan kemiskinan menjelang 2030.

5. Rujukan

- Alkire, S., & Santos, M. E. (2011). Training Material For Producing National Human Development Reports: The Multidimensional Poverty Index (MPI).
- Amartya Sen.(1999). Development As Freedom. United States: Alfred A. Knopf, Inc.
- Alkire, S., Dirksen, J., Nogales, R., & Oldiges, C. (2020). Multidimensional Poverty And COVID-19 Risk Factors: A Rapid Overview Of Interlinked Deprivations Across 5.7 Billion People. OPHI Briefing, 53.
- Coccia, Mario. (2019). Theories of Development. 10.1007/978-3-319-31816-5_939-1
- Christoph Bader, Sabin Bieri, Urs Wiesmann & Andreas Heinimann (2017) Is Economic Growth Increasing Disparities? A Multidimensional Analysis Of Poverty In The Lao PDR Between 2003 And 2013, The Journal Of Development Studies, 53:12, 2067-2085, DOI: 10.1080/00220388.2016.1251587
- Dr Zulkipli Omar. (2016). Kemiskinan Bandar. *Berita Harian*. https://www.mier.org.my/old/newsarticles/archives/pdf/DrZul22_08_2016.pdf
- Hamid, H. A., Son, G. H. W., & Ismail, S. (2019). Demarcating Households: An Integrated Income And Consumption Analysis.
- Hashim, A. T., Osman, R., & Badioze-Zaman, F. S. (2016). Poverty Challenges In Education Context: A Case Study Of Transformation Of The Mindset Of A Non-Governmental Organization. *International Journal Of Advanced And Applied Sciences*, 3(11), 40-46.
- Hulme, D., Moore, K., & Shepherd, A. (2001). Chronic Poverty: Meanings And Analytical Frameworks. *Chronic Poverty Research Centre Working Paper*, (2).
- Imperatives, S. (1987). Report of the World Commission on Environment and Development: Our common future. Accessed Feb, 10. Dimuat turun daripada Report of the World Commission on Environment and Development_ Our Common Future - A_42_427 Annex - UN Documents Cooperation Circles (ask-force.org)

- Jamil, N., & Mat, S. H. C. (2014). Realiti Kemiskinan: Satu Kajian Teoritikal. *Jurnal Ekonomi Malaysia*, 48(1), 167-177.
- Paim, Laily (2017) "Kemiskinan & Kerentanan": Penelitian Konsep Dan Pengukuran Dalam Era Revolusi Industri 4.0. [Inaugural Lecture]
- Rigg, J. (2015). *Challenging Southeast Asian Development: The Shadows Of Success*. New York, NY: Routledge.
- Record, R. J. L., Chong, Y. K., Teh Sharifuddin, S. B., Simler, K., Binti Ali Ahmad, Z., Harrison, D. H., & Bandaogo, M. A. S. S. (2019). *Malaysia Economic Monitor: Making Ends Meet* (No. 144194, Pp. 1-104). The World Bank.
- Rabi, Amjad & Mansor, Norma & Halimah, Awang & Kamarulzaman, Nurul. (2019). *Longevity Risk And Social Old-Age Protection In Malaysia: Situation Analysis And Options For Reform*.
- Talib, K. A. (2016). *Dilemma Kemiskinan: Falsafah, Budaya Dan Strategi (Poverty Dilemma: Philosophy, Culture And Strategies)*. *Akademika*, 86(2).
- UN DESA (2016), *The Sustainable Development Goals Report 2016*, UN, New York, <https://doi.org/10.18356/3405d09f-en>.

Eksplorasi Gabungan Tanah Liat Soneware dengan Kulit Telur dan Cengkerang Laut bagi Menghasilkan Formula Tanah Liat Metod Line Blend

Noor Mustaqim Bin Mohamed^{a*}, Shamsu Mohamad^b

^aPusat Pengajian Seni, Universiti Sains Malaysia, Malaysia

*Email: ba15110387@alum.ums.edu.my

^bPusat Pengajian Seni, Universiti Sains Malaysia, Malaysia

Abstrak

Kajian ini bertujuan untuk mengkaji gabungan tanah liat jenis *stoneware* dengan dua jenis sisa organik untuk menghasilkan jasad tanah liat bagi menghasilkan produk seramik. Kajian ini bertujuan untuk menguji kesesuaian campuran bahan yang terdiri daripada sisa kulit telur dan cengkerang laut untuk menghasilkan tanah liat yang berkualiti dan mempunyai ketahanan yang baik untuk menghasilkan produk seramik. Dalam pada itu, satu kerangka formula campuran dibuat berdasarkan metod *line blend* yang kemudian akan dilakukan ujikaji terhadap sampel bagi mengenalpasti kesesuaiannya. Kajian ini merupakan kajian studio yang melibatkan pengumpulan data kuantitatif yang juga menerapkan kaedah pemerhatian terhadap sampel kajian bagi menjalankan ujikaji fizikal seperti menguji kadar kecutan, plastisiti, ketahanan terhadap suhu dan ujikaji porositi dengan menggunakan standard ujikaji yang sesuai. Selain itu, kajian ini dianggap perlu bagi menguji kesesuaian gabungan sisa organik sebagai *opener* atau *filler* dalam sistem jasad tanah liat bagi menambah kekuatan serta sifat fizikal dan mekanikal seramik dalam menghasilkan produk seramik yang lebih baik. Dalam pada itu, kajian ini secara tidak langsung akan menguji teori kesesuaian campuran sisa organik dengan tanah liat untuk menghasilkan produk seramik.

Keywords: Tanah liat; Sisa organik; *Stoneware*; Seramik; *Line blend*; Cengkerang laut; Kulit telur,

1. Pengenalan

Tanah liat merupakan bahan utama yang digunakan dalam proses pembuatan seramik yang telah digunakan hampir di seluruh dunia sejak berzaman lagi. Tanah liat juga mempunyai pelbagai jenis serta karakternya yang tersendiri. Hal ini kerana, sifat fizikal tanah liat yang dipengaruhi oleh faktor kawasan dan juga geografi sekelilingnya. Tanah liat juga mempunyai sifat mudah dibentuk atau dikenali dengan sifat plastisiti dan akan menjadi keras apabila dikeringkan dan dibakar. Dengan terjadinya proses sebegini, maka terhasilah produk yang dinamakan sebagai tembikar atau kini lebih dikenali sebagai seramik.

Terdapat beberapa jenis tanah liat yang dikategorikan sebagai tanah liat sedia guna iaitu tanah liat jenis *earthenware* dan jenis *stoneware*. Kedua-dua jenis tanah liat ini boleh terus digunakan untuk menghasilkan seramik manakala jenis porselin pula perlu melalui proses campuran bahan-bahan lain yang terdiri daripada *ball clay* dan *bentonite*. Tujuan campuran tambahan bahan ini adalah untuk menambahkan lagi elemen plastisiti dalam tanah liat tersebut supaya mudah dibentuk serta mengekalkan bentuk yang dikenakan keatasnya sehingga proses pembakaran dan proses selanjutnya dilakukan. (Wahyu Gatot Budiyanto, dll,

2008). Selain itu, dalam sesebuah sistem jasad tanah liat, terdapat tiga komponen bahan yang perlu ada dan ianya mestilah wujud dalam jumlah dan kuantiti yang bersesuaian. Antara komponen bahan yang perlu ada dalam sebuah sistem jasad tanah liat ini termasuklah tanah liat, fluks dan pengisi yang mana bahan ini mestilah bebas dari segala bendasing yang akan menjejaskan sifat serta warna pada jasad apabila bertukar menjadi *bisqueware* iaitu setelah proses pembakaran (Allen Dinsdale, 1985).

2. Kajian Literatur

Pada masa kini, sisa organik seperti kulit telur ayam telah banyak dimanfaatkan dalam beberapa penyelidikan lain seperti kejuruteraan dan pembuatan bahan binaan. Sebagai contoh; batu-bata tanah liat yang juga merupakan salah satu bahan seramik yang digunapakai dalam industri pembinaan. Hal ini kerana wujudnya beberapa bahan kimia penting dalam sisa organik ini. Salah satu komponen utama yang ada pada kulit telur ini ialah kalsium karbonat (CaCO_3) yang mempunyai manfaat dan boleh diaplikasikan sebagai pengisi (*filler*) dan fluks dalam satu sistem jasad tanah liat (Nuchnapa Tangboriboon, dll, 2016). Hal ini telah membuktikan bahawa kalsium karbonat (CaCO_3) mempunyai kepentingan serta peranannya yang tersendiri dalam satu sistem jasad tanah liat bagi menambah baik sifat fizikal dan mekanikal sesuatu produk yang dihasilkan.

Selain itu, cengkerang laut juga telah menjadi sisa organik yang menarik tumpuan ramai pengkaji untuk membuat penelitian. Apa yang menarik mengenai cengkerang laut ini adalah, kandungan kalsium karbonat yang terkandung didalamnya iaitu sebanyak 95-99% yang mana ianya sangat sesuai digunakan sebagai pengisi (*filler*) dalam penghasilan konkrit dan terbukti berkesan dalam meningkatkan sifat mekanikal pada konkrit (Monita Olivia, dll, 2015). Selain itu, Penggunaan sisa cengkerang laut yang diaolah menjadi serbuk ini juga pernah digunakan dan dibuat penelitian sebagai mekanisme pengikat dalam komposit seramik untuk percetakan 'Binder-Jet 3D'. Hasil dari kajian tersebut telah membuktikan bahawa, kombinasi serbuk cengkerang laut sesuai digunakan sebagai bahan komposit untuk percetakan 3D Binder-Jet dalam jumlah yang terkawal (Singamneni S, Behera MP, Le Guen M, Zeidler H, 2018).

Berdasarkan kajian literatur yang telah diteliti, terdapat pembuktian bahawa gabungan dua bahan yang melibatkan pencampuran tanah liat dan sisa organik ini menunjukkan kesan serta hasil yang baik dalam meningkatkan sifat fizikal dan mekanikal produk yang dihasilkan. Selain itu, bahan ini juga dilihat mempunyai potensi untuk dibuat ujikaji pada tanah liat bagi menghasilkan produk seramik disamping dapat mengurangkan lambakan pembuangan sisa yang mengambil masa yang lama untuk terurai atau dilupuskan serta mengatasi masalah lambakan sisa organik bagi menjaga kelestarian alam sekitar. Namun, kajian ini akan memfokuskan pada penghasilan jasad tanah liat untuk pembuatan produk seramik dengan melakukan ujikaji fizikal. Justeru, langkah untuk menjalankan ujikaji gabungan sisa organik dengan tanah liat untuk menghasilkan satu formula tanah liat dilihat mempunyai kepentingan serta manfaat yang baik bagi mengembangkan lagi penerokaan bahan alam dan sisa boleh diolah yang lain dalam pembuatan produk seramik.

Oleh demikian, objektif utama kajian ini dijalankan adalah untuk membentuk formula gabungan tanah liat *stoneware* dengan sisa organik; cengkerang laut dan kulit telur ayam menggunakan metod *line blend*. Selain itu, kajian ini juga bertujuan untuk menganalisis ujikaji fizikal; kadar plastisiti, kecutan pengeringan, kecutan pembakaran dan kadar porositi pada sampel yang dibuat berdasarkan pemerhatian terhadap sampel yang dihasilkan.

3. Metodologi Dan Pengumpulan Data

Bagi mendapatkan data yang lebih tepat dan memenuhi standard ujikaji, kajian ini menggunakan kaedah kuantitatif yang juga menerapkan elemen pemerhatian sepanjang eksperimen dijalankan di studio seramik. Elemen pemerhatian dalam kajian ini digunapakai bagi meneliti perubahan sifat, karakter serta tindak balas fizikal yang berlaku terhadap sampel yang diuji yang kemudian akan direkod untuk dianalisis. Selain itu, kajian ini juga turut mengunapakai standard ujikaji yang sesuai bagi mendapatkan data yang lebih tepat serta memenuhi spesifikasi ujikaji fizikal bagi penghasilan formula jasad seramik.

Antara standard yang digunakan dalam kajian ini termasuklah; Standard National Indonesia (SNI 1966:2008) yang digunakan untuk menjalankan ujikaji kadar plastisiti pada setiap sampel formula tanah liat yang dihasilkan. Selain itu, ujikaji susut kering pula menggunakan Standard National Indonesia (SNI 15-0255-1984), ujikaji susut bakar menggunakan standard (SNI 15- 0255-1984), manakala ujikaji porositi menggunakan India standard (IS:3495 (Part-2)-1992, RA 2011).

3.1 Teoritikal: Gabungan Sisa Organik dan Tanah Liat *Stoneware* Menggunakan Metod *Line Blend*



Rajah 1: Teori pengembangan formula gabungan tanah liat dengan sisa organik; cengkerang laut dan kulit telur bagi menghasilkan tanah liat seramik. (Sumber: Noor Mustaqim Mohamed.)

Rajah 1 menunjukkan campuran bahan utama iaitu tanah liat dengan sisa organik; cengkerang laut dan kulit telur bagi menghasilkan satu jasad tanah liat. Bahan tersebut dikeringkan, dihancurkan menggunakan alat *ring grinder* kemudian ditapis menggunakan alat *sieve* berukuran 150 *micrometer*. Bahan tersebut kemudian dikeringkan di dalam alat pengering selama 24 jam bagi sebelum dicampur menggunakan kaedah campuran kering (*dry blend*) dengan mengaplikasikan metod campuran *line blend* bagi membentuk setiap formula yang dihasilkan.

3.2 Penyediaan Formula *Line Blend* Jasad Tanah liat dengan Sisa Organik

Sebelum memulakan ujikaji, pengkaji telah menyediakan formula campuran menggunakan metod *line blend* mengikut peratusan campuran bahan sisa organik yang berbeza. Sebanyak 26 formula telah dihasilkan terdiri dari bahan utama; tanah liat *stoneware*, cengkerang laut dan kulit telur ayam. Selain itu, penambahan beberapa bahan lain yang terdiri daripada *china clay*, *grog* dan juga pasir adalah sebagai bahan tambahan bagi membandingkan kualiti serta reaksi bahan yang biasa digunakan pembuat seramik dengan sisa organik kulit telur dan cengkerang laut. Selanjutnya, sebelum proses memulakan pencampuran bahan dan ujikaji, bahan-bahan yang berkaitan seperti tanah liat *stoneware*, cengkerang, kulit telur ayam, *china clay*, *grog* dan juga pasir dikeringkan, dihancurkan dan ditapis menggunakan sieve berukuran

150 micrometer. Selanjutnya, kajian ini akan menggunakan metod campuran *dry blend* bagi menghasilkan formula tanah liat.

Jadual 1: Formula Campuran Bahan Menggunakan Sistem Garis (*Line Blend*) 1 Kilogram.

					
(i) Tanah Liat <i>Stoneware</i>	(ii) Cengkerang Laut	(iii) Serbuk Kulit Telur	(iv) <i>Grog</i>	(v) Pasir Silika	(vi) <i>China Clay</i>

Sumber: Noor Mustaqim Mohamed.

Jadual 1 menunjukkan bahan-bahan yang telah diproses menjadi serbuk dan ditapis menggunakan *sieve* berukuran 150 *micrometer* untuk menghasilkan campuran jasad tanah liat *stoneware* dengan sisa organik menggunakan metod *line blend*.

Jadual 2: Formula Campuran Bahan Menggunakan Sistem Garis (*Line Blend*) 1 Kilogram.

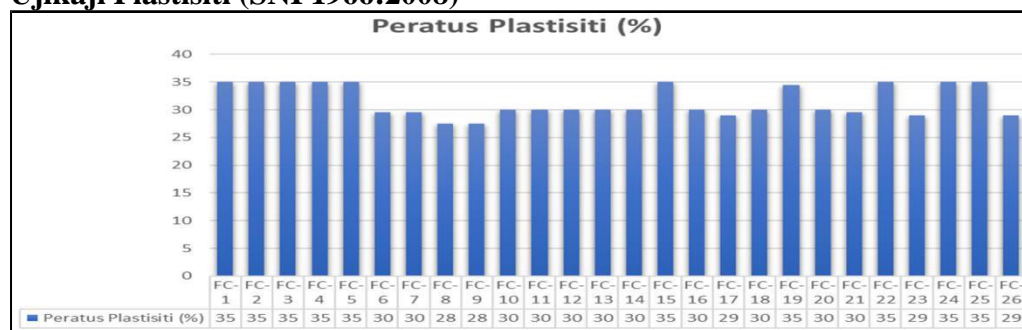
BAHAN	FORMULA CAMPURAN																									
	FC1	FC2	FC3	FC4	FC5	FC6	FC7	FC8	FC9	FC10	FC11	FC12	FC13	FC14	FC15	FC16	FC17	FC18	FC19	FC20	FC21	FC22	FC23	FC24	FC25	FC26
T.L-SW	1000g	900g	900g	900g	900g	800g	900g	950g	900g	900g	900g	900g	800g	800g	900g	800g	750g	750g	650g	650g	700g	600g	500g	600g	600g	400g
K-T	-	100g	-	50g	-	-	-	-	-	-	50g	-	100g	50g	20g	50g	30g	30g	300g	-	100g	-	-	400g	100g	200g
CKG-L	-	-	100g	50g	-	-	-	-	-	50g	-	50g	50g	100g	60g	50g	150g	150g	-	30g	100g	400g	100g	-	300g	100g
GROG	-	-	-	-	100g	50g	-	-	50g	50g	-	-	50g	50g	10g	50g	40g	40g	50g	50g	50g	-	-	-	-	100g
PASIR	-	-	-	-	-	50g	100g	50g	-	-	50g	50g	-	-	10g	50g	30g	30g	-	-	50g	-	-	-	-	100g
CHINA CLAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400g	-	-	100g
JUMLAH (KG)	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg	1Kg

Sumber: Noor Mustaqim Mohamed.

Jadual 2 menunjukkan formula bahan yang dihasilkan bagi membentuk 26 sampel jasad tanah liat. Setiap formula yang dihasilkan mengandungi nisbah campuran berbeza bagi menguji kadar peratusan campuran yang terbaik untuk dijadikan sebagai jasad tanah liat. Berat setiap formula campuran adalah 1 kilogram atau bersamaan 1000gram.

4.0 Keputusan dan Perbincangan

Ujikaji Plastisiti (SNI 1966:2008)



Graf 1: Keputusan Ujikaji Plastisiti.

Graf 1 diatas menunjukkan hasil ujikaji plastisiti bagi 26 sampel formula campuran yang diuji. Sampel FC-1, FC-2, FC-3, FC-4, FC-5, FC-15, FC-22, FC-24 dan FC-25 menunjukkan kadar peratusan plastisiti air yang paling tinggi iaitu 35% bagi berat tanah liat kering 1000g,

jika dibandingkan dengan sampel ujikaji yang lain. Berdasarkan graf ini juga, telah dikenalpasti peratusan batas maksimum air yang dicampur pada tanah liat (FC) ini adalah sebanyak 35% iaitu bersamaan dengan 350g air. Manakala, batas peratusan air paling minimum bagi berat tanah kering 1000g pula adalah sebanyak 27.5%. Dari hasil ujikaji ini juga dapat disimpulkan bahawa bahan-bahan campuran yang ditambah dalam jasad tanah liat sangat mempengaruhi batas plastisiti serta keboleh kerja tanah liat bagi menghasilkan seramik.

Ujikaji Kecutan Pengeringan (SNI 15-0255-1984)



Graf 2: Keputusan Ujikaji Susut Kering.

Berdasarkan graf 2 diatas, 14 sampel (FC) mencatatkan peratusan kadar susut kering yang paling tinggi iaitu sejumlah 7-9% penyusutan. Manakala, 12 sampel (FC) lainnya mencatatkan peratusan kadar susut kering yang sederhana iaitu antara 4-5% kadar penyusutan. Berdasarkan dapatan ini juga, pengkaji mendapati bahawa sampel FC-3 menunjukkan peratus kadar susut paling rendah iaitu sebanyak 4%. Perbezaan sebanyak 4% kadar susut kering daripada FC-1 dan FC-3. Campuran serbuk cengkerang laut sebanyak 10% telah berupaya mengatasi kadar susut kering tanah liat (FC) ini.

Ujikaji Kecutan Pembakaran (Suhu 1000°C) (SNI 15- 0255-1984)

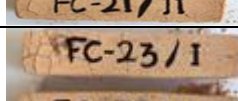



Graf 4: Keputusan Ujikaji Susut Bakar Suhu 1000°C.

Berdasarkan graf 4, kadar susut bakar paling rendah bagi suhu 1000°C ialah sampel FC-2, FC-3, FC-6, FC-7, FC-19, dan FC-25. Kesemua sampel ini mencatatkan kadar peratusan susut bakar antara 4 hingga 5%. Manakala FC-3 menunjukkan hasil kadar susut paling rendah iaitu sebanyak 4%. Nilai susut bakar sederhana pula adalah sebanyak 6 hingga 8%, dan telah dikenalpasti pada sampel FC-5, FC-10, FC-12, FC-13, FC-14, FC-15, FC-16, FC-17, FC-18, FC-20, FC-21, FC-22, FC-23, FC-24 dan sampel FC-26. Kadar kecutan paling tinggi bagi pembakaran suhu 1000°C adalah sampel FC-1, FC-4, FC-8, dan FC-11. Setiap sampel tersebut mencatatkan kadar susut yang tinggi iaitu antara 9 hingga 10%. Dari hasil ujikaji ini dapat disimpulkan bahawa gabungan sisi organik pada sampel FC-3 yang mengandungi 10% serbuk cengkerang laut menunjukkan reaksi yang positif dalam

mengurangkan kadar kecutan apabila dibakar pada suhu 1000°C.

Jadual 3: Hasil Ujikakji Pembakaran Suhu 900°C Dan 1000°C.

FORMULA	SAMPEL BAR	ULASAN	FORMULA	SAMPEL BAR	ULASAN
FC-1		Sampel Dalam Keadaan Sangat Baik.	FC-2		Sampel Merekah Dan Pecah
FC-3		Sampel Dalam Keadaan Sangat Baik.	FC-4		Sampel Merekah Dan Pecah
FC-5		Sampel Dalam Keadaan Sangat Baik.	FC-6		Sampel Dalam Keadaan Sangat Baik.
FC-7		Sampel Dalam Keadaan Sangat Baik.	FC-8		Sampel Dalam Keadaan Sangat Baik.
FC-9		Sampel Merekah Dan Pecah	FC-10		Sampel Merekah Dan Pecah
FC-11		Sampel Dalam Keadaan Sangat Baik.	FC-12		Sampel Dalam Keadaan Sangat Baik.
FC-13		Sampel Merekah Dan Pecah	FC-14		Sampel Merekah Dan Pecah
FC-15		Sampel Merekah Dan Pecah	FC-16		Sampel Merekah Dan Pecah
FC-17		Sampel Merekah Dan Pecah	FC-18		Sampel Dalam Keadaan Sangat Baik.
FC-19		Sampel Merekah Dan Pecah	FC-20		Sampel Merekah Dan Pecah
FC-21		Sampel Merekah Dan Pecah	FC-22		Sampel Merekah Dan Pecah
FC-23		Sampel Merekah Dan Pecah	FC-24		Sampel Merekah Dan Pecah
FC-25		Sampel Merekah Dan Pecah	FC-26		Sampel Dalam Keadaan Sangat Baik.

Sumber: Noor Mustaqim Mohamed.

Jadual 3 menunjukkan hasil tindak balas selepas proses pembakaran biskut bagi suhu 1000°C dan suhu 900°C yang dibiarkan selama 24 jam pada suhu bilik. Hasil pemerhatian mendapati bahawa 16 dari 26 sampel yang dibakar telah retak dan pecah manakala 10 sampel yang lain berada dalam keadaan yang baik. Dari hasil ujikakji pembakaran ini juga telah membuktikan bahawa berlaku reaksi atau tindak balas yang ketara terhadap sampel formula campuran yang mengandungi sejumlah cerbuk kulit telur yang menyebabkan jasad seramik retak dan pecah selepas proses pembakaran. Ini menunjukkan bahawa campuran kulit telur tidak

meningkatkan kekuatan fizikal dan mekanikal jasad seramik apabila dibakar pada suhu 1000°C. Manakala, sampel yang mengandungi serbuk cengkerang laut pula menunjukkan kesan serta reaksi positif dan tidak menjejaskan sifat fizikal seramik selepas pembakaran.

Ujikaji Porositi (Suhu 1000°C) (IS:3495 (Part-2)-1992, RA 2011)



Graf 6: Keputusan Ujikaji Porositi suhu 1000°C.

Graf 5 menunjukkan hasil ujikaji kadar porositi terhadap sampel (FC) bagi suhu pembakaran 1000°C. Dari hasil ujikaji, mendapati bahawa sampel FC-7 mencatatkan kadar porositi yang paling tinggi iaitu sebanyak 23.12% kadar serapan cecair. Dari hasil ini dapat dilihat bahawa telah berlaku peningkatan kadar porositi apabila semakin meningkat suhu pembakaran dan ianya dipengaruhi bahan yang dicampur dalam jasad tanah liat. Jika dilihat, sampel FC-7 mengandungi 100gram pasir bagi campuran tanah liat 900gram. Selain daripada itu, dari hasil ujikaji ini juga dapat dilihat bahawa sampel (FC) yang mencatatkan kadar porositi yang paling rendah ialah FC-12 iaitu sebanyak 16.78%. Walaubagaimanapun, kadar porositi bagi sampel FC-12 masih pada tahap yang baik bagi menyerap cecair atau gerlis bagi membentuk permukaan yang berlicau. Selain itu, sampel (FC) yang lain menunjukkan kadar peratusan porositi yang sederhana baik dan masih pada tahap yang terkawal.

5. Kesimpulan

Kesimpulannya, hasil kajian ini telah membuktikan tidak semua campuran daripada bahan sisa organik khususnya yang mempunyai kandungan kalsium karbonat yang tinggi mampu meningkatkan kadar kekuatan fizikal serta kekuatan mekanikal sesuatu jasad seramik. Ujikaji ini juga telah membuktikan bahawa dengan menghasilkan formulasi jasad seramik yang mengandungi 10% kandungan serbuk cengkerang laut mampu untuk mengatasi masalah kecutan kering dan bakar pada tahap yang paling optimum disamping dapat meningkatkan kadar kekuatan fizikal seramik apabila dibakar pada suhu 1000°C. Namun, kadar batas plastisiti juga perlu dikawal dengan teliti agar tanah liat yang dihasilkan bersesuaian dengan produk atau teknik yang akan digunakan.

Hasil ujikaji mendapati bahawa hanya 10 dari 26 sampel yang diuji memenuhi syarat sebagai tanah liat yang sesuai untuk dijadikan sebagai jasad membuat seramik. Dari hasil analisis serta ujikaji pada semua 26 sampel yang dilakukan, 16 sampel tidak melepasi prasyarat sebagai tanah liat untuk membuat seramik kerana faktor fizikal yang tidak menyokong untuk membentuk satu jasad yang baik dari sudut plastisiti dan juga fizikal selepas proses pembakaran *bisque*. Hasil ujikaji mendapati bahawa 16 sampel yang mengandungi campuran serbuk kulit telur merekah dan pecah selepas dibiarkan selama 24 jam pada suhu bilik. Hal ini membuktikan bahawa kulit telur ayam tidak sesuai dijadikan sebagai bahan campuran dalam jasad tanah liat khususnya dalam pembuatan prosuk seramik.

Disamping itu, dengan terhasilnya formula-formula pengolahan dan pembentukan jasad tanah liat yang mempunyai ciri ketahanan serta kekuatan fizikal yang baik, maka para pengusaha seramik, pelajar dalam jurusan seramik mahupun mereka yang mempunyai hobi dalam menghasilkan produk seramik boleh menggunakan formula-formula penghasilan jasad tanah liat yang dihasilkan melalui kajian ini.

6. Rujukan

- Allen Dinsdale (1986), Chichester, Pottery science: materials, process[es], and products, Chichester, West Sussex, England: New York: E. Horwood; Halsted Press (distributor).
- Effendi, M. D. (2010). Pemanfaatan Tungku Berbahan Bakar Lpg Dan Modifikasi Ruang Bakar Untuk Pembakaran Keramik Ukir Berglasir. *Jurnal Energi Dan Lingkungan*, 6(1). <https://doi.org/10.29122/elk.v6i1.1561>
- IS Detail. (2013). Retrieved January 14, 2021, from Bis.gov.in website: https://www.services.bis.gov.in:8071/php/BIS/bisconnect/pow/is_details?IDS=MTkyNDg%3D
- Mohd Rizal Khatib, Nik Nur Diana Nik Azmi. (2018). Kajian Kekuatan Tanah Liat Sebagai Bahan Binaan. Jabatan Kejuruteraan Awam. Politeknik Sultan Azlan Shah.
- Mustakimah Mohamed, Suzana Yusup, Saikat Maitra. (2012). Decomposition Study Of Calcium Carbonate In Cockle Shell. *Journal of Engineering Science and Technology* Vol. 7, No. 1 (2012) 1 – 10.
- Michael Cerv. (2021, January 14). MICHAEL CERV POTTERY. Retrieved January 14, 2021, from Blogspot.com website: <http://mikepottery.blogspot.com/2015/>.
- Noor AzalinaKhalil, Zarina Syuhaida Shaarani, Mohamad Norizham Hamzah (2014). Kajian Campuran Tanah Liat Dan Kulit Kerang Dalam Menstabilkan Tanah. Politeknik Tuanku Sultanah Bhiyah, Kulim Hi-tech Park, Kedah.
- Nuchnapa Tangboriboon1, Sopita Moonsri, Atima Netthip dan Anuvat Sirivat. (2016). Innovation of Embedding Eggshell to Enhance Physical-Mechanical-Thermal Properties in Fired Clay Bricks via Extrusion Process. 2nd International Conference on Green Design and Manufacture 2016, Volume 78.
- Singamneni S, Behera MP, Le Guen M, Zeidler H (2018). Mechanism of Bonding in Seashell Powder Based Ceramic Composites Used for Binder-Jet 3D Printing. *Bioceram Dev Appl* 8: 108. DOI: 10.4172/2090-5025.1000108.
- Standar Nasional Indonesia. (1966). Retrieved from <http://sni.litbang.pu.go.id/image/sni/isi/sni-1966--2008.pdf>
- Whayu Gatot Budiyanto, Sugihartono, Rohmat Sulistya, Fajar Prasudi, Taufik Eko Yanto. 2008. *Kriya Keramik SMK*. Jilid 1 & Jilid 2. Jakarta. Direktorat Pembinaan Sekolah Menengah Kejuruan, Depeartemen Pendidikan Nasional.

Islamic Finance and Sustainable Finance: A Convergence?

Anas Budiharjo^{a,b,*}, Nor Asmat Ismail^{b,*}

^aIslamic Economics Department, Faculty of Economics and Business, Universitas Brawijaya,
Indonesia

*Email: anasbudi@ub.ac.id

^bSchool of Social Sciences, Universiti Sains Malaysia, Malaysia

*Email: norasmat@usm.my

Abstract

Islamic finance (IF) is financial activities or transactions that are in accordance with Islamic law (Shariah). It concerns with socio-economic justice and has a full system of ethical values. Meanwhile, Sustainable Finance (SF) refers to any form of financial service integrating Environmental, Social, and Governance (ESG) aspects into the business or investment decisions for the long-lasting benefit of clients, stakeholders, society, and environment (Edwards et al., 2019; Krauss et al., 2016; Schoemaker, 2017; Swiss Sustainable Finance, 2019). Nowadays, people are more aware of their responsibilities toward the environment and society. Moreover, the covid-19 pandemic heightens their awareness of balancing the environmental, economic, and social dimensions. Therefore, these systems (IF and SF) are more widely accepted and developed by global industry players and policymakers in creating comprehensive development through financial facilitation. This study aims to explore the convergence of Islamic finance and sustainable finance, specifically from their basic features and principles. This research is based on desk-based research and uses the qualitative approach for the analysis of the literature. The paper found that there are convergences of IF and SF, namely: (1) concern both for people and planet; (2) preserving the interest of the next generation; (3) long-term orientation; (4) ethical values; (5) economic well-being; (6) inclusive and sustainable development. Finally, the study concluded that the SF framework embodies many elements from Shariah, which is a basis of the Islamic financial system. Hence, IF and SF are in consonance. The two concepts bring common goals and missions for society and the environment. Moreover, the Islamic financial system already contains SF's essential principles, either implicitly or explicitly.

Keywords: Islamic Finance; Sustainable Finance; Convergence; Shariah

1. Introduction

The world faces two crises that are different in aspects. However, they are interrelated. They are the financial crisis and the environmental crisis. Today, the financial crisis is even worse than the 2008 crisis due to the Covid-19 pandemic. Meanwhile, the pandemic has positive environmental impacts such as improving air quality, reducing emission, lessening water pollution, and negative impacts such as increasing medical waste, otherwise harming the environment if not treated correctly (Rume & Islam, 2020). The relationship between the financial crisis and the environmental crisis opens the opportunities and threats in achieving economic and environmental sustainability. If in dealing with the financial crisis, the policy is directed into environmental initiatives through a "green new agreement," so the financial crisis's consequence could be part of environmental crisis mitigation. Otherwise, it could exacerbate the environmental crisis (Tienhaara, 2010).

For that reason, there are calls for alternative financial systems that offer a just socio-economic system, a strong commitment to environmental sustainability, and society's well-being. The global industry players and policymakers adopt IF and SF systems in creating comprehensive and sustainable development, primarily through financial facilitation. Islamic finance is implemented not only in Muslim countries but also in other countries. Meanwhile, according to Sustainable Banking Network's (SBN) Progression Matrix as of June 2019, 20 countries have comprehensive implementation actions towards SF development, and even two countries, China and Indonesia, are classified as countries in the maturing stage in the implementation (Sustainable Banking Network, 2019).

Unfortunately, to the author's best knowledge, there is limited study regarding the convergence of IF and SF. Therefore, it is necessary to perform a study to explore the convergence of IF and SF, especially from their basic features and principles.

2. Theoretical Analysis

2.1 Islamic Finance and Its Basic Principles

Islamic finance has been defined differently by some scholars. According to Rosli, Islamic finance is defined as a field of study and professional practice that concerns the Shariah compliance status of, inter alia, economics, banking, takaful, asset and investment management, unit trust, wealth planning activities, and business. Muhammad Ayub (2007) said that Islamic finance is conceived as finance in consonance with the ethos and value system of Islam. Thus, Islamic finance is financial activities, products, or transactions according to Islamic law (Shariah).

Furthermore, the main objective of Islamic Finance is to achieve *maslahah* (welfare and public interest) and *Maqashid* Shariah (the objectives of Shariah). *Maqashid* Shariah consists of five objectives of protection that are (1) protection of faith (*hifz ad-din*), (2) protection of life (*hifz an-nafs*), (3) protection of intellect (*hifz an-aql*), (4) protection of dignity (*hifz al-nasl*), and (5) protection of wealth/property (*hifz al-maal*). The Shariah scholars also propose that the protection of the environment (*hifz al-bi'ah*) is seen as part of *Maqashid Shariah* with their various arguments (Al-Qaradhawi, 2001).

Meanwhile, scholars and researchers vary when addressing the principles of Islamic finance. Some scholars say that there are five principles, the others say there are six principles, yet the essence is the same. Still with the same essence, in this study, the author categorizes Islamic finance principles into two categories, namely the core principles and the ethical principles.

There are six core principles of the Islamic financial system, as follows:

1. Prohibition of *riba*

Riba means excess, increase, expansion, or growth. Technically, it means an amount of money that must be paid by the debtor to the creditor along with the principal loan, as a condition of the loan, or as payment for an extension of the loan deadline. The additional payment is considered *riba* if it is predetermined or fixed at the time of contract by the creditor as a condition of the debt (Al-Bukhari, 2002, Hadith no. 2392).

2. Avoidance of *gharar*

Gharar means uncertainty, deceit, fraud, danger, or hazard that might lead to destruction and loss. Technically, it is interpreted as the uncertainty of one or both parties over the substance or the existence of the contract's object at the time of contract. Any form of financial

transactions containing extreme *gharar* (*gharar fahish*) or excessive uncertainty, such as speculation or gambling (*maisir*), is forbidden.

3. Profit and loss sharing

Islam promotes the partnership contract between the capital owners and the skill owner. The providers of capital are encouraged to become investors instead of creditors. Thus, profit-loss sharing means the profits or losses that may arise from an economic or business activity are shared among the parties (Kettell, 2011).

4. The engagement in real economic activities

Every financing in an Islamic financial system generates real assets as a result of forbidding interest-bearing loans, encouraging profit-loss sharing, and promoting trading mechanisms (Usmani, 1998). As it is practised in the conventional system, interest creates “fake” money without producing real goods in the same quantity. On the contrary, profit, which is promoted by Islam, is gained through real economic activities such as business, partnership, or sale that deal with goods and services.

5. Creating money from money is prohibited.

From the Islamic point of view, money is not considered a commodity used for a price. Therefore, using money itself as a tool to make a profit through fixed interest payments is prohibited. Islam recognizes money as a commodity of exchange and not a commodity in itself (Mohsin, 2011).

6. Shariah approved activities.

In Islamic finance, only business activities that comply with Shariah principle (*halal*) are allowed to do so. For example, Islam permits selling, trade, service, custody, and social activities such as *zakat*, *infaq*, or *waqf*. On the other side, Islam prohibits activities or businesses dealing with *haram* (unlawful) commodities such as alcohol, pork, and pornography (Quran, 5: 3; 5: 90; 4: 43; 2: 219; 17: 32). According to Ismal (2010), the macro implication of *halal* concept both in objects and transactions in Islam is achieving social stability and environmental sustainability.

Furthermore, there are three ethical principles of Islamic finance, as follows:

1. Fair and transparent financial dealings

Dealings or transactions in Islamic finance must be conducted with the full mutual consent of the parties as per Quranic provision (Quran, 4:29). In this system, parties' mutual consent is the basis for the formation of a contract, and therefore, contract under coercion is prohibited.

2. Avoidance of forbidden activities

The purpose of all prohibitions in Shariah, is to ensure the existence of *maslahah* (public welfare or public interest) and eliminate harm. The objective of Shariah is to facilitate ease and to remove hardship for human beings. As written in Islamic legal maxim (*al-qawa'id al-fiqhiyyah*) “Harm is to be eliminated (*al-darar yuzal*)” (Lahsasna, 2011). It means that all activities that can harm and threaten humans' survival are absolutely against Shariah principles. Investing in businesses that are considered unethical or immoral, such as businesses that actively exploit natural resources unnecessarily, businesses that exploit cheap labour to pursue material profits, or businesses that pollute water and air, are also prohibited.

3. Commitment to Islamic values

The Islamic values in the financial sector include *ihsan* (excellence), *ukhuwwah* (brotherhood), *'adalah* (justice), *maslahah* (public welfare), *tawazun* (balance), *khalifah* (trustee), *syumuliah*, (universalism) and *rahmatan lil alamiin* (a mercy to all creation). For example, the application of *ihsan*, which means doing the best or excellence, in the financial aspect such as proper management and planning, smart investments, good governance, environmentally-friendly business, CSR (Corporate Social Responsibility), charity activities through *zakat*, risk management and so on. Furthermore, *rahmatan lil alamin* or mercy to all

creation is defined as a principle that aims to protect the well-being of all and protect the environment, including animals and plants, and maintaining the balance of life on earth. In the financial sector, this principles' spirit is found in the concept of Sustainable Finance, Green Financing, Climate Financing, Green Banking, SRI (Socially Responsible Investment), Circular Economy, Socially Inclusive Economy, and so on.

2.2 Sustainable Finance and Its Basic Principles

Sustainability focuses on meeting the present's needs without compromising future generations' ability to meet their needs. It consists of three pillars, namely: economic, environmental, and social. The concept is also known as the Triple Bottom Line (TBL), a sustainability-related construct invented by Elkington (Elkington, 1997). Furthermore, these TBL dimensions are known as Triple-P or 3Ps: people, planet, and profits. Sustainability is about balancing economic sustainability, social sustainability, and environmental sustainability (Dalibozhko & Krakovetskaya, 2018; Elkington, 1997; Slaper, 2011).

Furthermore, Prof. Dirk Schoenmaker (2019) from the University of Rotterdam argued that there are always interactions between economy, society, and environment. Figure 1 below shows the framework for managing sustainable development. Following Rockström and Sukhdev (2016), he classifies Sustainable Development Goals (SDGs) according to the levels of the economy, the society, and the environment. Nevertheless, he stresses that the SDGs levels are interrelated. For example, a reasonable income and proper work for all (level of the economy) contribute to achieving the societal goals (level of society). Through living wages, households can purchase food, reach enough education and health care for the families. Then, sustainable consumption, production, and sustainable cities are instrumental in combatting climate change (level of the environment).

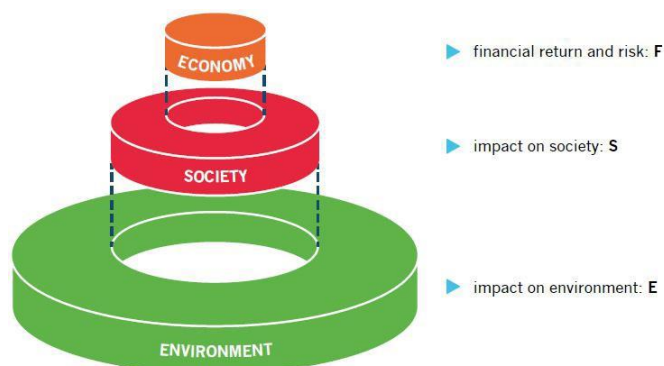


Figure 1: Managing Sustainable Development

Source: Schoenmaker (2017)

Sustainability in the financial and economic sectors is related to other terminologies such as Sustainable Finance, Circular Economy, Green Financing, SRI (Socially Responsible Investment), Climate Financing, Socially Inclusive Economy, Impact Investing, and Socially Inclusive Economy. Afterwards, sustainable finance has become a global trend in financial institutions that support sustainable development implementation. The emergence of sustainable finance has received a wide response from many institutions and countries.

Sustainable finance relates to any form of financial service including investment, accounting, banking, trading, insurance, and financial reporting that goes beyond business by integrating

environmental, social, and governance (ESG) aspects into the business or investment decisions for the long-lasting benefit of clients, stakeholders, and society at large. It is also known as long-term-oriented financial decision-making that integrates environmental, social, and governance aspects (Edwards et al., 2019; Krauss et al., 2016; Schoenmaker, 2017; Swiss Sustainable Finance, 2019). Otoritas Jasa Keuangan Indonesia (OJK) defines sustainable finance in Indonesia as comprehensive support from the financial service industry to achieve sustainable development resulted from a harmonious relationship between economic, social, and environmental interests (Peraturan Otoritas Jasa Keuangan Nomor 51 /POJK.03/2017, 2017).

There are several definitions of sustainable finance. However, it was agreed on the basic features of the concept. *First*, sustainable finance relates to any form of financial services integrating environmental, social, and governance (ESG) criteria into the business or investment decisions. To some extent, sustainable finance is a means to operationalize sustainable development in the financial sector. *Secondly*, sustainable finance is considered a long-term financial and investment approach as it derives from the meaning of the word sustainable, which indicates that something persists or continues for a long time (Krauss et al., 2016). Therefore sustainable finance, in this study, refers to ESG features and related risks and opportunities. It does not represent the concept of financial sustainability alone. The financial instrument that falls into this category includes green bonds or green *sukuk*, sustainable funds, active ownership, impact investing, green banking, and microfinance.

Furthermore, sustainable finance framework aims to foster economic growth, social inclusion and environmental preservation. Through this framework, financial institutions are expected to promote economic growth and address social and environmental problems such as poverty and climate change (Shidiq, 2020). According to OJK, the principles of sustainable finance program in Indonesia comprise of the following: (1) responsible investments; (2) sustainable business strategy and practice; (3) management of social and environmental risk; (4) governance; (5) Informative communication; (6) inclusive; (7) development of priority sectors; (8) coordination and collaboration (Peraturan Otoritas Jasa Keuangan Nomor 51 /POJK.03/2017, 2017).

Therefore, from the above description, it can also be concluded that the basic principles of sustainable finance are: (1) ESG (environmental, social, and governance) integration into business or investment decisions; (2) long-term financial and investment approach; (3) responsible and ethical financing; (4) development of priority economic sector; (5) coordination and collaboration.

3. Research Methodology

This research is based on desk-based research and uses the qualitative approach for the analysis of the literature. Desk research is the collection of secondary data from internal sources, including from the internet, libraries, government organizations, trade associations, and published reports. This is often used at the beginning of the study as a stage-gate to see if more costly primary research is justified (Hague, 2006). This research uses literature in the area of Islamic finance, Islamic Law (Shariah), Maqasid Shariah, and sustainable finance. Moreover, it uses Arabic sources (*turats*) and the reading of the Quranic texts, Hadist (*nushus*).

4. Results

SF is designed to bring together economic interests and environmental sustainability, expand access for the poor to escape poverty, and uphold justice. This paradigm's emergence considers that social and environmental problems have not been included in economic calculations so far. The desire to generate profits should not lead to low concern and commitment to protect and preserve the environment and make a better social life. IF is also creating inclusive and sustainable development through financial facilitation with profit-sharing and interest-free concepts. Moreover, IF concerns promoting social welfare and justice, equitable distribution of wealth, and prohibition of activities such as *riba* (commercial interest), exploitation activities, and other illegal contracts. Shariah prohibits the elements that may lead to injustice, exploitation, and enmity among contracting parties.

From their features, it is found that both IF and SF put equal concern both for people and the planet. SF gives priority to the environment. Meanwhile, Shariah also gives great emphasis on the environment and the proper use of natural resources. It prohibits extravagance and economic activities that exploit natural resources unnecessarily, exploit cheap labour to pursue material profits or businesses that pollute water and air. In line with *khalifah's* concept, humans as a *khalifah* (trustees) should utilize the planet's resources as trustees and give protection to all creation (*rahmatan lil alamin*). In addition, the SF's goals in the social dimension, including ensuring health and safety, human rights, fair labour practices, and decent works, are aligned with Shariah's objectives (Adam et al., 2019).

From the basic principles mentioned above, it can be found that the two concepts bring shared similarities and convergence. The table below explains the convergence of IF and SF from their basic features and principles.

Table 1: The elements of convergence

Sustainable Finance	Islamic Finance	The Convergences
ESG integration	<i>Maslahah, Rahmatan lil-alamiin, Khalifah</i> , halal commodities and transaction, <i>hifz al-maal, hifz al-bi'ah, al-darar yuzal, tawazun</i>	✓ Concern both for people and the planet ✓ Preserving interest of the next generation
Long-term financial and investment approach	Profit and loss sharing, Shariah approved activities (<i>waqf, sukuk</i>)	✓ Long-term orientation
Responsible and ethical financing	Commitment of Islamic values, fair and transparent financial dealings	✓ Ethical values
Development of priority economic sector	The engagement in real economic activities, creating money from money is prohibited.	✓ Economic well-being
Coordination and collaboration	<i>Ukhuwwah</i> (brotherhood), partnership, profit and loss sharing	✓ Inclusive and sustainable development

From the table above, it is obtained that there is at least six convergence of SF and IF. They are (1) concern both for people and planet; (2) preserving the interest of the next generation;

(3) long-term orientation; (4) ethical values; (5) economic well-being; (6) inclusive and sustainable development. Furthermore, there are several Islamic financial contracts (*akad*) and instruments that support the SF agenda. These instruments prove that the Islamic financial system contains the essential features and principles of SF.

Table 2: Islamic contract (*akad*) and instruments that support SF agenda

SF's Principles	Contracts and Instruments in IF
ESG integration	Micro-financing, zakat, <i>infaq</i> , <i>shadaqa</i> , waqf, sukuk
Long-term financial and investment approach	<i>Waqf</i> , <i>Musharakah</i> , Sukuk
Responsible and ethical financing	<i>Musyarakah</i> , <i>Mudharabah</i> , <i>Salam</i> contract, <i>khiyar</i>
Development of priority economic sector	<i>Bai'</i> , <i>Muzara'ah</i> , <i>waqf</i> , micro-financing
Coordination and collaboration	Micro-takaful, <i>musyarakah</i> , zakat, <i>infaq</i> , waqf

To this end, essentially, the SF embodies many elements from Shariah or Islamic law. There is a close relationship between the goals of Shariah (*maqashid Shariah*) and what the SF does. The figure below describes the relationship between IF, SF, and Shariah. The figure describes that Shariah is a basis of the Islamic financial system and part of the principles of SF already exists in the Islamic financial system. The principles of SF are mostly captured in the Shariah. However, there are parts of differentiation in their features, such as the prohibition of *riba* and *gharar*, profit-sharing concepts, and money views, that do not address in SF framework.

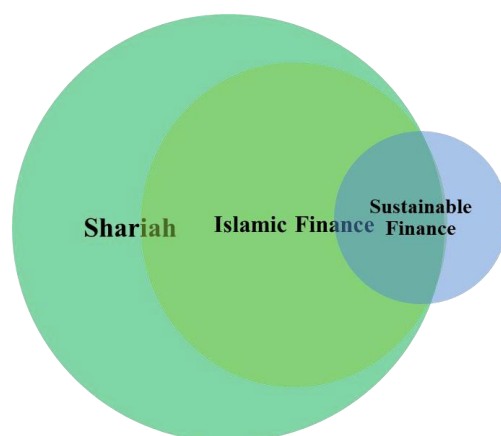


Figure 2: The relationship between Shariah, IF, and SF

5. Conclusions

There are convergences of Islamic finance and Sustainable finance: (1) concern both for people and planet; (2) preserving interest of the next generation; (3) long-term orientation; (4) ethical values; (5) economic well-being; (6) inclusive and sustainable development. The SF framework embodies many elements from Shariah, which is the basis of the Islamic financial system. Therefore, the principles of IF and SF are in consonance. The concepts bring similar objectives and missions for society and the environment. Additionally, the Islamic financial system already contains SF's essential principles, either implicitly or explicitly.

6. References

- Adam, N., Dewandaru, G., Aqsha, N., Noorfatin, W., Nasution, A., Rizkiah, S., Fauzi, F., & Noh, N. (2019). *Harnessing Value-based Intermediation (VBI): The Role of Development Financial Institutions (DFIs)*.
- Al-Bukhari, M. bin I. A. ‘Abd A. (2002). *Sahih al-Bukhari* (first). Daarul Ibnu Katsir.
- Al-Qaradhawi, Y. (2001). *Ri’ayatul Al-Bi’ah fi As-Syaria’ah al-Islamiyyah*. Daar Al-Syuruq.
- Ayub, M. (2007). *Understanding Islamic Finance*. John Wiley & Sons Ltd.
- Dalibozhko, A., & Krakovetskaya, I. (2018). Youth entrepreneurial projects for the sustainable development of global community: evidence from Enactus program.
- Edwards, M., Kelly, S., Klettner, A., & Brown, P. (2019). *Unlocking Australia’s Sustainable Finance Potential*. <https://www.uts.edu.au/sites/default/files/2019-06/Unlocking Sustainable Finance.pdf>
- Elkington, J. (1997). *Cannibals With Forks, The Triple Bottom Line of 21st Century Business* (Vol. 66). Capstone Publishing Limited.
- Hague, P. (2006). Chapter 4. An Introduction to Research Methodologies. In *A Practical Guide To Market Research* (pp. 59–74).
- Ismal, R. (2010). *The Special Quality of Islamic Economics for Indonesian Economy*. <https://staff.ui.ac.id/node/47244>
- Kettell, B. (2011). *Introduction to Islamic Banking and Finance*. John Wiley & Sons.
- Krauss, A., Krüger, P., & Meyer, J. (2016). *Sustainable Finance in Switzerland: Where Do We Stand? September*, 62.
- Lahsasna, A. (2011). *Shariah Aspects of Business and Finance (CIFP Module)*. INCEIF.
- Mohsin, M. I. A. (2011). *Concept of Money from Islamic Perspective*. INCEIF.
- Peraturan Otoritas Jasa Keuangan Nomor 51 /POJK.03/2017, Pub. L. No. 51 /POJK.03/2017, Ojk.go.id 1 (2017).
- Rume, T., & Islam, S. M. D. U. (2020). Environmental effects of COVID-19 pandemic and potential strategies of sustainability. *Heliyon*, 6(9), e04965.
- Schoenmaker, D. (2017). *From Risk to Opportunity: A Framework for Sustainable Finance*. Rotterdam School of Management, Erasmus University.
- Schoenmaker, D., & Schramade, W. (2019). *Principles of Sustainable Finance* (first editi, Issue January). Oxford University Press.
- Shidiq, F. (2020). *Integrating UN SDGs Framework at Sharia Banks in Indonesia* (Issue September).
- Slaper, T. F. (2011). The Triple Bottom Line: What Is It and How Does It Work? *Indiana Business Review*, Spring 201. <https://doi.org/10.1023/A:1008381314159>
- Sustainable Banking Network. (2019). *2019 Global Progress Report & 30 Country Progress Reports*.
- Swiss Sustainable Finance. (2019). *Swiss Sustainable Investment Market Study 2019*. 76.
- Tienhaara, K. (2010). A tale of two crises: What the Global Financial Crisis Means for the Global Environmental Crisis. *Environmental Policy and Governance*, 20(3), 197–208.
- Usmani, T. (1998). *Introduction to Islamic Finance*. <http://content.wkhealth.com/linkback/openurl?sid=WKPTLP:landingpage&an=00019442-199721520-00011>

Export Performance and Competitiveness of Malaysian Furniture Industry

Bee Hui Soh

School of Social Sciences, Universiti Sains Malaysia, Penang, Malaysia

Email: sohbeehui@student.usm.my

Abstract

Global competition has been a great concern in furniture manufacturing industry. Malaysia is a net furniture exporter and amongst the world's most leading furniture exporters given its comparative advantage. Nonetheless, the maturity of the Malaysian furniture industry, coupled with the emergence of the regional low-cost furniture producers during times of uncertainty, may indicate the eroding competitiveness upon the industry. The present study aims to evaluate the Malaysian furniture export competitiveness with respect to its prominent ASEAN destinations (i.e. Singapore, the Philippines, Indonesia, Vietnam and Thailand) by employing the Revealed Comparative Advantage, Relative Trade Advantage, Revealed Competitiveness and Constant Market Share Competitiveness indices. Generally, Malaysia has diminishing competitiveness in exporting furniture during 2001-2018. Besides, among the furniture export destinations, Malaysia shows the least competitive furniture export in Singapore but the most competitive in the Philippines. It is suggested that efficient export strategic plans regarding furniture incorporate more international and emerging markets such as the Philippines and Thailand (where Malaysia carries positive competitive and growth effects) so that Malaysia will gain more export market shares and higher position globally.

Keywords: Constant market share; Export competitiveness; Furniture; Index; Malaysia.

1. Introduction

The Malaysian wood furniture has transformed successfully from a domestic cottage-based sector to an export-oriented industry within three decades given its comparative advantage. The furniture industry has been earmarked as a target industry under the series of Industrial Master Plans and the National Timber Industry Policy to accomplish an export target of RM20 billion by 2025 (Lim, 2019; Ratnasingam, Chin, Latib, Subramaniam, & Khoo, 2018). As claimed by Ratnasingam (2017), it is the most rapidly growing wood-based manufacturing sub-sector, in terms of its socio-economic contributions (i.e. employment and foreign exchange earnings). Ranked 15th largest furniture exporters in the world and 4th in Asia in 2019, with an export value of almost USD 3.11 billion, Malaysia exports furniture to more than 160 countries throughout the world (ITC, 2020; Ratnasingam et al., 2018). Malaysia is also a net furniture exporter in which the export to production ratio is more than double the global average with Southeast Asia's wood and furniture exports fulfilling 5% of demand in the United State (US) that is the most dominant furniture importer (The Nation, 2019).

Nonetheless, the Malaysian furniture industry is a matured industry (i.e. evinced by a declining rate of its export growth and contribution towards the national gross domestic product) that suffers from low level of innovation, technology and profitability, therefore it confronts a decrement in value-addition intensity and domestic youth participation (Ratnasingam, 2017; Ratnasingam et al., 2018). A mature industry is one with an established market and customer base in which future growth is indeed limited. The lower rubberwood

supply and higher labour cost may then lead to a contraction (sunset) of the industry (Amarthalingam, 2017; Ratnasingam, 2017). These, in turn, further erode the competitive advantage of the home industry when regional rivals (e.g. Vietnam) offer relatively cheaper furniture products (MIFF, 2017).

Moreover, the Malaysian furniture industry is being hit by higher uncertainty in the recent global issues. For instance, the protracted US-China trade war since 2018 has resulted in import diversion of furniture among the US consumers, who may transfer their orders to Southeast Asia countries (Wong, 2019). Unfortunately, a spate of orders that were offered to Malaysia have shifted to Vietnam due to the labour shortage issue (i.e. led by foreign labour hiring policy) in Malaysia (Lim, 2019). The coronavirus disease (COVID-19) pandemic that followed has made the condition more daunting. The COVID-19 outbreak has severely affected new orders (since the orders cannot be obtained immediately) and the production lines due to logistic and labour issues in Malaysia (The Star, 2020). ASEAN (2020) then mentions that regional trade enhancement is crucial in building resilience against these global uncertainties. Malaysia has continued to play a central role as furniture exporter to Association of Southeast Asian Nations (ASEAN) countries in which Singapore is the most promising ASEAN markets of Malaysian furniture, followed the Philippines, Indonesia, Vietnam and lastly Thailand (ITC, 2020). As proof, in 2018-2019, Malaysia became the most prime furniture exporter for Singapore, the Philippines and Thailand within the region whilst exports to Vietnam also grew 1.48% year-on-year.

To this end, the objective of this present study is to evaluate the Malaysian furniture export competitiveness with respect to other ASEAN competitors during 2001-2018. In addition, yields a more comprehensive picture of the recent development of furniture export competitiveness with the combination of advanced method (i.e. the CMSC index) that will be a strength in this paper, ultimately contribute to literature and policy.

2. Literature Review

Generally, the conception of competitiveness in classical international economic theory that is synonymous with a country's competitive advantage based on the laws of absolute advantage and comparative advantage. Despite the criticism of limitations, the comparative advantage has been the most basic principles in explaining international trade and how countries gain from trade. Nevertheless, only few notable studies of the Malaysian export competitiveness focus on furniture industry. Vu et al. (2019) investigated the international competitiveness of the Vietnam's wood processing industry in comparison to other major 21 exporters for 2001-2017 by using Revealed Comparative Advantage (RCA), Relative Trade Advantage (RTA), Market Share (MS) and Trade Competitiveness (TC). Vietnam yield a slight increment in competitiveness (since 2008) and export MS. Malaysia also offered relatively high competitiveness in the industry. As per the RCA analysis of Malaysian products relative to other top Asian exporters (i.e. China, Indonesia, Japan, Singapore and India) in the Gulf Cooperation Council (GCC) market for 1998-2007, Malaysia held strong advantage in exporting palm oil, electrical and electronics, furniture and jewellery in both the world and GCC markets (Abu-Hussin, Mohamad, & Hussin, 2011). Haque, Anwar, & Ibrahim (2013) further focalized on Malaysian furniture industry during 2000-2011 by practising the RCA, Constant-Market-Share (CMS) and shift-share analysis. It deduced that Malaysia had an escalating competitive advantage (RCA) in exporting the product. Based on the CMS analysis, there were significant improvements in the industry due to the positive value of market distribution effect and competitive effect (CE).

3. Methodology

3.1 Balassa Index

The Balassa index of RCA has been widely assessed empirically to approximate countries' sectoral specialisation. The index is presented by:

$$r_i = \frac{X_{ij}/L_j}{\sum_j X_{ij}/L_j} \cdot \frac{L_i}{\sum_i X_{ij}/L_i} \quad (1)$$

where X_{ij} are the country j exports of commodity i , while $\sum_i X_{ij}$ are the total exports of country j ; similarly, $\sum_j X_{ij}$ are the world exports of commodity i but $\sum_i \sum_j X_{ij}$ are the total world's export. If the index takes a value of more than one ($RCA > 1$), comparative advantage is revealed. If it below unity ($RCA < 1$), the selected industry of a country is considered to have a comparative disadvantage.

3.2 Vollrath Indices

Due to its sensitivity and the presence of double-counting problem in the commodity and/or country, Vollrath indices are the alternative measures of RCA. First measure is RTA. The formulation of Relative Export Advantage (RXA) and Relative Import Advantage (RMA) is based on the standard RCA. Also, the definition and formula of RXA is identical to RCA, which can be shown as below:

$$X_i = \frac{X_{ij}/L_j}{\sum_j X_{ij}/L_j} \quad (2)$$

Similarly, RMA is calculated as:

$$t_i = \frac{t_{ij}/L_j}{\sum_j t_{ij}/L_j} \quad (3)$$

Eventually, RTA that signifies the net trade (dis)advantage is written as follow:

$$r_i = X_i - t_i \quad (4)$$

Besides that, Vollrath's second measure, which calculates the relative export (dis)advantage (lnRXA), and third measure, Revealed Competitiveness (RC), are expressed as:

$$r_i = \frac{t_{ij}}{X_{ij}} - \frac{t_{ij}}{t_i} \quad (5)$$

Positive values of Vollrath's measures (i.e. RTA, lnRXA and RC) mean a comparative and competitive advantage. Otherwise, they refer to an absence of competitiveness.

3.3 Constant-Market-Share Space (CMSS) Analysis

This study concentrates on the world trade and the furniture competitiveness from a home country perspective within a monitored period, hence follows the geometric CMSS approach and its Constant-Market-Share Competitiveness (CMSC) index (Aisha Nuddin, Azhar, Gan, & Khalifah, 2018; Aisha Nuddin & Ibrahim, 2019) where CE is located in the area of the other trapezium $\frac{1}{2} \Delta s(Q^1 + Q^0)$ whilst GE is in the area of the trapezium $\frac{1}{2} \Delta Q(s^1 + s^0)$. The approach starts with the below formula:

$$\Delta p = \frac{1}{2} \Delta p_1 (Q_0 + Q_1) + \frac{1}{2} \Delta p_0 (s_0 + s_1) \quad (6)$$

where p is the total value of home furniture exports, Q represents the total value of world exports (home plus foreign exports), $s = \frac{p}{Q}$ is the export share of the home country(s) to the world exports, CE denotes the competitive effect (or market share) on the exports whereas Growth Effect (GE) expresses the change in exports due to growth (structural) effects, Δ symbolises the changes in value while the onset and the end of analysing period (represented by the superscripts 0 and 1, respectively).

The two-dimensional CMSS has four square quadrants which can gauge every CE and GE for each of n countries for a given period where the CE and GE can be positive, negative or zero. The CE is labelled on the vertical axis (+/- CE) and the GE on the horizontal axis (+/- GE). The axes are labelled based on the Cartesian plane in which the centre is the origin, (0,0), where (CE, GE) = (0,0). The CE and GE for any of the n countries in an analysed period can be represented by a single coordinate point in the CMSS (Figure 1). Points Y and Z are two representative countries' coordinates in which Z has positive values while Y has negative values for both CE and GE. In this case, Z is more competitive than Y due to its relatively higher position and increasing CMSC index (Figure 2).

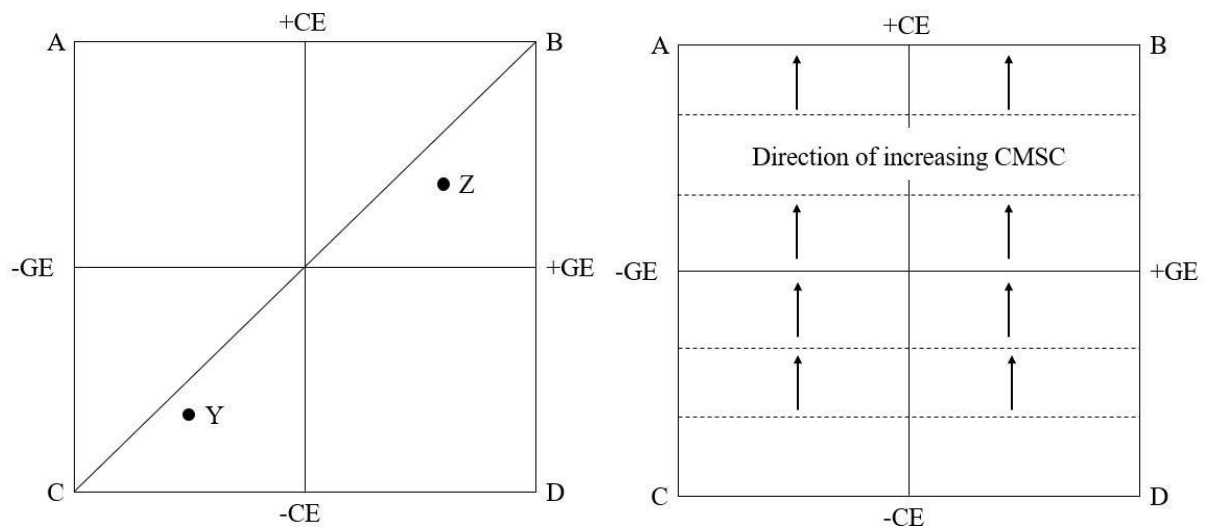


Figure 1: (Left) The CMSS

Figure 2: (Right) Competitiveness index within the CMSS

The CMSS for n countries is expressed in set notation as:

$$CMSS = \left\{ \left(\begin{matrix} p \\ r \end{matrix} \right) \mid \left(\begin{matrix} p \\ r \end{matrix} \right) \mid \left(\begin{matrix} p \\ r \end{matrix} \right) \mid \left(\begin{matrix} p \\ r \end{matrix} \right) \mid \left(\begin{matrix} p \\ r \end{matrix} \right) \right\} \quad (7)$$

Please note that the total of all the CEs of the countries in this CMSS analysis is equal to zero since the CMSS analysis presumes CE is a zero-sum game.

3.4 The Constant-Market-Share Competitiveness (CMSC) Index

The modified CMSC index (Aisha Nuddin & Ibrahim, 2019) is computed as:

$$r_t = \frac{s^1 - s^0}{\max(s^1, s^0)} \quad (8)$$

where the denominator, $\max(s_m^1, s_m^0)$ represents the highest export share between these periods and $\Delta s = s^1 - s^0$, which measures the changes in the export shares of countries in a region for a given period, also symbolizes the “net share” of the export share where $-1 < \Delta s < 1$ and $\sum_{t=1}^n \Delta s_i = 0$. As mentioned earlier, the CMSC index is positive above the horizontal axis but negative below (Figure 2). When $CMSC > 0$, the industry gains stronger export competitiveness. On the other hand, $CMSC < 0$ indicates it loses competitiveness.

3.5 Data

This study employed the RCA, RTA, RC and CMSC indices in the Malaysian furniture export to the top five ASEAN markets during 2001-2018. The sample of the export destinations are Singapore, the Philippines, Indonesia, Vietnam and Thailand. For the CMSC analysis, import data of each country from Malaysia is applied given its virtue, reliability and accessibility (Tveterås et al., 2012). The annual data of category HS94 regarding furniture is collected from International Trade Centre (ITC). The values in all figures are in USD million.

4. Results and Discussion

4.1 Balassa and Vollrath Indices

In Figure 3, Malaysia has enjoyed comparative superiority where $RCA=1.035$ and $\ln RXA=0.015$ until 2013 and faced a continuous decrement in the competitiveness in terms of RTA and RC during 2001-2018. The RTA and RC indices fall to 0.435 and 0.740 in 2018, respectively. Although Malaysia is endowed with natural resources (i.e. timber and rubberwood), the competitiveness of its furniture industry is deteriorating mainly due to lacking innovation and competitive pricing (Ratnasingam et al., 2018), especially during times of uncertainty. The global financial crisis of 2008-2009, the establishment of IKEA outlets in Malaysia (since 2013) and the US-China trade war (since 2018) largely reduce both local and foreign consumers’ spending on the Malaysian furniture (Lim, 2019; Muravytska, 2009). Similarly, Singapore and the Philippines also show a comparative disadvantage (RCA and $\ln RXA$) in exporting furniture where only Singapore carries the negative RTA and RC. In other words, the resource scarcity faced by Singapore makes it a major furniture importing country (ITC, 2020). Unlike Malaysia, Vietnam has enjoyed the competitiveness since 2001 (due to its RCA above unity, positive values of $\ln RXA$, RTA and RC) that attributes to its labour abundance in the industry (Lim, 2019). Collectively, Vietnam offers the highest competitiveness in the global furniture market, followed by Malaysia, Indonesia, Thailand, the Philippines and lastly Singapore. Malaysia has maintained the 2nd position in the export performance among these countries since 2011 but with the weak competitiveness.

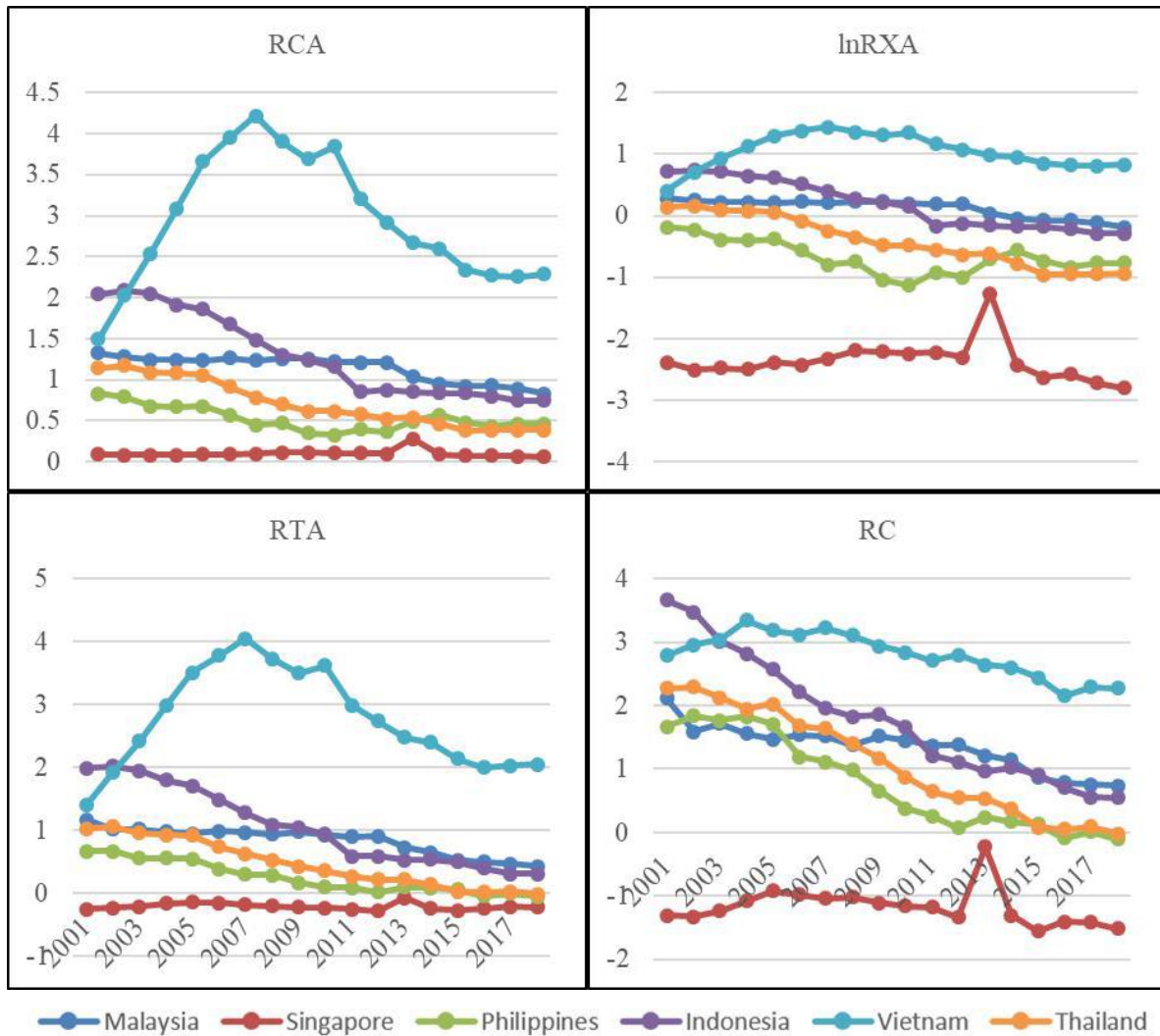


Figure 3: Changes in trade competitiveness index values for selected countries for 2001-2018.

4.2 CMSC Analysis

When Malaysia has an expanding furniture export ($\Delta Q = \text{USD } 96.275$ million) during 2017-2018, all destinations show positive export (Δp) and GE values (Table 1 and Figure 4), meaning that the export increment to each destination is resulted from the growth in the total Malaysian furniture export (ΔQ). The Philippines is the most competitive destination due to its highest CMSC index (0.0105), CE (USD 13.713 million) and CMSS position. Conforming to the index, it is then followed by Thailand, Indonesia, Vietnam and lastly Singapore. Singapore is the least competitive based on its CMSC index (-0.0154), CE (-USD 20.141 million) with the lowest CMSS position. Thailand also registers a remarkable competitive effect, which signifying it is a salient market for Malaysian export. Interestingly, merely Thailand exerts relatively greater CE, indicating that the export is more driven by Malaysian competitiveness. Indonesia and Vietnam are near to the origin, implying a minuscule change in their amount and share. Overall, Malaysia has gained a high level of export competitiveness in the Philippines and Thailand but lost competitiveness in Singapore, Vietnam and Indonesia.

Table 1. CMSC index, competitive and growth effects for five ASEAN destinations of Malaysian furniture export, 2017-2018

Country	p^0	flp	p^1	$p^0 + flp$	
Singapore	249.747	40.863		290.610	
Philippines	50.485	28.122		78.607	
Indonesia	27.803	6.365		34.168	
Vietnam	25.187	1.261		26.448	
Thailand	27.181	19.664		46.845	
Total	$Q^0 = 380.403$	$\Delta Q = 96.275$		$Q^1 = 476.678$	
Country	s^0	s^1	fls	s^1	s^0
Singapore	0.657	0.610			-0.047
Philippines	0.133	0.165			0.032
Indonesia	0.073	0.072			-0.001
Vietnam	0.066	0.055			-0.011
Thailand	0.071	0.098			0.027
Total	1	1			0
Country	CMSC Index	CR $\frac{1}{Z}(Q^0 + Q^1) fls$	GR $\frac{1}{Z}(s^0 + s^1) flQ$		
Singapore	-0.0154	-20.141	60.990		
Philippines	0.0105	13.713	14.345		
Indonesia	-0.0003	-0.429	6.980		
Vietnam	-0.0036	-4.714	5.825		
Thailand	0.0089	11.571	8.135		
Total	0	0	96.275		

Source: Author's estimation.

Notes: Estimates are one-year interval and numbers may not sum due to rounding.

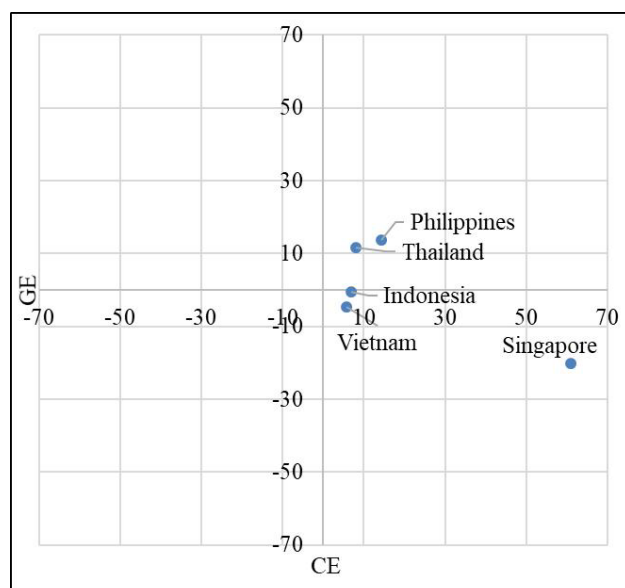


Figure 4: The CMSS of simulated data from Table 1

5. Conclusion

When international competition within the industry is on the upswing, the matured furniture industry may lose export competitiveness. On that account, this study is designed to evaluate the Malaysian furniture export competitiveness relative to the five selected markets. The outcomes of RCA, lnRXA, RTA and RC reveal that Malaysia has an overall declining

competitiveness. For the CMSC analysis, Malaysia shows the least competitive furniture export in Singapore but the most competitive in the Philippines.

Future studies may explore more leading furniture importing countries- the US, Germany, the United Kingdom and France. These empirical evidences yield certain policy implications. To strengthen the competitive advantage of Malaysian furniture industry, moving up along the value-chain through innovation and value-added manufacturing is highly recommended. Efficient export strategic plans regarding furniture are also suggested to cover more international and emerging markets such as the Philippines and Thailand (where Malaysia carries positive competitive and growth effects) so that Malaysia will gain more export market shares and higher position globally.

6. References

- Abu-Hussin, M. F., Mohamad, A. A. S., & Hussin, M. Y. bin M. (2011). Capturing Arab gulf market: An analysis of Malaysian exports competitiveness in the market. *African Journal of Business Management*, 5(21), 8521–8535.
- Aisha Nuddin, A. J., Azhar, A. K. M., Gan, V. B. Y., & Khalifah, N. A. (2018). A new constant market share competitiveness index. *Malaysian Journal of Mathematical Sciences*, 12(1), 1–23.
- Aisha Nuddin, A. J., & Ibrahim, N. A. (2019). Competitiveness of profit-loss-sharing mode of financing using constant market share competitiveness index. *Journal of Islamic, Social, Economics and Development*, 4(12), 41–57.
- Amarthalingam, S. (2017, July 17). Furniture exports keep growing. *The Edge Markets*. Retrieved from <https://www.theedgemarkets.com/article/furniture-exports-keep-growing>
- ASEAN. (2020). ASEAN seeks to boost intra-regional trade and investment. Retrieved from: <https://asean.org/asean-seeks-boost-intra-regional-trade-investment/>
- Balassa, B. (1965). Trade liberalisation and “revealed” comparative advantage. *The Manchester School*, 33(2), 99–123.
- Haque, A., Anwar, N., & Ibrahim, Z. (2013). Export of furniture product from Malaysia: Market prospects and challenges. *Journal of Economics and Behavioral Studies*, 5(7), 406–419.
- ITC. (2020). Trade Map - List of exporters for the selected product Product: 94 Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings. Retrieved from: https://www.trademap.org/Country_SelProductCountry_TS.aspx?nvpm=1%7c458%7c%7c%7c94%7c%7c%7c2%7c1%7c1%7c2%7c2%7c1%7c2%7c1%7c1%7c1
- Lim, J. (2019). Labour Shortage Stopping Furniture Makers From Taking More Orders. Retrieved from: <https://www.edgeprop.my/content/1623401/labour-shortage-stopping-furniture-makers-taking-more-orders>
- Malaysian International Furniture Fair (MIFF). (2017). Malaysian Furniture Industry. Retrieved from: <https://2021.miff.com.my/about-miff/malaysian-furniture-industry/>
- Muravytska, N. (2009, May 28). Malaysia: Which industries are being hardest hit by the global recession? Retrieved from: <https://ihsmarkit.com/country-industry-forecasting.html?ID=106593488&fbclid=IwAR3ZaIotxBCnWCJWLo-hCwk5TPUoyZxSYWpoco2THGr0g0jjSoxMq4kZTOE>
- Ratnasingam, J. (2017). *The Malaysian Furniture Industry: Charting Its Growth Potential*.
- Ratnasingam, J., Chin, K. A., Latib, H. A., Subramaniam, H., & Khoo, A. (2018). Innovation in the Malaysian furniture industry: Drivers and challenges. *BioResources*, 13(3), 5254–5270.

- The Nation. (2019, November 28). Southeast Asian furniture industry seeks to achieve prosperity together. Retrieved from <https://www.nationthailand.com/business/30378848>
- The Star. (2020, April 6). *Furniture industry associations call on gov't to hear concerns*. Retrieved from <https://www.thestar.com.my/business/smebiz/2020/04/06/furniture-industry-associations-call-on-govt-to-hear-concerns>
- Tveterås, S., Asche, F., Bellemare, M. F., Smith, M. D., Guttormsen, A. G., Lem, A., ... Vannuccini, S. (2012). Fish is food - the FAO's fish price index. *PLoS ONE*, 7(5).
- Vollrath, T. L. (1991). A theoretical evaluation of alternative trade intensity measures of revealed comparative advantage. *Review of World Economics*, 127(2), 265–280.
- Vu, T. T. H., Tian, G., Khan, N., Zada, M., Zhang, B., & Nguyen, T. Van. (2019). Evaluating the international competitiveness of Vietnam wood processing industry by combining the variation coefficient and the entropy method. *Forests*, 10(10).
- Wong, E. L. (2019, July 17). Malaysian furniture exports to the US seen growing 20% annually. *The Edge Markets*. Retrieved from <https://www.theedgemarkets.com/article/malaysian-furniture-exports-us-seen-growing-20-annually>

Masalah Sosial Yang Dihadapi Komuniti: Kerja Komuniti Terhadap Isu Sosial Kemiskinan dan Intervensi Yang Boleh Diambil Sebagai Pekerja Sosial Daripada Perspektif Global

Prabu A/L Daymudoo, Ph.d

Pusat Pengajian Sains Kemasyarakatan, Universiti Sains Malaysia.

Email: Daymudoo24051093@student.usm.my

Abstrak

Kertas kerja ini bertujuan untuk meninjau aspek pembangunan dan pengelolaan komuniti dan peranan pekerja sosial dalam menangani masalah sosial kemiskinan daripada perspektif global. Tiada maksud yang khusus bagi mendefinisikan maksud pembangunan komuniti walaupun terdapat pelbagai ahli - ahli falsafah dan sains sosial yang telah melakukan banyak kajian untuk mendapatkan satu definisi yang tepat dan merangkumi konsep pembangunan yang bersesuaian. Antara definisi yang diberikan oleh ahli falsafah yang mengkaji maksud pembangunan ini seperti Todaro (1977) yang berpendapat bahawa pembangunan melibatkan proses menyusun dan mengorientasi semula sistem ekonomi dan sosial masyarakat. Manakala, kemiskinan pula boleh didefinisikan sebagai satu situasi di mana seseorang individu itu tidak mempunyai keperluan asas yang mencukupi dalam kehidupannya. Mengikut takrifan masyarakat yang moden mengaitkan keadaan kemiskinan dengan ketiadaan wang yang secukupnya untuk menjalani kehidupan yang norma bagi seseorang individu tersebut. Penulisan kertas kerja ini banyak dibantu oleh sumber rujukan seperti buku rujukan, ensiklopedia, dan surat khabar yang mengandungi isu - isu yang berkaitan dengan masalah kemiskinan yang dialami oleh masyarakat global. Penemuan hasil kajian mendapati bahawa terdapat pelbagai faktor dan kesan yang berkaitan dengan masalah sosial iaitu isu kemiskinan. Melalui rujukan ini didapati isu kemiskinan dalam kalangan sesebuah komuniti merupakan suatu masalah yang rumit dan kompleks untuk dianalisis justeru memerlukan kerjasama semua pihak termasuk pekerja sosial daripada pelbagai negara untuk merancang tindakan yang bersesuaian dengan isu global ini. Dengan itu, kertas kerja ini merumuskan bahawa perkhidmatan kerja sosial atau pekerja sosial dapat bertindak sebagai intervensi yang membantu serta berkesan untuk mencegah peningkatan dalam kadar isu kemiskinan yang melingkungi skop komuniti dan masyarakat global melalui praktis kerja pembangunan dan pengelolaan komuniti yang berkesan.

Kata Kunci: Pekerja sosial; Kerja komuniti; Kemiskinan; Pembangunan masyarakat; Perspektif global

1. Pengenalan

Tiada maksud yang khusus bagi mendefinisikan maksud pembangunan komuniti walaupun terdapat pelbagai ahli - ahli falsafah dan sains sosial yang telah melakukan banyak kajian untuk mendapatkan satu definisi yang tepat dan merangkumi konsep pembangunan yang bersesuaian. Antara definisi yang diberikan oleh beberapa orang ahli falsafah yang mengkaji maksud pembangunan ini ialah Todaro (1977) yang berpendapat bahawa pembangunan melibatkan proses menyusun dan mengorientasi semula sistem ekonomi dan sosial masyarakat. Hal ini membawa maksud bahawa pembangunan bukan sahaja melibatkan kepada peningkatan pendapatan dan pengeluaran malah ia juga mengambil kira perubahan

yang berlaku di dalam institusi sosial, struktur pentadbiran, pendapat umum, adat resam dan kepercayaan. Walau bagaimanapun terdapat beberapa ciri yang sama dan penting dalam definisi pembangunan komuniti tanpa mengira di mana pembangunan ini dilakukan atau dipraktikkan. Mengikut ahli falsafah Ploch (1976) pula pembangunan komuniti ialah penglibatan yang aktif daripada kalangan masyarakat setempat untuk melakukan program atau aktiviti yang dapat meningkatkan kualiti kehidupan mereka. Dari perspektif ahli falsafah Hope (1980) melihat pembangunan komuniti sebagai satu proses. Mengikut perspektif beliau, proses ini bermula daripada mengidentifikasi masalah yang berlaku di sesuatu komuniti tersebut sehinggalah kepada proses pemberian intervensi atau melakukan penyelesaian masalah. Hope menjelaskan bahawa perubahan yang berlaku terhadap isu atau masalah yang dialami oleh komuniti atau masyarakat setempat itu dapat dirasai atau dilihat oleh mereka hanya jika mempunyai penyertaan yang aktif daripada pihak mereka tanpa mengira pihak kerajaan, bukan kerajaan dan masyarakat setempat itu sendiri. Berasaskan kepada pelbagai definisi dan pandangan ahli falsafah seperti di atas dapat dirumuskan bahawa pembangunan komuniti adalah usaha yang harus ditunjukkan oleh semua pihak terutamanya masyarakat setempat itu untuk meningkatkan kualiti kehidupan mereka. Tujuan pembangunan komuniti yang lebih mendalam telah diterangkan oleh ahli falsafah Christenson, Fendley dan Robinson (1989). Dari sudut pandangan mereka mengatakan bahawa tujuan utama pembangunan komuniti ialah untuk membantu meningkatkan dan memulihkan keadaan sosial serta ekonomi mereka. Logik yang digunakan oleh mereka ialah masyarakat merupakan subjek dan bukannya objek maka jika sesebuah komuniti atau masyarakat mengalami masalah agensi atau masyarakat yang berkaitan harus merancang tindakan susulan bagi menyelesaikan masalah mereka. Pembangunan komuniti ini adalah signifikan kepada masyarakat kerana dua sebab yang utama iaitu pembangunan komuniti akan menyediakan sebuah rangka kerja atau rancangan tindakan yang berkesan untuk menyelesaikan masalah secara sistematik terutamanya dalam membasmi masalah atau isu kemiskinan. Seterusnya, pembangunan komuniti adalah penting bagi kejayaan jangka panjang di dalam era globalisasi. Kedua - dua perkara berikut adalah amat signifikan kerana pembangunan komuniti. Hal ini kerana pembangunan komuniti adalah satu carta yang sangat luas dan rumit yang mengandungi pelbagai jenis aspek dan aktiviti seperti pendidikan, kesihatan, perumahan dan kepimpinan. Model pembangunan komuniti ini telah diwujudkan di persidangan dan seminar antarabangsa yang telah dijalankan beberapa siri setelah menganalisa beberapa perkara penting untuk membantu membangunkan dan meningkatkan kualiti kehidupan masyarakat. Antara persidangan dan seminar antarabangsa yang telah dijalankan untuk membentuk model ini ialah seminar pembangunan luar bandar di Iran, bengkel pembangunan komuniti bersepadu di Taiwan, seminar pembangunan komuniti berkesan di Sri Lanka, seminar kredit mikro untuk pembangunan komuniti di Bangladesh, Seminar fasilitator untuk pembangunan komuniti di Indonesia, perjumpaan green productivity dan pembangunan komuniti di Singapura, dan akhirnya ialah perjumpaan konsep dan kaedah pembangunan komuniti di Kuala Lumpur, Malaysia. Selain daripada seminar dan perjumpaan - perjumpaan yang telah dilakukan di atas penyelidikan -penyelidikan yang berkaitan dengan konsep pembangunan komuniti ini juga dijalankan secara global untuk memastikan keberkesanan model pembangunan komuniti ini kepada masyarakat. Antara penyelidikan - penyelidikan yang dijalankan di Malaysia untuk membantu penwujudan dan pengakplikasian model pembangunan komuniti ini ialah “Leadership and the Success of Community Development Project” dan “The Impacts of Integrated Development Projects on Poverty”.

1.1 Definisi Kemiskinan

Kemiskinan boleh didefinisikan sebagai satu situasi di mana seseorang individu itu tidak mempunyai keperluan asas yang mencukupi dalam kehidupannya. Mengikut takrifan masyarakat yang moden mengaitkan keadaan kemiskinan dengan ketiadaan wang yang secukupnya untuk menjalani kehidupan yang norma bagi seseorang individu tersebut. Mengikut kajian ahli ekonomi dan ahli sains sosial terdapat tiga aspek yang penting untuk menentukan takrifan yang tepat untuk kemiskinan iaitu yang pertama ialah dengan mengambil kira jumlah kalori pemakanan yang diambil oleh seseorang individu itu adalah seimbang dan mencukupi mengikut skala pengambilan kalori makanan yang betul. Apabila seseorang individu tersebut gagal untuk mengambil kalori pemakanan yang seimbang maka ia dikategorikan sebagai individu yang berada dalam kemiskinan. Seterusnya, aspek memenuhi keperluan asas seseorang individu tersebut juga adalah amat penting untuk memastikan individu tersebut tidak dikategorikan sebagai individu yang miskin. Ketiga pula ialah menggunakan kaedah ukuran pendapatan garis kemiskinan (PGK) yang menentukan kumpulan yang miskin dalam sesebuah masyarakat. Kelompok yang miskin ini hanya akan mendapat pendapatan separuh daripada yang ditetapkan untuk PGK dan dikategorikan sebagai kumpulan miskin tegar atau miskin mutlak. Kemiskinan adalah masalah dunia kerana isu ini juga terdapat di negara - negara yang sudah maju. Contohnya, seperti di negara Brunei walaupun kadar penduduknya yang miskin adalah rendah intervensi yang sepatutnya harus diambil dengan kadar segera agar masalah ini tidak terus membelenggu jiwa masyarakat miskin tersebut. Antara intervensi yang boleh diambil untuk mengatasi masalah kemiskinan di negara tersebut adalah memastikan penglibatan Majlis Agama Islam Brunei menjalankan program pembasmian kemiskinan di negara tersebut secara konsisten dan sistematik. Hal ini secara tidak langsung akan memberi impak kepada kualiti dan taraf kehidupan rakyat Brunei yang miskin. Berdasarkan kepada kajian didapati bahawa hampir setengah negara dunia ketiga atau negara yang sedang membangun mengalami masalah sosial kemiskinan ini. Antara negara yang paling teruk kadar rakyatnya yang miskin ialah negara Pakistan, India, Afghanistan, Bangaladesh dan banyak lagi negara yang sama keadaan dengannya. Pelbagai intervensi telah dilakukan pada peringkat global oleh negara - negara berkaitan dan ada juga tindakan yang diambil oleh badan - badan bertaraf dunia seperti Pertubuhan Bangsa - Bangsa Bersatu (PBB) dengan pelancaran beberapa program yang dapat mengatasi masalah kemiskinan di negara - negara berkenaan namun kadar kemiskinan tersebut tidak dapat menampakkan perubahan yang ketara dari aspek peratusannya. Ahli falsafah Booth (dalam Holman, 1978) menerangkan bahawa kemiskinan boleh didefinisikan sebagai suatu situasi bagi seseorang individu tersebut susah untuk memenuhi keperluan kehidupannya dari pelbagai aspek seperti kesihatan, makanan, ekonomi, dan sebagainya. Dari perspektif takrifan bank dunia bagi kemiskinan pula ialah kemiskinan merupakan suatu keadaan peminggiran daripada kehidupan yang norma serta sempurna bagi seseorang individu tersebut. Peminggiran tersebut merupakan dari aspek material yang menyebabkan seseorang individu tersebut tidak mempunyai pendapatan yang mencukupi serta menolak atau memaksa individu tersebut hidup di dalam keadaan yang daif. Dari perspektif yang lain pula bank dunia mentakrifkan kemiskinan sebagai kemiskinan dari segi kemanusiaan yang memberi impak kepada tahap kesihatan dan pendidikan seseorang individu tersebut yang secara tidak langsungnya menjadi faktor yang amat signifikan untuk keadaan kemiskinan ini berlaku.

1.2 Kesan-kesan Daripada Isu Kemiskinan

Implikasi - implikasi daripada masalah sosial kemiskinan ini boleh difahami dengan lebih jelas dan berkesan jika dilihat dan diteliti daripada perspektif Islam. Perspektif Islam

menjelaskan musibah yang menimpa hasil daripada masalah sosial kemiskinan ini dengan memisahkannya kepada beberapa aspek. Aspek yang pertama ialah aspek akidah yang menjelaskan bahawa wujudnya keadaan di mana orang - orang miskin merana susah kerana tidak mempunyai hasil pendapatan yang secukupnya untuk menampung kehidupan seharian mereka dan hal ini tidak dilayan atau tidak diambil berat oleh orang - orang kaya untuk membantu mereka dari segi memberi atau menderma hasil yang lebih daripada keperluan mereka yang ada pada mereka untuk mengurangkan beban orang miskin tersebut. Hal ini secara langsung mereka impak kepada akidah orang - orang kaya yang bersikap tidak berperikmanusiaan. Selain itu, seseorang individu yang miskin mudah terganggu dari segi emosi dan mudah berputus asa apabila individu ini diberi tekanan hidup yang tinggi apabila berada di sekeliling orang kaya justeru memberi impak kepada etika dan moral seseorang individu miskin tersebut. Hal ini kerana dia akan dipaksa oleh naluri kehidupan yang tertekan untuk berbohong, mencuri dan melakukan apa sahaja aktiviti negatif untuk memiliki kekayaan yang sama. Kesan yang lain dijelaskan dari perspektif Islam ialah ketidakstabilan rumah tangga seseorang individu yang miskin. Hal ini berikutan dengan dalam membina rumah tangga yang bahagia dan gembira menjadi tanggungjawab suami untuk memastikan nafkah zahir atau lebih difahami sumber ekonomi keluarga berada di dalam keadaan yang stabil dan normal agar dapat menjalani kehidupan yang berkualiti serta baik. Apabila berlaku ketidakstabilan faktor ekonomi ini boleh berlaku perselisihan faham, kerungsingan dan kekecewaan dalam rumah tangga sehingga hilang kebahagiaan dalam keluarga tersebut. Aspek yang terakhir ditekankan dalam perspektif Islam pula ialah kegugatan ketenteraman dalam sesebuah komuniti atau masyarakat. Peratusan untuk kes - kes jenayah berlaku di sesebuah komuniti atau masyarakat yang terdiri daripada masyarakat yang miskin dengan banyak adalah lebih tinggi berbanding dengan masyarakat yang kurang individu miskin. Hal ini kerana paksaan kepincangan hidup yang dijalani oleh masyarakat miskin ini mendorong mereka untuk terlibat dalam melakukan kekejaman dan aktiviti - aktiviti yang kontra dengan norma kehidupan masyarakat yang baik justeru mereka dapat menjadi orang kaya dalam kadar masa yang pendek. Berdasarkan kepada implikasi - implikasi yang dijelaskan daripada perspektif Islam ini dapat dirumuskan bahawa masalah kemiskinan ini pada dasarnya menjadi tonggak utama untuk berlakunya pelbagai masalah sosial yang lain. Maka isu ini harus diberi perhatian dan dirancang tindakan yang bersesuaian oleh seseorang pekerja sosial bukan sahaja daripada aspek negara Malaysia malah daripada perspektif global agar dapat menyelesaikan masalah ini secara menyeluruh.

2. Intervensi Yang Boleh Diambil Oleh Pekerja Sosial Terhadap Isu Kemiskinan Daripada Perspektif Global

Seorang Pekerja Sosial mempunyai kemahiran, etika, prinsip dan kebolehannya tersendiri untuk berfungsi dan berperanan mengikut kehendak keadaan. Pekerja Sosial yang professional mempunyai pelbagai peranan yang boleh dimainkannya untuk menyelesaikan sesuatu masalah yang dibantunya. Berdasarkan kepada masalah sosial kemiskinan ini seseorang pekerja sosial boleh memainkan peranannya sebagai seorang pendidik, penghubung, pemudahcara dan pekerja sosial komuniti yang boleh memberi kesan kepada masyarakat global. Dengan itu, pekerja sosial ini dapat membantu komuniti miskin ini untuk meningkatkan taraf dan kualiti hidup mereka dengan menghubungkannya dengan sumber - sumber yang ada disekelilingnya serta memberikan maklumat - maklumat yang relevan kepada komuniti miskin untuk meningkatkan kefungsi sosial seseorang individu dalam komuniti tersebut. Hal ini akan dapat membantu seseorang individu tersebut untuk keluar daripada kepincangan hidupnya yang miskin dan sekaligus dapat membangunkan dirinya daripada pelbagai aspek seperti pendidikan, ekonomi, sosial dan sebagainya. Contohnya,

apabila seseorang pekerja sosial profesional yang bekerja dengan komuniti berperanan sebagai pendidik maka akan terhasilnya satu proses penyampaian maklumat yang berkesan kepada masyarakat atau komuniti tersebut yang akan membantu untuk meningkatkan kepercayaan komuniti tersebut terhadap kebolehan pekerja sosial dan secara langsung akan meningkatkan keyakinan klien untuk menyelesaikan masalahnya secara sistematik. Berdasarkan kepada kajian didapati masalah kemiskinan yang melanda di kebanyakan negara yang membangun seperti Indonesia, Pakistan, Myanmar, dan sebagainya adalah disebabkan kurang pendedahan dan penyampaian maklumat ini kepada golongan atau masyarakat miskin ini yang kebiasaannya leka dengan kesusahan hidup mereka. Maka, antara peranan pekerja sosial profesional ialah mendidik komuniti miskin ini dengan memberikan informasi - informasi yang relevan kepada peningkatan sumber ekonomi mereka. Aspek pendidikan ini secara asasnya boleh menjadi satu bentuk kerjasama diantara pekerja sosial dan klien sehingga wujudnya keadaan di mana klien dan pekerja sosial akan saling bergantung satu sama lain untuk menyelesaikan masalah klien atau komuniti di sesebuah negara. Selain itu, pekerja sosial profesional boleh berperanan sebagai penghubung yang akan menghubungkan sesebuah komuniti miskin tersebut dengan organisasi - organisasi, badan kerajaan, badan bukan kerajaan dan orang perseorangan yang mampu membantu meningkatkan kefungsi sosial komuniti ini sehingga wujudnya peningkatan dalam taraf dan kualiti hidup komuniti berkenaan. Berikutnya, pekerja sosial yang profesional juga mampu mengenali keperluan - keperluan asas yang dikehendaki oleh komuniti miskin ini dan sangat sensitif dengan keperluan mereka. Hal ini kerana pekerja sosial harus mengelak situasi kronik atau rumit dalam kerja komuniti yang dilakukannya bagi menyelesaikan masalah kemiskinan ini di sesebuah komuniti. Selain itu, apabila seseorang pekerja sosial profesional yang menjalankan kerja komuniti pada peringkat mezzo dan makro harus mempunyai kemahiran untuk mengetahui selok - belok komuniti tersebut daripada segala aspek bagi membolehkannya melakukan kerja komunitinya dengan sempurna dan berkesan serta sebagai seorang penghubung seseorang itu mestilah mempunyai pengetahuan yang luas tentang sumber-sumber komuniti supaya mereka boleh membuat rujukan yang sewajarnya. Pengetahuan tentang akta dan undang- undang sesebuah negara yang berkaitan dengan sistem sumber dan hubungan kerja adalah penting untuk proses rujukan yang berkesan. Maka, seseorang pekerja sosial yang profesional yang menjalankan kerja komuniti dengan komuniti miskin sesebuah negara boleh berperanan sebagai penghubung untuk mendapatkan impak positif dengan menghubungkan sesebuah komuniti miskin dengan agensi - agensi atau orang perseorangan yang mampu mengubah corak kehidupan komuniti tersebut. Pekerja sosial yang berperanan sebagai pemudahcara pula dapat membantu klien atau komuniti tersebut dari aspek memberikan kata- kata semangat atau motivasi bagi menimbulkan perasaan ingin berubah kepada yang lebih baik dalam diri komuniti tersebut. Hal ini adalah sangat penting bagi pekerja sosial dan komuniti tersebut kerana masing - masing dapat mengetahui harapan, perspektif, dan keperluan diri komuniti tersebut yang sangat membantu dalam proses merancang tindakan yang sesuai bagi menyelesaikan masalah komuniti tersebut. Dalam memainkan peranan sebagai pemudahcara ini juga mempunyai kelebihan kepada pekerja sosial kerana pekerja sosial mampu menilai semula tindakan - tindakan yang telah dijalankan dalam proses menyelesaikan masalah komuniti tersebut samaada mempunyai sebarang perubahan positif seperti peningkatan dorongan jiwa untuk berubah, peningkatan tahap keyakinan komuniti tersebut dan sebagainya. Berdasarkan kepada peranan - peranan yang dapat dimainkan oleh pekerja sosial yang profesional ini dengan jelas dapat membantu mengurangkan masalah kemiskinan ini daripada perspektif global dan membantu masyarakat miskin global ini untuk berubah serta meningkatkan kefungsi sosial dan taraf hidup mereka kepada yang lebih berkesan.

3. Kesimpulan

Masalah sosial kemiskinan ini adalah antara faktor yang signifikan untuk berlakunya masalah - masalah sampingan seperti peningkatan kadar jenayah, peningkatan peratusan kematian kanak - kanak dan sebagainya di negara - negara sedang membangun dan juga negara maju. Tidak dinafikan bahawa masalah kemiskinan adalah antara faktor utama keadaan ini berlaku dan berleluasa namun masalah ini juga mempunyai perannya dalam situasi ini berlanjutan sehingga sekarang. Berasaskan kepada kajian yang telah dibuat dan dikenalpasti dibuktikan bahawa antara faktor utama berlakunya isu sosial ini adalah kerana kurangnya sumber pendapatan bagi seseorang individu dalam komuniti dan tahap pendidikan yang rendah. Maka hal ini harus diberi perhatian yang serius oleh masyarakat seluruh komuniti dunia tanpa mengira negara maju atau negara dunia ketiga bagi mengelakkan keadaan ini terus berleluasa sehingga berlakunya satu keadaan yang tidak diinginkan seperti peningkatan peratusan kematian kerana kebuluran yang sangat drastik. Peranan pekerja sosial yang professional adalah amat penting untuk merancang tindakan yang berkesan dan sistematik bagi membantu masyarakat miskin ini pada peringkat global sejurus meningkatkan kualiti dan taraf hidup komuniti tersebut.

4. Rujukan

- Adair & John. (1984). *The Skills of Leadership*. Aldershot: Gower Publishing Limited.
- Brown & A. Barratt. (1938). *Democratic Leadership*. London: G. Allen and Unwin.
- Charles S. Levy. (1976). *Social Work Ethics*. New York: Human Sciences Press.
- Dean H. Hepworth, Ronald H. Rooney & Jo Ann Larsen. (2002). *Direct Social Work Practice: Theory and Skills*. USA: Brooks/Cole.
- Roy Bailey & Phil Lee. (1982). *Theory and Practice in Social Work*. England: Basil Blackwell Publisher Limited.
- Schwartz & William. (1971). *The Practice of Community Work*. Columbia University Press.
- Toseland & Ronald. W. (1995). *An Introduction to Community Work Practice*. Published by Allyn and Bacon.

Efficacy of Blended Learning in Promoting Learning Outcomes and Student Achievement

Lim Cheow Nee^{a*}, Ellisha Nasruddin^b

^aGraduate School of Business, USM, Malaysia

*Email: eenmil@gmail.com

^bGraduate School of Business, USM, Malaysia

Abstract

The Malaysian Education Blueprint 2013-2025 mentioned that it is a worrying fact that Malaysia was ranked in the bottom 30% in PISA (Program for International Student Assessment) 2009+ because PISA's report is an evaluation of students' higher order thinking skills (HOTS) and the ability for problem-solving in a real-world scenario. This is a matter of great concern because such skills are essential 21st Century skills as well as essential graduate employability skills. This issue is of even greater significance in a post-pandemic (COVID-19) scenario whereby there is a high-level of unemployment and survival of the fittest is becoming part-and-parcel of the narrative in the work environment. This paper aims to determine whether blended learning has the efficacy to help promote learning outcomes and to improve students' achievement. This study strives to influence stakeholders to adopt blended learning because blended learning can pave the way for effective learning practices, thus restructuring the educational context towards a paradigm shift for student-centered learning approaches. This research will draw on literature reviews to investigate the efficacy of blended learning in promoting the relevant learning outcomes and in improving students' achievement. Pedagogical theories and concepts will form the theoretical foundation for the use of blended learning, especially Constructivism theory.

Keywords: Blended learning; Pedagogy; Learning outcomes.

1. Introduction

This paper aims to determine whether blended learning has the efficacy to help promote learning outcomes and to improve students' achievement. This study strives to influence stakeholders to adopt blended learning (BL) because blended learning (BL) can pave the way for effective learning practices, thus restructuring the educational context towards a paradigm shift for student-centered learning approaches. This research will draw on literature reviews to investigate the efficacy of blended learning (BL) in promoting the relevant learning outcomes and in improving students' achievement.

The Malaysian Education Blueprint 2013-2025 mentioned that it is a worrying fact that Malaysia was ranked in the bottom 30% in PISA (Program for International Student Assessment) 2009+ because PISA's report is an evaluation of students' higher order thinking skills (HOTS) and the ability for problem-solving in a real-world scenario. PISA (Programme for International Student Assessment) is held every 3 years by OECD (Organization for Economic Co-operation and Development) to measure the performance of 15-year-olds in Mathematics, Science and Reading. Rothman (2013) highlighted that PISA has been mainly designed to determine whether students are able to think critically, solve problems and

communicate effectively based on the knowledge they have. PISA's assessment typically examines whether these 15-year-old youths are able to use their knowledge and skills in meeting the challenges of the real-world. For example, the PISA Mathematics literacy test requires students to solve real-world related problems based on their knowledge and skills. Since these 15-year-old youths will be finishing secondary education soon and will soon either be entering the workforce or higher educational institutions, it is understandable that the Malaysian Education Blueprint 2013-2025 finds it a worrying fact that Malaysia was ranked in the bottom 30% in PISA (Program for International Student Assessment). It becomes a matter of even greater concern in current times because such skills are essential 21st Century skills as well as essential graduate employability skills. This issue is of even greater significance in a post-pandemic (COVID-19) scenario whereby there is a high-level of unemployment and survival of the fittest is becoming part-and-parcel of the narrative in the work environment. Hence, it is imperative that new student-centered teaching and learning approaches such as BL should be adopted in order to help equip students with such essential skills.

Oliver and Trigwell (2005) defined BL as :- the combination of F2F instructional delivery with any form of instructional technology, the combination of Web-based technologies to achieve educational goals, the integration of instructional technology into an instructional study program's design and the combination of pedagogical learning theories in order to achieve the desired learning outcomes regardless of whether it uses instructional technology. Dziuban, Hartman and Moskal (2004) emphasized that BL should be regarded as a pedagogical approach which combines together the technologically enhanced online active learning opportunities with the socialization and effectiveness of the classroom environment. Holsapple and Lee-Post (2006) felt that even with the technological advancements in modern education, students still need a human touch in the learning process, thus the solution to this issue was to utilize technological advancements without losing the needed human touch as what is done in BL. Garrison and Kanuka (2004) felt that BL integrates the best of both F2F and online learning. Chan, Narasuman, Dalim, Sidhu and Lee (2016) were of the view that BL could lead to an overall positive experience for students because BL could specifically enable students to increase their interactions, communication skills and confidence while at the same encouraging discussions and collaborations with their respective lecturers and also their peers. Anthony et al. (2020) defined BL as a delivery method involving F2F and other corresponding online learning delivery methods by graphically conceptualising BL (Figure 1) based on key aspects of BL identified by Graham (2013) and Moskal, Dziuban and Hartman. (2013).

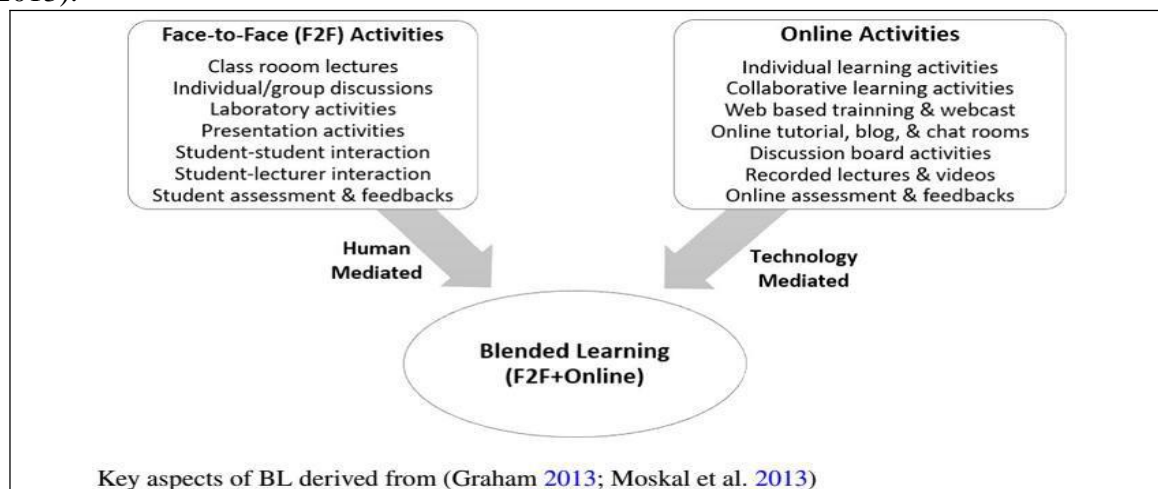


Figure 1: Key Aspects of Blended Learning

2. Major Advantages of Blended Learning (BL)

BL can bring many benefits. It can provide the flexibility of being able to access course materials from anywhere as long as there is Internet connection while still being able to provide the human touch needed during face-to-face (F2F) sessions. Lim and Morris (2009) believed that the BL instruction mode is increasingly being used because the diverse delivery methods used in BL can enhance learning outcomes and student satisfaction. The diverse delivery methods and activities usually practised in BL can encourage students to collaborate and hold discussions with their instructors and their peers while improving on their communication skills. At the same time, the student-centered mode of BL can help increase students' self-confidence and enhance their problem-solving skills because student-centered learning is mainly driven by students themselves. BL modules provide the opportunity for students to pick up skills such as social interaction, communication and collaboration, hence the transition from the student world to the real-world will be less problematic. Sivakumar, Namasivayam, Al-Atabi, and Ramesh (2013) felt that because BL is a combination of a Web-based learning environment and a formal classroom environment, BL can provide a more comprehensive environment for students to be equipped with collaborative skills and problem-solving skills which are similar to real-world working environments. Hancock & Wong (2012) inferred that BL is an effective but yet a low-risk learning strategy that can help HEIs meet the current transformational changes brought about by technological developments. Bowyer and Chambers (2017) maintained that BL has been able to improve course outcomes partly because the use of BL results in a more strategic use of classroom time. They highlighted that online activities can either reinforce the learning which took place in the classroom or can be used to serve as a basic introduction to topics as preparation for a class before these topics are covered in more depth in the classroom. With regards to this aspect, they suggested that the use of online pre-reading materials will enable a deeper discussion of topics during the classroom sessions while at the same allowing instructors to spend more individualised time with students who might face certain difficulties in understanding the topics. With a better understanding of the topics, students' performance will also improve.

3. Literature Review

Shukla (2015) stated that technology enables students to develop various skills, ranging from basic skills to the higher order thinking skills (HOTS) while emphasizing that for the successful use of technology for such a purpose, teachers will have to make informed pedagogical choices to suit students' needs and also the learning objectives. Sankey (2020) strongly advocated that HEIs adopt a policy of "pedagogy first" before making technological choices, i.e. to consider the pedagogical aspects before deciding on the choice of the technology and not the other way round. BL promotes student-centered active learning and is mainly linked to the theoretical active learning pedagogy of constructivism even though other pedagogical theories do come into play. In constructivism, learning is an active process whereby learners construct knowledge based on their experiences. Al-Huneidi and Schreurs (2012) stated that constructivism's strong point is that it prepares students for problem-solving environments because students are actively building and creating knowledge themselves, both individually and also socially, based on their personal experiences and interpretations. BL can provide an environment to enable knowledge construction via communication and discussion. As cited by Vu (2015), the adoption of constructivist teaching and learning theories will enable students to learn better because they are actively

involved in the learning process. Vu (2015) also highlighted that constructivist-oriented teaching styles can result in building ICT-integrated student-centered classrooms which can enable students to study better because students are actively involved in a discovery and investigative process. Vu's view is similarly echoed by Halasa et al. (2020) in their proposal that student-centered learning can be achieved through the use of technology to promote interactive learning and online interaction so that students can be actively involved in the learning process.

Two other major pedagogical learning theories are behaviourism and cognitivism. In behaviourism, all behaviours are formed through the conditioning of the interaction with our environment. Baulo and Nabua (2019) said that in behaviourism, learning will take place in response to the stimuli provided by the environment and from feedback derived from actions carried out. Thus, behaviourism is particularly useful in the online learning component of BL because online modules can be designed to provide the stimuli for the required behaviour. For example, online assessment exercises can be designed to provide the needed feedback to condition the students' responses until they achieve the required outcome. Cognitivism focuses on the internal mental processes which are essential for learning to occur. As stated by Yilmaz (2011), cognitivism places importance on what the learners know and how the learners acquire this knowledge. The cognitive approach aims to make knowledge meaningful so as to help learners relate to new information with reference to prior knowledge gained. Instructors who understand and practice this cognitive approach can optimize their students' learning with suitable strategies to help students integrate new knowledge with prior knowledge obtained to achieve the required learning outcomes.

Namyssova et al. (2019) conducted a survey with open-ended questions on BL at Nazarbayev University (NU) and found that BL proved to be a valuable tool in developing leadership skills and in helping to enhance students' time management skills. Most of the participants' responses highlighted that they found BL to be a helpful tool for time management as well as in developing leadership skills when carrying out projects. The responses from the participants also indicated that BL had a positive impact in terms of students being more confident in expressing their thoughts as well as in terms of public speaking. In addition to that, some participants also mentioned that BL had increased their decision-making and reflective thinking skills. Studies carried out by Garnham and Kaleta (2002) at University of Wisconsin-Milwaukee indicated that students tend to learn better in BL courses as compared to traditional classroom sessions. Instructors reported that students in the BL mode were able to have more meaningful topical discussions of relevant course materials, could write better papers, could perform better during examinations and could also produce higher quality projects. Wannapiroon (2014) undertook a study on a research-based BL model to evaluate whether BL could help enhance graduate students' research competency and critical skills and found that there was a significant improvement of the students' research competency and critical thinking skills after BL mode of learning was implemented.

Vasbieva, Klimova, Agibalova, Karzhanova and Bírová (2016) stated that it is rare for empirical studies to find that BL has no impact on students' achievements. Kebualemang and Mogwe (2017) conducted an empirical investigation to find out the impact of BL on tertiary students. They sampled 200 participants through the use of questionnaires at Botho University Gaborne Campus. The findings from their study based on their data collection from the questionnaires included (but not limited to) the following responses from the participants (Table 1):-

Table 1: Impact of Blended Learning on Tertiary Students

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
BL improved my analytical skills	45%	48%	6%	1%	0%
BL improved my inquisitiveness to foster course understanding	38%	54%	5%	2%	1%
BL fostered more interaction between me & other students & the instructor	41%	54%	2%	2%	1%
I have improved my results due to Blended Learning	69%	31%	0%	0%	0%
BL impacted on the growth of my GPA	65%	31%	4%	0%	0%

Based on their findings, Kebualemang and Mogwe (2017) concluded that BL has a positive impact on the students.

Gambari, Shittu, Ogunlade, and Osunlade (2018) conducted a study to investigate the effectiveness of BL on the performance of undergraduates in Kwara State, Nigeria. Table 2 shows there is improvement in the post-test scores for all the three groups but experimental group 1 who experienced BL had the highest mean score of 5.96. Experimental group 2 who experienced e-learning had a mean score of 5.93 while the control group who experienced the conventional teaching method had a mean score of 5.56. Findings from this study (Table 2) indicated that those who experienced BL mode performed better than others.

Table 2: Mean Performance scores of undergraduates taught using blended learning, e-learning and conventional teaching method

Groups	N	Pretest Mean	Posttest Mean	Mean Gain Score
Blended Learning	30	12.77	18.73	5.96
E-Learning	30	11.67	17.60	5.93
Conventional Teaching Method	25	9.12	14.68	5.56

Utami (2018) conducted a research study to investigate the effect of BL on senior high school students' achievement by carrying out a pre-test and a post-test with a randomized control group of 63 students in an information and communication technology course. 31 students were placed in the experimental group of using BL as the instructional model while the remaining 32 students were placed in the control group and were taught using the traditional instructional model. Based on the test results for both groups, the average for the experimental group (BL mode) was 57.8 for pre-test and 82.5 for post-test while the average for the control group (traditional mode) was 58.3 for pre-test and 72.9 for post-test. (Figure 2). The results for pre-test, indicated that there was no significant difference between the two groups for pre-test ($t(61)=301$, $\text{sig} > 0.05$), i.e. both groups had similar knowledge levels. The results for the post-test indicated a significant difference ($t(61) = 5.657$, $\text{sig} < 0.05$). The study concluded that students in the BL mode (experimental group) had a higher level of achievement as compared to students in the traditional mode (control group).

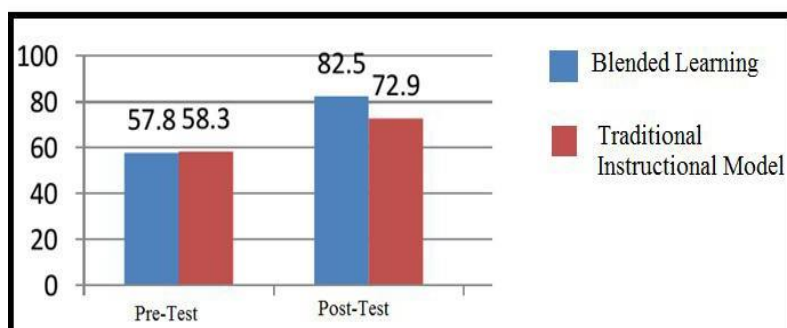


Figure 2: Student Learning Outcomes

4. Conclusion

It is the conclusion of this study that BL has the efficacy to promote learning outcomes and to improve students' achievement. Findings from literature reviews have indicated that students taught in BL mode perform better than those taught in the traditional mode. This conclusion is in agreement with Vasbieva et al.'s statement that it is rare for empirical studies to find that BL has no impact on students' achievements. Hence, there is a strong case to advocate for the use of BL to be an integral part of the instructional design for students, especially those in higher educational institutions so as to help students achieve the relevant learning outcomes. The adoption of BL becomes significantly even more important for learning outcomes which relate to equipping students with 21st Century skills especially during the Covid pandemic era because employability skills become even more essential when there is a high-level of unemployment and survival of the fittest is becoming part-and-parcel of the narrative in the work environment.

5. References

- Al-Huneidi, A., & Schreurs, J. (2012). Constructivism based blended learning in higher education. *International Journal of Emerging Technologies in Learning (iJET)*, 7(1), 4-9. doi:10.3991/ijet.v7i1.1792.
- Anthony, B., Kamaludin, A., Romli, A., Raffei, A. F. M., Phon, D. N. A. E., Abdullah, A., & Ming, G. L. (2020). Blended learning adoption and implementation in higher education: A theoretical and systematic review. *Technology, Knowledge and Learning*, 1-48. doi:10.1007/s10758-020-09477-z.
- Baulo, Janisah & Nabua, Edna. (2019). Behaviourism: Its Implication to Education.
- Bowyer, J., & Chambers, L. (2017). Evaluating blended learning: Bringing the elements together. *Research Matters: A Cambridge Assessment Publication*, 23, 17-26.
- Chan, Y. F., Narasuman, S., Dalim, S. F., Sidhu, G. K., & Lee, L. F. (2016). Blended learning as a conduit for inquiry-based instruction, active learning, formative assessment and its impact on students' learning outcomes in higher education.
- Dziuban, C., Hartman, J., and Moskal, P. (2004) Blended learning. Educause Center for Applied Research, Research Bulletin, (2004)7. Retrieved from <http://net.educause.edu/ir/library/pdf/ERB0407.pdf>
- Gambari, A. I., Shittu, A. T., Ogunlade, O. O., & Osunlade, O. R. (2018). Effectiveness of blended learning and elearning modes of instruction on the performance of undergraduates in Kwara State, Nigeria. *MOJES: Malaysian Online Journal of Educational Sciences*, 5(1), 25-36.
- Garnham, C. and Kaleta, R. (2002). Introduction to Hybrid Courses. Teaching with Technology Today. University of Wisconsin-Milwaukee. Retrieved from

- <https://hcelearning.files.wordpress.com/2010/09/introduction-to-hybrid-course1.pdf>
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, 7(2), 95-105.
- Graham, C. R. (2013). Emerging practice and research in blended learning. *Handbook of distance education*, 3, 333-350.
- Halasa, Suhaila & Abusalim, Nimer & Rayyan, Mohammad & Constantino, Rose & Nassar, Omayyah & Amre, Huda & Sharab, Moayad & Qadri, Insirah. (2020). Comparing student achievement in traditional learning with a combination of blended and flipped learning. *Nursing Open*. doi:10.1002/nop2.492.
- Hancock, S., & Wong, T. (2012). Blended Learning. Retrieved from http://sites.wiki.ubc.ca/etec510/Blended_Learning#cite_note-3.
- Holsapple, C. W., & Lee-Post, A. (2006). Defining, assessing, and promoting e-learning success: An information systems perspective. *Decision sciences journal of innovative education*, 4(1), 67-85.
- Kebualemang, G. K., & Mogwe, A. W. (2017). An Empirical Investigation into Blended Learning Effects on Tertiary Students and Students Perceptions on the Approach in Botswana. *International Journal of Advanced Computer Science and Applications*, 8(6), 187-197. doi:10.14569/IJACSA.2017.080624.
- Kumar, S. (2009). *Undergraduate perceptions of the usefulness of Web 2.0 in higher education: Survey development*. Paper presented at the Proceedings of the European Conference on e-Learning.
- Lim, D. H., & Morris, M. L. (2009). Learner and instructional factors influencing learning outcomes within a blended learning environment. *Journal of Educational Technology & Society*, 12(4), 282-293.
- Malaysia, K. P. (2012). Malaysia Education Blueprint 2013-2025. *Kementerian Pelajaran Malaysia*.
- Moskal, P., Dziuban, C., & Hartman, J. (2013). Blended learning: A dangerous idea? *The internet and higher education*, 18, 15-23.
- Namysova, G., Tussupbekova, G., Helmer, J., Malone, K., Mir, A., & Jonbekova, D. (2019). Challenges and Benefits of Blended Learning in Higher Education. *International Journal of Technology in Education*, 2(1), 22-31.
- Oliver, M., & Trigwell, K. (2005). Can 'blended learning' be redeemed? *E-learning and Digital Media*, 2(1), 17-26. doi:10.2304/elea.2005.2.1.17.
- Rothman, R. (2013). The Deepest Learners: What PISA Can Reveal about the Learning That Matters. *Alliance for Excellent Education*. Retrieved from <https://all4ed.org/wp-content/uploads/2013/12/DeepestLearners.pdf>.
- Sankey, M. (2020). Putting the pedagogic horse in front of the technology cart. *Journal of Distance Education in China*, 5, 46-53. doi:10.13541/j.cnki.chinade.2020.05.006.
- Shukla, A. (2015). Constructivism and Intigration of ICT: Powerful Blend of Teaching–Learning Process. *People: International Journal of Social Sciences*, 1(1). doi:10.20319/pijss.2015.s21.8290.
- Sivakumar, S., Namasivayam, S., Al-Atabi, M., & Ramesh, S. (2013). Pre-implementation study of blended learning in an engineering undergraduate programme: taylor's university lakeside campus. *Procedia-Social and Behavioral Sciences*, 103, 735-743.
- Utami, I. S. (2018). *The effect of blended learning model on senior high school students' achievement*. Paper presented at the SHS Web of Conferences. doi:10.1051/shsconf/20184200027.
- Vasbieva, D. G., Klimova, I. I., Agibalova, E. L., Karzhanova, N. V., & Bírová, J. (2016). Enhancement of students' vocabulary learning through a blended learning approach. *International Electronic Journal of Mathematics Education*, 11(5), 1195-1203.

- Vu, X. H. (2015). Active learning in an ICT-enhanced blended learning environment: A case study of Vietnamese students in Australian higher education. Retrieved from <https://ro.uow.edu.au/theses/4714>.
- Wannapiroon, P. (2014). Development of research-based blended learning model to enhance graduate students' research competency and critical thinking skills. *Procedia-Social and Behavioral Sciences*, 136, 486-490. doi:10.1016/j.sbspro.2014.05.361.
- Yilmaz, K. (2011). The cognitive perspective on learning: Its theoretical underpinnings and implications for classroom practices. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 84(5), 204-212. doi:10.1080/00098655.2011.568989.

The Effects of Integrating GeoGebra on Students' Images of Mathematics: A Systematic Review using PRISMA

Ziham Zawawi Bin Mazlan^{a*}, Muhammad Faizul Bin Abdul Hamid^b
^aSchool of Educational Studies, Universiti Sains Malaysia, Penang, Malaysia
*Email: g-91223866@moe-dl.edu.my

^bSchool of Human Ecology, Universiti Putra Malaysia, Selangor, Malaysia

Abstract

GeoGebra is a type of Dynamic Geometric Software (DGS) that has been widely used to teach Mathematics. A substantial research study was done to investigate the effectiveness, as well as the impact on learners' images of mathematics. Therefore, in this research, a systematic review of GeoGebra usage on learners' images of mathematics studies was conducted using PRISMA's procedure. The distribution of articles published specifically by years, distribution of articles by country of origin of which the study being conducted, tool or instrument used by researchers, samples, and types of images of mathematics were examined. 45 articles between 2004-2020 have been analyzed. The result of the review revealed that 2010 to 2020 were the years GeoGebra as DGS, gaining attention among researchers and educators. Researchers tend to study the effect of integrating GeoGebra on students' images of mathematics from the cognitive domain compared to the affective domain. Researchers also paid significant attention to the effectiveness of GeoGebra on secondary students. Meanwhile, less attention has been given to university and primary students.

Keywords: Dynamic Geometric Software (DGS), GeoGebra; images of mathematics.

1. Introduction

Previous studies revealed that the use of technology is effective to enhance students' learning in mathematics from varied dimensions (Chew, 2009; Chew & Lim, 2013; Mazlan, 2020). Thus, this increasing consensus among mathematics educators and mathematicians that technology is becoming an integral part of mathematics teaching and learning (Lavicza, et al., 2020) is promoting the use of technology in the classroom as it does give positive impact in constructing students' knowledge and understanding (Noorbaizura & Leong, 2013). The free availability and portability of GeoGebra have made it possible for millions of students and learners worldwide to discern these novel techniques whether using smartphones, tablets, computers, or laptops (Hohenwater et. al. 2019). As GeoGebra is gaining popularity worldwide, a study in regards to the effect of GeoGebra on students' learning in mathematics keeps thriving, thus a systematic review is needed to be conducted to analyze this trend.

1.1 GeoGebra

GeoGebra is a Dynamic Geometry Software (DGS) that offers the possibility to create web pages with embedded interactive applets that can be used in a web browser (Ancsin et. al., 2013) as this software is an open-source educational mathematics software. Its name is a portmanteau made from the two words Geometry and Algebra. GeoGebra can be used for demonstration and visualization, as a construction tool, discovering mathematics, and for the teacher to prepare materials (Hohenwater & Fuchs, 2004). This software is widely being used for learning geometry and algebra (Mazlan, 2020). To cater to the worldwide user, GeoGebra

offers many powerful commands starting from the slope of a straight line up to differentiation and integration of functions (Hohenwater & Fuchs, 2004). Its popularity has been proven with 100 million+ users, 153 GeoGebra Institutes and 1 million+ shared examples (Lavicza, et al., 2020).

1.2 Images of Mathematics

Lim (1999) refers to the image as a mental picture and propose a conjectural model of image formation where student constructs their images of something from what they have experienced or perceived. McLeod (1987) emphasizes the element of memory in his definition for the image. Thus, an image is mental representation or mental experience of something that is not immediately present to the sense involving memory. Lim (1999) defined image from the constructive perspective as divided into cognitive dimension and affective dimension. From the cognitive dimension, theoretically image of mathematics consists of beliefs about mathematics and knowledge of mathematics while from the affective dimension, the image of mathematics consists of attitudes, emotion and feeling towards mathematics.

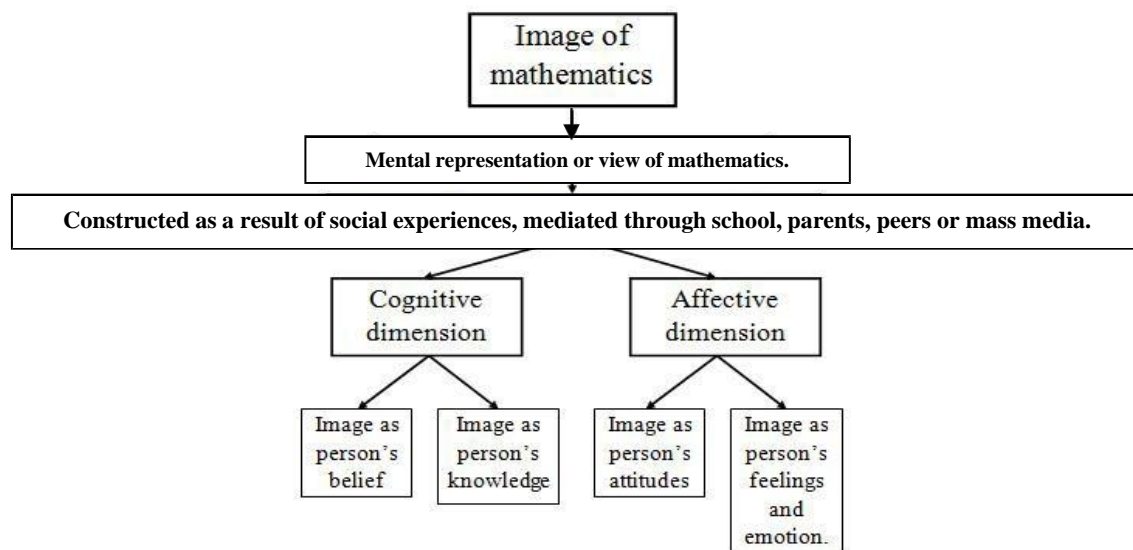


Figure 1: The concept of 'image of mathematics'

Source: Adapted from *Public Images of Mathematics* (p.39), Lim, C. S. (1999). University of Exeter.

1.3 PRISMA

Preferred Reporting Items of Systematic reviews and Meta-Analysis (PRISMA) statement was developed in 2005 which consist of four steps, namely, identification, screening, eligibility, and inclusion criteria. PRISMA can also be used as the foundation for reporting systematic review and benefits various fields (Liberati et. al., 2009).

2. Objectives of The Review

The purpose of this study is generally to identify the effects of integrating GeoGebra on students' images of Mathematics. Under this general aim, the answers are searched for the following research question (RQ):

RQ1: How are the articles distributed over the years?

RQ2: What is the distribution of types of images holds by learners in the articles?

RQ3: What is the distribution of country of origin in the articles of which the study being conducted?

RQ4: What is the distribution of ‘Who’ associated with the effect of using GeoGebra on student’s images of Mathematics in the articles?

3. Methodology

3.1 The PRISMA Procedure

The paper has used Preferred Reporting Items of Systematic Reviews and Meta-Analysis or PRISMA procedure adapted from Liberati, et. al., (2009). PRISMA consist of four stages, namely, identification, screening, eligibility, and inclusion. This systematic review attempts to collate all empirical evidence that fits pre-specified eligibility criteria to answer a specific research question. It uses explicit, systematic methods that are selected with a view to minimize bias, thus provide reliable findings from conclusion can be drawn and decisions made (Antman, et. al., 1992; Oxman & Guyatt, 1993).

3.2 Limitations of Study

This research is limited to the selected articles in Google Scholar, Scopus, ResearchGate, and Mendeley. For the Scopus database, access was used via Universiti Sains Malaysia database. Thus, this study only utilized these databases to provide a complete and systematic article searching procedure and analysis. Only accessed journals using English, Malay, and Indonesian languages being used.

3.3 The Systematic Review Process

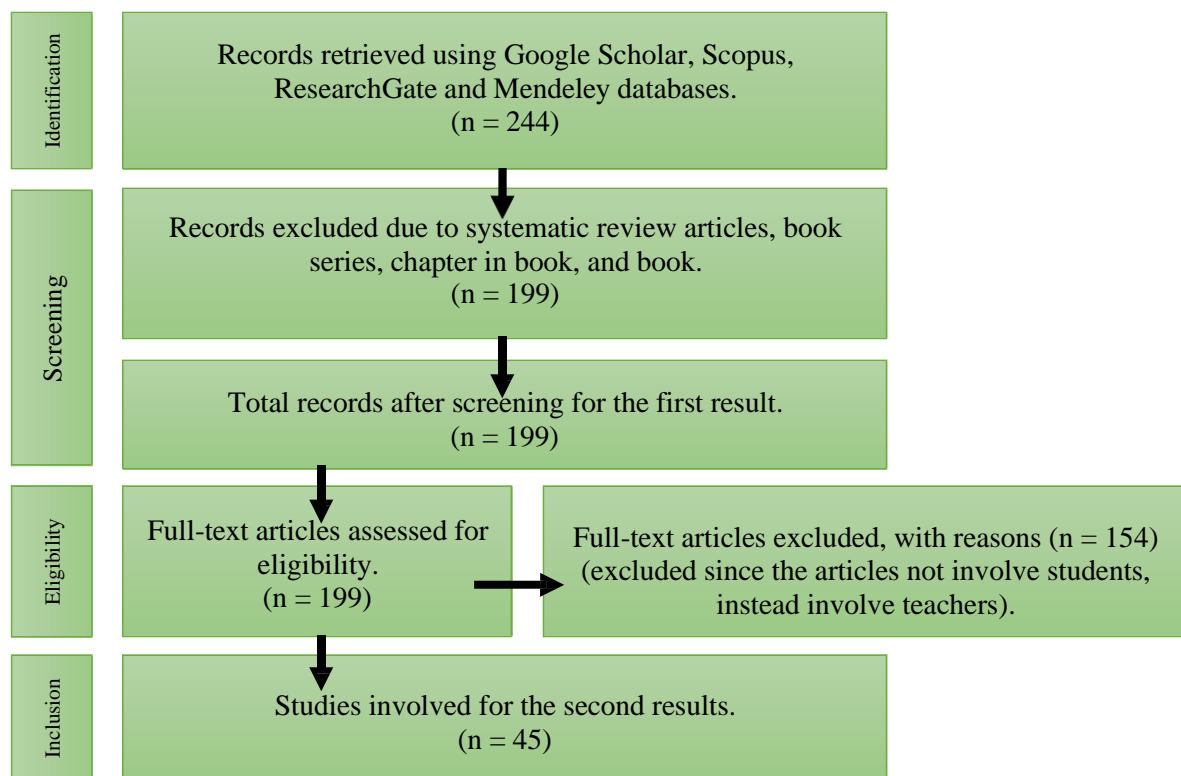


Figure 1: PRISMA’s flow map.

Identification

Titles and abstracts of 244 articles were filtered by the authors after the inclusion and exclusion process which was automatically completed using a database system (Table 1). The last search was run on 5 December 2020. Thus, 199 articles were selected to be read in full text. The authors read the full text of all articles.

Table 1: The search string.

Database	Search String
Google Scholar/ Scopus/ Researchgate/ Mendeley	TITLE-ABS-KEY ((“GeoGebra”) AND (“effect” OR “enhancing”) AND (“learner” OR “students” OR “pupils” OR “children”) AND (“achievement” OR “motivation” OR “attitude” OR “belief” OR “understanding” OR “skill” “misconception” OR “ability” OR “knowledge” OR “feelings and emotion” OR “perception” OR “views” OR “interest” OR “response” OR “feedback” OR “image of mathematics”)).

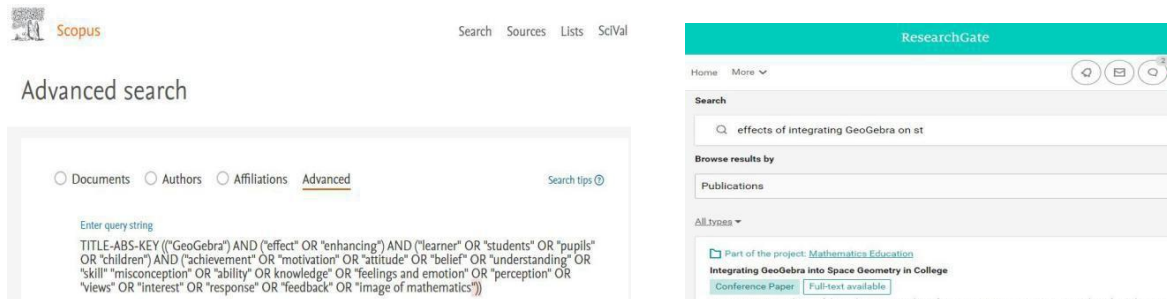


Figure 2: Advanced menu to enter search string on Scopus. Figure 3: Search menu for ResearchGate.

Screening

The following search terms to search all studies in the related topic: GeoGebra; effect; enhancing; learner; students; pupils; children; achievement; motivation; attitude; belief; understanding; skill; ability; knowledge; misconception; feelings and emotion; perception; views; interest; response; feedback; image of mathematics. From 244 articles, only 199 articles were selected after the screening process. 45 records being excluded due to systematic review articles, book series, chapter in book and book.

Eligibility

Eligibility assessment was performed independently in an unblinded standardized manner by two reviewers. From 199 articles, only 45 articles were included in the third step. 154 articles being excluded with reasons as such do not comply with the objective of the review. Any articles that studied teachers' or educators' images of mathematics will be excluded.

Inclusion

45 articles have been chosen after eligibility assessment and authors examine the articles and found out the following results.

4. Results

RQ1: How are the articles distributed over the years?

Table 2: Distribution of articles by years.

Years	F
2020	7
2019	1
2018	2
2017	7
2016	5
2015	5
2014	3
2013	2
2012	3
2011	3
2010	4
2006	1
2004	2
	45

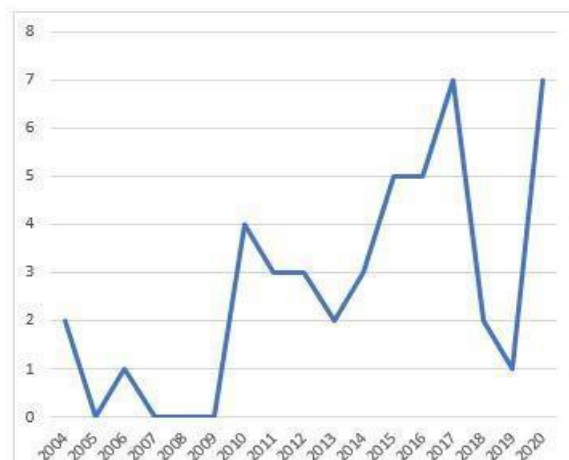


Figure 4: Trend of the publication of the articles.

Table 2 shows the article distribution according to its publication year. No article publication is available in 2005, 2007, 2008, and 2009. The biggest gap is for one group in three consecutive years between 2007 to 2009. The total number of article publications in regards to this topic within these 17 years period is only 45 articles. Article publication increases gradually within the last ten years from 2010 to 2020 of which 37 articles were published. This trend shows that current researchers are getting more interested to study the effect of integrating GeoGebra on students' images of mathematics.

RQ2: What is the distribution of types of images holds by learners in the articles?

The image of mathematics can be divided into two dimensions which are the cognitive dimension and affective dimension. As for this study, each identified article being recognized and labeled based on their research objective(s); whether (i) belief, (ii) knowledge, (iii) attitudes, and (iv) emotion and feeling towards mathematics.

Table 3: Keywords falls under each dimension of images of mathematics

Dimensions	Themes	Keywords
Cognitive	Belief	Self-efficacy, values, ethics, moral
	Knowledge	Achievement, understanding, skill, misconception, ability
Affective	Attitudes	Motivation
	Feelings and emotion	Perception, feeling, emotion, views, interest, response, feedback

Table 3 shows the keywords identified in each article and where it falls under each dimension to suits the term images of mathematics from Lim's (1999) Model of Images of Mathematics.

Table 4: Distribution of types of images holds by learners in the articles.

Themes	Belief	Knowledge	Attitudes	Feelings and emotion
f	4	32	10	14

Based on Table 4, from the discerned articles, most researchers tend to choose to study the effects of integrating GeoGebra in terms of knowledge whereas they wanted to explore and understand the effect from the cognitive dimension. Elaborately, is GeoGebra can give a significant effect on student's cognitive dimension after using it.

RQ3: What is the distribution of country of origin in the articles of which the study being conducted?

Table 5: Distribution of articles by country of origin of which the study being conducted.

Countries/ Areas	f
Malaysia	18
Turkey	10
Indonesia	9
South Africa	2
Brunei	1
Iran	1
Philippines	1
South Korea	1
Viet Nam	1
Zimbabwe	1
	45

Table 5 indicates the distribution of articles by country of origin of which the study being conducted. The result illustrates that Malaysia has the most scientific works executed and published in the effects of integrating GeoGebra on students' images of Mathematics with 19 articles. Turkey and Indonesia at the second and third rank with 10 and 9 articles. The rest have the least article published with one article each. It is evidence that Asian countries produce the highest number of article publications in the related topic and proves that Asian researchers paid serious attention to how GeoGebra affects students' images of mathematics.

RQ4: What is the distribution of ‘Who’ associated with effect of using GeoGebra on student’s images of Mathematics in the articles?

Table 6: Distribution of ‘who’.

Author(s)	Who involve?	Author(s)	Who involve?	Author(s)	Who involve?
Abdul Halim et. al. (2020)	Secondary students.	Zaleha & Syairatul Nadiyah (2017)	Primary students.	Delaviz & Leong (2013)	Secondary students.
Ari Septian et. al. (2020)	Secondary students.	Ibnu Fazar, Zulkardi & Somakin (2016)	Secondary students.	Noorbaizura & Leong (2013)	Primary students.
Em & Roman (2020)	Secondary students.	Farida Nursyahidah et. al. (2016)	Secondary students.	Dede (2012)	Primary and secondary students.
Mukamba & Makamure (2020)	Secondary students.	Khor & Ruzlan (2016)	Secondary students.	Effandi & Lo (2012)	Secondary students.
Ogbonnaya & Mushipe (2020)	Secondary students.	Lim & Leong (2016)	Primary students.	Hutkemri & Effandi (2012)	Secondary students.
Safrida et. al. (2020)	University students.	Rohaidah et. al. (2016)	Secondary students.	Dogan & Icel (2011)	Primary students.
Mazlan (2020)	Primary student	Bulut, Akcakin, & Kaya (2015)	Primary students.	Hutkemri, Effandi & Norazah (2011)	University students.
Zetiuslita et. al. (2019)	University students.	Kamariah, Ahmad Fauzi & Rosnani (2015)	Secondary students.	Zengin, Furkan & Kutluca (2011)	Secondary students.
Hutkemri & Enny (2018)	Secondary students.	Leong (2015)	Secondary students.	Choi (2010)	Secondary students.
Syamsiah & Jasni (2018)	University students.	Marzita & Muhamad Hafizhuddin (2015)	Secondary students.	Unlu et. al. (2010)	University students.
Chua et. al. (2017)	Secondary students.	Nazihatulhasanah & Nurbiha (2015)	Secondary students.	Royati, Ahmad Fauzi, & Rohani (2010)	Secondary students.
Horzum & Unlu (2017)	University students.	Shadaan & Leong (2014)	Secondary students.	Reis (2010)	Secondary students.
Hutkemri & Sharifah Norul Akmar (2017)	Secondary students.	Tran et. al. (2014)	Secondary students.	Ozdemir (2006)	University students.
Khor & Ruzlan (2017)	Secondary students.	Wulan & Sugiman (2014)	Secondary students.	Bayram (2004)	Secondary students.
Pavethira & Leong (2017)	Primary students.			Duatepe (2004)	Secondary students.
Pfeiffer (2017)	University students.				

The ‘who’ represents students’ involvement in the studies. The articles show researchers paid attention towards the effectiveness of GeoGebra to each student level ranging from primary school students to higher level students. Whilst 30 studies examined secondary school students; only 8 studies examined university students and 8 studies examined primary students. This has shown that a significant spotlight has been given on secondary school students in examining the effect of integrating GeoGebra on students’ images of mathematics compared to university students and primary students.

5. Discussion and Conclusion

Results, first, shown that article publication increases gradually within the last ten years from 2010 to 2020 of which 37 articles were published. This trend shows that current researchers are getting more interested to study the effect of integrating GeoGebra on students’ images of mathematics (RQ1). Second, most researchers tend to choose to study the effects of integrating GeoGebra in terms of knowledge whereas they wanted to explore and understand the effect from the cognitive dimension compared to the affective dimension (RQ2). Third, Malaysia has the most scientific works published in the related topic (RQ3). Fourth, the ‘who’ revealed that studies on the effects of integrating GeoGebra on students’ images of

mathematics emphasized more on secondary education level compared to university and primary level (RQ4).

The use of DGS such as GeoGebra is significant in enhancing and improving students' images of mathematics as this software plays a role for demonstration and visualization, as a construction tool, discovering mathematics, and for the teacher to prepare materials (Hohenwater & Fuchs, 2004). The integration of technology substantially modifies the way mathematics is taught and learned (Zaenal Abidin et. al., 2017). Technology also provides a tool for teachers to connect mathematical concepts with real-world problems so that their students can explore mathematical concepts, and analyze situations (Sawaya & Putnam, 2015) and this will contribute to students' images of mathematics directly (Lim, 1999).

With the guidance of the PRISMA procedure, self-regulated learning in online platforms becomes much easier for researchers. Table 6 indicates a huge number of articles focus on the effects of integrating GeoGebra on students' images of mathematics among secondary students. This fact can provide further analysis of the reason for emphasis given at this different level.

6. Recommendations

The current review provides evidence from the literature on the effects of integrating GeoGebra on students' images of mathematics regarding data collection procedure and the dimension of images of mathematics being explored. Due to the limitation of languages, and the database chosen, it is suggested that further studies being conducted to cover other languages and databases. This study also gives significant directions for future research to continue identifying the effects of integrating GeoGebra on students' images of mathematics at every level of education.

7. References

- Abdul Halim, A., Noor Suhaily, M., Umar Haiyat, A., Mohd Hilmi, H., Sharifah Nurarfah, S. (2020). The Effects of an Inductive Reasoning Learning Strategy Assisted by the GeoGebra Software on Students' Motivation for the Functional Graph II Topic. *IEEE Access*, 8, 143848-143861. doi:10.1109/ACCESS.2020.3014202.
- Ancsin, G., Hohenwater, M., & Kovacs, Z. (2013). GeoGebra goes Web. *The Electronic Journal of Mathematics and Technology*, 7(6), 412-418.
- Antman, E., Lau, J., Kupelnick, B., Mosteller, F., & Chalmers, T. (1992). A comparison of results of meta-analyses of randomized control trials and recommendations of clinical experts. *JAMA*, 268, 240-248.
- Ari Septian, Sarah I., Ramadhan F. S., & Rendi N. (2020). GeoGebra-Assisted Problem Based Learning to Improve Mathematical Problem Solving Ability. *Advance in Social Science, Education and Humanistic Research*, 467, 67-71.
- Battista, M. T., & Clements, D. H. (1995). Geometry and proof. *The Mathematics Teacher*, 88(1), 48-54.
- Bayram, S. (2004). *The Effect of Instruction with Concrete Models on Eighth Grade Students' Geometry Achievement and Attitudes Towards Geometry*. Middle East Technical University.
- Bell, A. W. (1976). A Study of Pupils' Proof-Explanation in Mathematical Situations. *Educational Studies in Mathematics*, 7, 23-40.
- Bulu, M., Akcakin, H., & Kaya, G. (2015). The Effects of GeoGebra on Third Grade Primary Students' Academic Achievement in Fractions. *Mathematics Education*, 11(2), 347-

355. doi:10.12973/iser.2016.2109a.
- Chew, C. M., & Lim, C. S. (2013). Enhancing Primary Pupils' Geometric Thinking through Phase-Base Instruction Using the Geometer's Sketchpad. *Asia Pacific Journal of Educators and Education*, 28, 33-51.
- Choi, K.-S. (2010). Motivating students in learning mathematics with GeoGebra. *Annals. Computer Science Series*, 8(2), 65-76.
- Chua, G., Khairul Amilin, T., Masitah, S., Tan, A., & Leong, E. (2017). Analysing Students' Perspectives on Geometry Learning From The Combination of van Hiele Phase-Based Instructions and GeoGebra. *proceeding of the 3rd International Conference on Education*. 3, pp. 205-213. Kuala Lumpur: TIIKM Publishing. doi:https://doi.org/10.17501/icedu.2017.3122.
- DeBellis, V., & Goldin, G. (1997). The affective domain in mathematical problem-solving. *Proceedings of the 21st Conference of the International Group for the Psychology of Mathematics Education*, (pp. 209-216). Lahti, Finland.
- Dede, Y. (2012). Students' Attitudes Towards Geometry: A Cross-Sectional Study. *International Journal for Studies in Mathematics Education*, 5(1), 85-113.
- Delaviz, M., & Leong, K. (2013). Exploring students' conceptual understanding of parallelogram based on GeoGebra. *5th International Conference on Science and Mathematics Education* (pp. 1-8). Georgetown :RECSAM .
- Dogan, M., & Icel, R. (2011). the role of dynamic geometry software in the process of learning: GeoGebra example about triangles. *international Journal of Human Sciences*, 8(1), 1441-1457.
- Duatepe, A. (2004). *The effects of drama based instruction on 7th grade students' geometry achievement, van Hiele geometric thinking levels, attitude toward mathematics and geometry*. Middle East Technical University.
- Em, A. M. M. & Roman, A. G. (2020). Effectiveness of GeoGebra in Teaching Grade 10 Mathematics. *Asian Journal of Multidisciplinary Studies*, 3(2), 1-8.
- Effandi, Z. & Normah, Y. (2009). Attitudes and Problem-Solving Skills in Algebra Among Malaysian Matriculation College Students. *European Journal of Social Sciences*, 8(2), 232-244.
- Farida Nursyahidah, Bagus Ardi Saputro, & Muhammad Prayito. (2016). Kemampuan penalaran matematis siswa SMP dalam belajar garis dan sudut dengan GeoGebra. *Suska Journal of Mathematics Education*, 2(1), 13-19.
- Hannula, M. (2006). Affect in mathematical thinking and learning towards integration of emotion, motivation, and cognition. In J. Maab , & W. Schloglman (Eds.), *New mathematics education research and practice* (pp. 209-232). Rotterdam: Sense.
- Hohenwater, M., & Fuchs, K. (2004). Combination of dynamic geometry, algebra and calculus in the software system GeoGebra. *ZDM* , 1-6.
- Hohenwater, M., Zoltan, K., & Tomas, R. (2019). Using Automated Reasoning Tools to Explore Geometric Statement and Conjectures. In G. H. al, *Proof Technology in Mathematics Research and Teaching, Mathematics Education in the Digital Era 14* (pp. 1-22). Switzerland: Springer Nature. doi:https://doi.org/10.1007/978-3-030-28483-1_10
- Horzum, T., & Unlu, M. (2017). Pre-Service Mathematics Teachers' Views About GeoGebra and Its Use. *Acta Didactica Napocensia*, 10(3), 77-90.
- Hutkemri, Z., Effandi , Z., & Norazah, M. (2011). Emploting GeoGera in the teaching of mathematics: The teachers' perspective. *Elixir Psychology*, 36, 3483-3485.
- Hutkemri, Z., & Effandi, Z. (2012). The Effect of Using geoGebra on Conceptual and Procedural Knowledge of High School Mathematics Students. *Asian Social Science*, 8(11), 102-106.

- Hutkemri, Z., & Enny, O. (2018). The Effect of GeoGebra on Students' Misconceptions of Limit Function Topic. *Jurnal Kurikulum & Pengajaran Asia Pasifik*, 6(1), 1-6.
- Hutkemri, Z., & Sharifah Norul Akmar, S. (2017). The Effectiveness of the GeoGebra Software: The Intermediary Role of Procedural Knowledge on Students' Conceptual Knowledge and their Achievement in Mathematics. *EURASIA Journal of Mathematics Science and Technology Education*, 13(6), 2155-2180. doi:10.12973/eurasia.2017.01219a.
- Ibnu Fazar, Zulkardi, & Somakim. (2016). Pengembangan Bahan Ajar Program Linear Menggunakan Aplikasi GeoGebra Berbantuan Android Di Sekolah Menengah Atas. *JPPM*, 9(1), 6-11.
- Kamariah, A., Ahmad Fauzi, M., & Rosnani, M. (2015). Effects of Geogebra towards students' mathematics performance. *7th international Conference on Research and Education in Mathematics (ICREM7)*, (pp. 180-183).
- Khor, M., & Ruzlan, M.-A. (2016). Penggunaan GeoGebra Dalam Pembelajaran Matematik Melalui Pembelajaran Modular. *Proceedings of International Seminar on Generating Knowledge Through Research* (pp. 147-154). UUM-UMSIDA.
- Khor, M., & Ruzlan, M.-A. (2017). Geogebra: Towards Realizing 21st Century Learning in Mathematics Education. *Malaysian Journal of Learning and Instruction: Special Issues*, 93-115.
- Lavicza, Z., Prodromou, T., Fenyvesi, K., Hohenwater, M., Juhos, I., Koren, B., & Diego-Mantecon, J. (2020). Integrating STEM-related technologies into mathematics education at a large scale. *International Journal for Technology in Mathematics Education*, XX(Y), 1-9.
- Leong, K. (2015). The Effects of Instruction Using the ARCS Model and GeoGebra on Upper Secondary Students' Motivation and Achievement in Learning Combined Transformation. *Asia Pacific Journal of Educators and Education*, 30, 141-158.
- Liberati, A., Altman, D., Tetzlaff, J., Mulrow, C., . . . Moher, D. (2009). Preferred Reporting Items for Systematic Review and Meta-Analyses: The PRISMA Statement. *PLoS Med*, 6(7). doi:10.1371/journal_pmed1000097
- Lim, C. S. (1999). *Public Images of Mathematics*. UK: University of Exeter.
- Lim, K., & Leong, K. (2016). A Study of gamification on GeoGebra for remedial pupils in primary mathematics. *Proceedings of the 21st Asian Conference on technology in Mathematics*, (pp. 222-228). Pattaya, Thailand.
- Mazlan, Z Z. (2020). Analyzing Year 2 DLP Pupils' Motivation in Learning The Topic of Shape and Space by Using ARCS Model Instruction Incorporating GeoGebra. *Jurnal Penyelidikan Pendidikan Guru*, 15, 1-16.
- Martin, W., & Harel, G. (1989). Proof frames of preservice elementary teachers. *Journal for Research in Mathematics Education*, 20(1), 41-51.
- Marzita, P., & Muhamad Hafizhuddin, A. (2015). Can Under Achiever Pupils Learn Trigonometry By Using The GeoGebra Learning Module?. *The 3rd International Postgraduate Conference in Science and Mathematics (IPCSM'15)*, (pp. 1-5).
- McLeod, W. T. (1987). *The New Collins dictionary and thesaurus in one volume*. UK: HarperCollins.
- Mukamba, E., & Makamure, C. (2020). Integration of GeoGebra on Teaching and Learning Geometric Transformation at Ordinary Level in Zimbabwe. *Contemporary Mathematics and Science Education*, 1(1), 1-8. doi:https://doi.org/10.30935/conmaths/8431
- Nazihatulhasanah, A., & Nurbiha, A. (2015). The effects of GeoGebra on students achievement. *Procedia - Social and Behavioral Sciences*, 172, 208-214.
- Noorbaizura, T., & Leong, K. (2013). Effect of students' achievement in fractions using

- GeoGebra. *SAINSAB*, 16, 97-106.
- Ogbonnaya, U., & Mushipe, M. (2020). The Efficacy of GeoGebra-Assisted Instruction on Students' Drawing and Interpretations of Linear Functions. *International Journal of Learning, Teaching and Educational Research*, 19(9), 1-14.
doi:<https://doi.org/10.26803/ijlter.19.9.1>
- Oxman, A., & Guyatt, G. (1993). The science of reviewing research. *Ann NY Acad Sci*, 703, 133-124.
- Ozdemir, E. (2006). *An investigation of the Effects of Project-based Learning on Students' Achievement in and Attitude Towards Geometry*. Middle East Technical Univeristy.
- Pfeiffer, C. (2017). *A Study of The Development of Mathematical Knowledge in a GeoGebra-Focused Learning Environment*. Stellenbosch University. Retrieved from <https://scholar.sun.ac.za>.
- Reis, Z. (2010). Computer supported mathematics with GeoGebra. *Procedia Social and Behavioral sciences*, 9, 1449-1455.
- Rohaidah, M., Ting, S. H., Nor'ain, M. T, Zamzana, Z., Raja Lailatul Zuraida, R. M. S. (2016). The effects of using GeoGebra teaching strategy in Malaysian secondary schools: A case study from Sibul, Sarawak. *Malaysian Journal of Society and Space*, 12(7), 13-25.
- Royati, A., Ahmad Fauzi, M., & Rohani, A. (2010). The Effects of GeoGebra on Mathematics Achievement: Enlightening Coordinate Geometry Learning. *Procedia Social and Behavioral Sciences*, 8, 686-693.
- Safrida, L., Setiawan, T., Susanto, Yudianto, E., Ambarwati, R., & Putri, I. (2020). Integrating GeoGebra into geometry space learning: a lesson from traditional cultural festival tumpang sewu. *Journal of Physics: Conference Series*, 1-8.
doi:10.1088/1742-6596/1465/1/012046
- Sawaya, S., & Putnam, R. (2015). Bridging the Gap: Using Mobile Devices to Connect Mathematics to out-of-School Contexts. In H. Crompton, & J. Traxler, *Mobile Learning and Mathematics* (pp. 9-19). New York: Routledge.
- Seloraji, P., & Eu, L. K. (2017). Students' Performance in Geometrical Reflection Using GeoGebra. *MOJET-Malaysian Online Journal of Educational Technology*, 5(1), 65-77.
- Shadaan, P., & Leong, K. (2014). Effectiveness of Using Geogebra on Students' Understanding in Learning Circles. *The Malaysian Online Journal of Educational Technology*, 1(4), 1-11.
- Syamsiah, H., & Jasni, M. (2018). The Effectiveness of Using GeoGebra Software in Teaching Angle in Circle. *International Journal of Computer and Information Technology*, 7(5), 224-228.
- Tran, T., Nguyen, N.-G., Bui, M.-D., & Phan, A.-H. (2014). Discovery Learning with the Help of the GeoGebra Dynamic Geometry Software. *International Journal of Learning, Teaching and Educational Research*, 7(1), 44-57.
- Unlu, M., Avcu, S., & Avcu, R. (2010). The relationship between geometry attitudes and self-efficacy beliefs towards geometry. *Procedia Social and Behavioral Sciences*, 9, 1325-1329.
- Wulan Fitriyani, & Sugiman. (2014). Pengembangan Perangkat Pembelajaran Teorema Pythagoras Dengan Pendekatan Ideal Berbantuan GeoGebra. *Jurnal Riset Pendidikan Matematik*, 1(2), 268-283.
- Zaenal, A., Mathrani, A., & Hunter, R. (2017). Student Engagement with Technology Use in Mathematics Education: An Indonesian Secondary School Context. *Pacific Asia Conference on Information Systems (PACIS)*, (pp. 1-13).
doi:<http://aisel.aisnet.org/pacis2017>

- Zaleha, I., & Syairatul Nadiah, A. (2017). Learning 2-Dimensional and 3-Dimensional Geometry with Geogebra: Which Would Students Do Better? *International Journal on Emerging Mathematics Education (IJEME)*, 1(2), 121-134. doi:<http://dx.doi.org/10.12928/ijeme.v1i2.5541>.
- Zengin, Y., Furkan, H., & Kutluca, T. (2012). The effect of dynamic mathematics software geogebra on student achievement in teaching of trigonometry. *Procedia - Social and Behavioral Sciences*, 31, 183-187.
- Zetiuslita, Nofriyandi, & Endang Istikomah. (2019). The effectiveness of Geogebra-assisted direct instruction learning in improving students' mathematical communication skill viewed from academic level. *Journal of Physics: Conference Series*, 1-6.

Pendekatan Model *Flipped Classroom* Dengan Sumber Digital Bagi Penjanaan Kekekalan Amalan Kemahiran Pemikiran Sejarah

M. Kaviza

SMK Padang Besar

Email: kavizakaviza@yahoo.com

Abstrak

Kajian kuasi eksperimen ini bertujuan untuk mengkaji kesan kekekalan amalan kemahiran pemikiran sejarah melalui pendekatan Model *Flipped Classroom* dengan sumber digital berdasarkan jantina. Seramai 32 orang murid tingkatan Satu iaitu 13 orang murid lelaki dan 19 orang murid perempuan terlibat dalam kajian ini. Instrumen kajian ini ialah soal selidik amalan kemahiran pemikiran sejarah yang telah disahkan oleh pakar penilai dan mempunyai nilai kebolehpercayaan yang baik. Data kajian ini dianalisis secara deskriptif dan inferensi iaitu ujian *SPLIT ANOVA* dengan perisian *IBM SPSS*. Dapatan kajian ini menunjukkan bahawa terdapat kesan kekekalan amalan kemahiran pemikiran sejarah dalam kalangan murid lelaki dan murid perempuan. Implikasi kajian ini menyediakan sumber maklumat kepada para guru sejarah untuk melaksanakan aktiviti pembelajaran sejarah melalui pendekatan Model *Flipped Classroom* dengan sumber digital dalam proses pengajaran dan pembelajaran bagi memupuk amalan kemahiran berfikir yang baik dalam kalangan murid.

Kata Kunci: Pendekatan Model *Flipped Classroom*, sumber digital, kekekalan, amalan kemahiran pemikiran sejarah

1. Pengenalan

Pendekatan Model *Flipped Classroom* merupakan strategi pembelajaran berpusatkan murid dan abad ke-21 iaitu kelas berbentuk terbalik yang mengubah aktiviti pembelajaran kuliah di dalam kelas dan menyiapkan tugas di rumah kepada aktiviti pembelajaran kuliah di rumah dan menyiapkan tugas di dalam kelas dengan bimbingan guru (Lage, Platt & Tregilia, 2000; Bergamann & Sams, 2012, 2014; Mohamed Amin Embi & Ebrahim Panah, 2014; Zolkefli Bahador, Mohd Kasri Saidon & Irdawati Ibrahim, 2019). Pelaksanaan pendekatan *Flipped Classroom* kini semakin berkembang pesat sejak kebekalangan ini dalam mata pelajaran sejarah (Kaviza, 2019; Aidinopoulou & Sampson, 2017; Gaughan, 2014; Westermann, 2014). Rentetan daripada itu, kurikulum sejarah telah menekankan tiga elemen pengetahuan, kemahiran pemikiran sejarah dan nilai (Pusat Perkembangan Kurikulum [PPK], 2015). Justeru, aktiviti pembelajaran sejarah perlulah menerapkan ketiga-tiga elemen tersebut disebabkan oleh mata pelajaran sejarah merupakan disiplin ilmu untuk mencari kebenaran tentang masa lalu melalui proses pemikiran inkuiri dan aplikasi amalan kemahiran pemikiran sejarah yang terdiri daripada kemahiran memahami kronologi, kemahiran meneroka bukti, kemahiran membuat interpretasi, kemahiran membuat imaginasi dan kemahiran membuat rasionalisasi secara kritis dan analitis dalam proses pengkajian sejarah dengan menggunakan sumber-sumber atau bahan-bahan sejarah yang boleh diperolehi dalam format analog mahupun digital (PPK, 2015; Barton, 2018; Library of Congress, 2018; Nersater, 2019). Sehubungan dengan itu, terdapat satu keperluan kepada pengkaji untuk melaksanakan aktiviti pembelajaran sejarah melalui pendekatan Model *Flipped Classroom* dan penggunaan sumber digital dengan mengenal pasti sama ada pelaksanaan aktiviti pembelajaran sejarah tersebut dapat menjana kekekalan dalam amalan kemahiran pemikiran sejarah dalam kalangan murid.

1.1 Objektif Kajian

Objektif kajian ini ialah:

1. Mengenal pasti sama ada terdapat kesan kekekalan dalam amalan kemahiran pemikiran sejarah antara ujian pra, ujian pasca dan ujian lanjutan melalui pelaksanaan aktiviti pembelajaran sejarah melalui Model *Flipped Classroom* dengan penggunaan sumber digital berdasarkan jantungina.

1.2 Soalan Kajian

Soalan kajian ini ialah:

1. Adakah terdapat kesan kekekalan dalam amalan kemahiran pemikiran sejarah antara ujian pra, ujian pasca dan ujian lanjutan melalui pelaksanaan aktiviti pembelajaran sejarah melalui Model *Flipped Classroom* dengan penggunaan sumber digital berdasarkan jantungina?

2. Hipotesis Kajian

Hipotesis kajian ini ialah:

H₀₁: Tidak terdapat perbezaan yang signifikan bagi amalan kemahiran pemikiran sejarah antara ujian pra, ujian pasca dan ujian lanjutan melalui pelaksanaan aktiviti pembelajaran sejarah melalui Model *Flipped Classroom* dengan penggunaan sumber digital berdasarkan jantungina

3. Metodologi Kajian

Kajian berbentuk eksperimen ini melibatkan seramai 32 orang murid tingkatan satu yang telah ditentukan melalui teknik persampelan berkelompok yang mengikuti aktiviti pembelajaran sejarah melalui pendekatan *Flipped Classroom* dan penggunaan sumber-sumber digital. Instrumen kajian ini ialah soal selidik kemahiran pemikiran sejarah yang mempunyai nilai kebolehpercayaan *Cronbach Alpha* ialah 0.95. Data kajian ini telah dianalisis secara deskriptif dan inferensi iaitu *SPLIT ANOVA* melalui perisian *IBM SPSS*. Murid-murid dalam kajian ini telah mengikuti proses pengajaran dan pembelajaran bagi topik Tamadun Awal Dunia.

4. Dapatan Kajian

Berdasarkan Jadual 1, min ujian pasca amalan kemahiran pemikiran sejarah ($M=3.38$, $SD=0.71$) adalah lebih tinggi berbanding dengan min ujian pra ($M=2.40$, $SD=0.70$) dan ujian lanjutan ($M=3.05$, $SD=0.71$). Keputusan ujian *Multivariate* pada Jadual 2 menunjukkan terdapat kesan waktu ujian yang signifikan ($Wilks\ Lambda=0.48$, $F(2, 29)=15.12$, $p=0.00$) dan tidak terdapat kesan interaksi waktu ujian dan jantungina ($Wilks\ Lambda=0.96$, $F(2, 29)=0.63$, $p=0.54$) terhadap amalan kemahiran pemikiran sejarah. Di samping itu, keputusan ujian kesferaan *Mauchly* yang tidak signifikan ($p=0.41$) pada Jadual 3 menunjukkan bahawa andaian kesferaan matriks varians adalah dipatuhi, maka keputusan ujian *univariate* pada Jadual 4 menunjukkan bahawa terdapat kesan waktu ujian yang signifikan ($F(2,60)=20.98$, $p=0.00$) dan tidak terdapat kesan interaksi waktu ujian dan jantungina yang signifikan ($F(2,60)=0.37$, $p=0.69$) terhadap amalan kemahiran pemikiran sejarah. Hal ini menunjukkan bahawa waktu ujian mempengaruhi min amalan kemahiran pemikiran sejarah dalam kajian

ini.

Jadual 1: Statistik Deskriptif untuk Min Amalan Kemahiran Pemikiran Sejarah

	Ujian Pra	Ujian Pasca	Ujian Lanjutan
N	32	32	32
Min	2.40	3.38	3.05
Sisihan Piawai	0.70	0.71	0.71

Jadual 2: Keputusan Ujian *Multivariate* untuk Min Amalan Kemahiran Pemikiran Sejarah

Kesan		Nilai	<i>F</i>	Hipotesis <i>df</i>	Ralat <i>df</i>	<i>p</i>
Waktu ujian	<i>Wilks' Lambda</i>	0.49	15.12	2.00	29.00	0.00
Waktu * Jantina	<i>Wilks' Lambda</i>	0.96	0.63	2.00	29.00	0.54

Jadual 3: Keputusan ujian *Mauchly's W* Min Amalan Kemahiran Pemikiran Sejarah

Kesan dalam subjek	<i>Mauchly's W</i>	<i>Khi kuasa dua</i>	<i>df</i>	<i>p</i>	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Waktu ujian	0.80	6.38	2	0.41	0.84	0.91	0.50

Pada aras kesignifikan 0.05

Jadual 4: Keputusan Ujian *Univariate* untuk Min Amalan Kemahiran Pemikiran Sejarah

Kesan		Jumlah kuasa Dua Jenis III	<i>df</i>	Kuasa dua min	<i>F</i>	<i>p</i>
Waktu ujian	Andaian dipatuhi	15.42	2	7.71	20.98	0.00
Waktu ujian * jantina	Andaian dipatuhi	0.27	2	0.14	0.37	0.69
Ralat	Andaian dipatuhi	22.05	60	0.37		

Seterusnya, keputusan ujian *Post Hoc Bonferroni* pada Jadual 5 menunjukkan bahawa min amalan kemahiran pemikiran sejarah bagi ujian pasca adalah lebih tinggi daripada ujian pra (perbezaan min ujian pasca-ujian pra=0.98, $p=0.00$) dan min amalan kemahiran pemikiran sejarah bagi ujian lanjutan adalah lebih tinggi daripada ujian pra (perbezaan min ujian lanjutan-ujian pra=0.66, $p=0.00$). Hal ini menunjukkan terdapat peningkatan min amalan kemahiran pemikiran sejarah antara ujian pra, ujian pasca dan sedikit penurunan dalam ujian lanjutan secara keseluruhan. Oleh itu hipotesis nol H_{01} telah ditolak iaitu terdapat perbezaan yang signifikan antara ujian pra, ujian pasca dan ujian lanjutan. Maka, terdapat kesan kekekalan terhadap amalan kemahiran pemikiran sejarah dalam kajian ini.

Jadual 5: Keputusan Ujian *Post Hoc Bonferroni* Min Amalan Kemahiran Pemikiran Sejarah

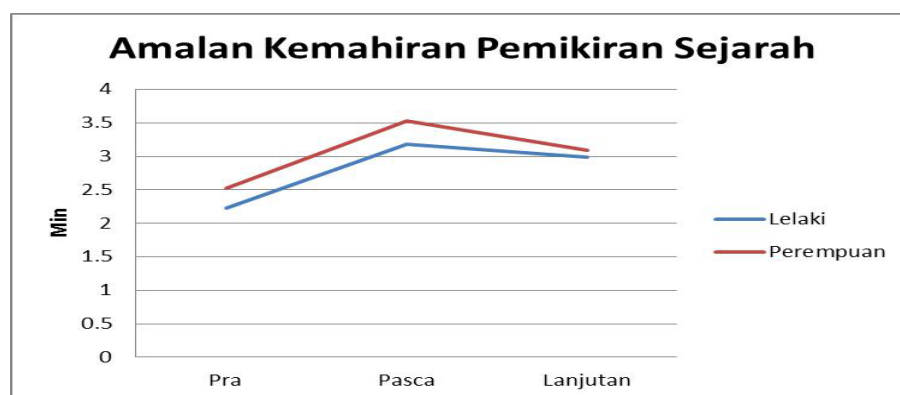
		Perbezaan Min	Ralat	<i>p</i>	95% selang keyakinan bagi perbezaan	
					Bawah	Atas
Ujian Pra	Ujian Pasca	-0.98	0.18	0.00	-1.42	-0.53
	Ujian Lanjutan	-0.66	0.17	0.00	-1.08	-0.25

Ujian Pasca	Ujian Pra	0.98	0.18	0.00	0.53	1.42
	Ujian Lanjutan	0.31	0.12	0.03	0.02	0.61
Ujian Lanjutan	Ujian Pra	0.66	0.17	0.00	0.25	1.08
	Ujian Pasca	-0.31	0.12	0.03	-0.61	-0.21

Berdasarkan *estimated marginal means*

*Perbezaan min adalah signifikan pada aras 0.05

Bentuk graf pola profil jelas menunjukkan bahawa min amalan pemikiran sejarah bagi murid lelaki meningkat dari ujian pra ($M=2.22$, $SD=0.67$) ke ujian pasca ($M=3.18$, $SD=0.71$) dan menurun pada ujian lanjutan ($M=2.99$, $SD=0.68$) iaitu sebanyak 0.19. Hal ini menunjukkan bahawa rawatan yang diberikan adalah berkesan bagi murid lelaki walaupun terdapat kesan kekekalan jangka pendek dalam amalan kemahiran pemikiran sejarah dalam kajian ini. Bagi murid perempuan pula, bentuk graf pola profil menunjukkan bahawa min amalan kemahiran pemikiran sejarah meningkat dari ujian pra ($M=2.51$, $SD=0.71$) ke ujian pasca ($M=3.53$, $SD=0.71$) dan menurun pada ujian lanjutan ($M=3.09$, $SD=0.75$) iaitu sebanyak 0.44. Hal ini menunjukkan bahawa rawatan yang diberikan adalah berkesan bagi murid perempuan dan terdapat kesan kekekalan jangka pendek dalam amalan kemahiran pemikiran sejarah dalam kajian ini. Justeru dapat disimpulkan bahawa terdapat kesan kekekalan dalam amalan kemahiran pemikiran sejarah melalui pelaksanaan aktiviti pembelajaran sejarah melalui Model *Flipped Classroom* dan penggunaan sumber digital dalam kalangan murid.



Rajah 1: Graf Pola Profil Amalan Kemahiran Pemikiran Sejarah

5. Perbincangan Kajian

Dapatan kajian ini yang menunjukkan bahawa pelaksanaan pendekatan Model *Flipped Classroom* dan penggunaan sumber digital adalah berkesan terhadap kekekalan dalam amalan kemahiran pemikiran sejarah adalah konsisten dengan dapatan kajian Adinopoulou dan Sampson (2017) yang telah menjalankan kajian tindakan di sekolah rendah dan telah melaporkan bahawa pelaksanaan Model *Flipped Classroom* adalah berkesan terhadap penjana kemahiran pemikiran sejarah dalam kalangan murid. Tambahan pula, dapatan kajian Renuka Ramakrishnan, Norizan Esa dan Siti Hawa Abdullah (2014) dan kajian Tally dan Goldenberg, (2010) yang telah melaporkan bahawa penggunaan sumber digital adalah berkesan dalam meningkatkan kemahiran pemikiran sejarah. Ketiga-tiga dapatan kajian tersebut secara tidak langsung telah menyokong dapatan kajian ini iaitu pelaksanaan aktiviti pembelajaran sejarah melalui pendekatan Model *Flipped Classroom* dan penggunaan sumber digital yang bercirikan strategi pembelajaran berpusatkan murid yang dapat melibatkan murid dalam proses pengkajian sejarah adalah mampu untuk meningkatkan dan mengekalkan amalan kemahiran pemikiran sejarah secara berterusan dalam kalangan murid seperti yang disarankan dalam kurikulum sejarah.

6. Kesimpulan

Kesimpulannya, kajian ini menunjukkan bahawa terdapat kesan kekekalan dalam amalan kemahiran pemikiran sejarah melalui pelaksanaan aktiviti pembelajaran sejarah dengan pendekatan *Flipped Classroom* dan penggunaan sumber digital berdasarkan jantina. Justeru, implikasi kajian ini mencadangkan pelaksanaan aktiviti pembelajaran sejarah melalui Model *Flipped Classroom* dan penggunaan sumber digital.

7. Rujukan

- Aidinopoulou, V. & Sampson, D. (2017). An action research study from implementing the flipped classroom model in primary school history teaching and learning. *Educational Technology & Society*, 20(1), 237-247.
- Barton, K.C. (2018). Historical sources in the classroom: Purpose and use. *HSSE Online*, 7(2), 1-11.
- Bergamann, J & Sams, A. (2014). *Flipped Learning: gateway to student engagement*. Eugene: International Society for Technology in Education.
- Bergamann, J. & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. Eugene: International Society of Technology in Education.
- Gaughan, J.E. (2014). The Flipped Classroom in World History. *Journal The History Teacher*, 47(2), 221-244.
- Kaviza, M. (2019). Kesan kaedah Flipped Classroom dengan Teknik Peer Instruction terhadap Kemahiran Berfikir Kritis. *e-Bangi*, 16(5), 1-12.
- Lage, M.J., Platt, G.J., & Tregilia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *The Journal of economic Education*, 32(1), 30-43.
- Library of Congress. (2018). Using primary sources. Retrieved from <https://www.loc.gov/collections>
- Mohamed Amin Embi & Ebrahim Panah (2014). *Overview of Flipped Learning*. Centre For Teaching & Learning Technologies: UKM.
- Nersater, A. (2019). Student understanding of historical sources – A composite ability. *Journal of Humanities and Social Science Education*, 1, 105-131.
- Pusat Perkembangan Kurikulum. (2015). *Dokumen Standard Kurikulum dan Pentaksiran Mata Pelajaran Sejarah Tingkatan Satu*. Putrajaya: Kementerian Pendidikan Malaysia.
- Renuka Ramakrishnan, Norizan Esa & Siti Hawa Abdullah (2014). *Kesan penggunaan sumber digital sejarah terhadap amalan pemikiran sejarah*. 23rd International Conference of Historians of Asia 2014 (IAHA 2014), 23-27 Ogos 2014, Alor Setar, Kedah Malaysia.
- Tally, B. & Goldenberg, L.B. (2010). Fostering historical thinking with digized primary sources. *Journal of Research on Technology in Education*, 38(1), 1-21.
- Westermann, E.D. (2014). “A half-flipped classroom or an alternative approach? Primary Sources and Blended Learning?”. *Journal Educational Research Quarterly*, 38(2), 43-57.
- Zolkefli Bahador, Mohd Kasri Saidon & Irdawati Ibrahim. (2019). Penggunaan Kaedah Pengajaran Flipped Classroom dalam Pengajaran dan Pemudahcaraan Matematik Tingkatan 4. *Proceeding of the ICECRS*, 3, 1-8.

Penggunaan Sumber Teks Dan Pengekalan Motivasi Intrinsik

M. Kaviza

SMK Padang Besar

kavizakaviza@yahoo.com

Abstrak

Kajian kuasi-eksperimen ini adalah bertujuan untuk mengkaji kesan pengekal terhadap penjana motivasi intrinsik melalui penggunaan sumber teks berdasarkan murid berbeza tahap pemikiran kritis. Seramai 55 orang murid tingkatan empat iaitu 30 orang murid berpemikiran kritis tinggi dan 25 orang murid berpemikiran kritis rendah terlibat dalam kajian ini. Instrumen kajian ini ialah soal selidik motivasi dan ujian pemikiran kritis yang telah disahkan oleh pakar penilai dan mempunyai nilai kebolehpercayaan yang baik. Data kajian ini dianalisis secara deskriptif dan inferensi iaitu ujian *Split-Anova*. Dapatan kajian ini menunjukkan bahawa terdapat kesan pengekal terhadap penjana motivasi intrinsik dalam kalangan murid berpemikiran kritis tinggi dan murid berpemikiran kritis rendah. Implikasi kajian ini menyediakan sumber maklumat kepada para guru sejarah untuk menggunakan sumber teks dalam proses pengajaran dan pembelajaran sejarah dalam menjana motivasi intrinsik secara berterusan dalam kalangan murid.

Kata Kunci: Sumber Teks, Pengekalan, Motivasi intrinsik, Pembelajaran sejarah

1. Pengenalan

Penggunaan sumber teks adalah diakui manfaatnya yang dapat membolehkan murid-murid menjalankan proses pengkajian sejarah yang mendalam bagi meningkatkan kemahiran pemikiran dan pemahaman sejarah (Nokes, 2014; Reisman, 2012; Reisman & Fogo, 2016; Lorimer, 2019; Apaolaza-Liorente & Arguero, 2019). Tidak dinafikan bahawa proses pengkajian sejarah yang melibatkan elemen inkuiri sejarah, penggunaan sumber, kemahiran pemikiran sejarah, penjelasan sejarah dan pemahaman sejarah juga telah disarankan dalam kurikulum sejarah (Pusat Perkembangan Kurikulum, 2003). Namun, penggunaan sumber-sumber teks yang dilaporkan kurang dalam proses pengajaran dan pembelajaran sejarah telah menyebabkan tahap pengetahuan dan kemahiran murid menganalisis sumber-sumber tersebut berada pada tahap memuaskan (Nersater, 2019; Cowgill II & Waring, 2017; Wineburg, 1991), di samping murid-murid juga mendapati bahawa aktiviti pengajaran dan pembelajaran sejarah dengan penggunaan sumber teks sebagai sesuatu yang sukar dan mereka didapati lebih selesa dengan amalan pengajaran sedia ada yang secara tidak langsung telah mempengaruhi tahap motivasi intrinsik dalam belajar sejarah (Wineburg, 1991; Rantala & Van Den Berg, 2015; Godwin & Quinlan, 2019). Hal ini demikian kerana motivasi intrinsik dalam belajar sejarah akan wujud apabila murid-murid mempunyai keinginan dalaman yang baik dalam melakukan sesuatu aktiviti pembelajaran dengan lebih berminat, seronok dan jayannya (Pintrinch & Schnuk, 1996; Ryan & Deci, 2001). Tambahan pula, murid yang bermotivasi instrinsik yang baik terhadap aktiviti pembelajaran bagi menggalakkan penglibatan aktif yang dapat membentuk proses pembelajaran yang bermakna serta mengekalkan persepsi dan tingkah laku secara berterusan dalam kalangan murid yang mempunyai pelbagai gaya pembelajaran, gaya kecerdasan, tahap pemikiran kognitif dan sebagainya. Rentetan daripada itu, terdapat satu keperluan untuk mengenal pasti sama ada pelaksanaan aktiviti pengajaran dan pembelajaran dengan penggunaan sumber teks dapat

menjana kekekalan dalam motivasi intrinsik berdasarkan tahap pemikiran kritis murid.

1.1 Objektif Kajian

Objektif kajian ini ialah:

2. Mengenal pasti sama ada terdapat kesan kekekalan dalam motivasi intrinsik antara ujian pra, ujian pasca dan ujian lanjutan berdasarkan tahap pemikiran kritis murid.

1.2 Soalan Kajian

Soalan kajian ini ialah:

2. Adakah terdapat kesan kekekalan dalam motivasi intrinsik antara ujian pra, ujian pasca dan ujian lanjutan berdasarkan tahap pemikiran kritis murid?

2. Hipotesis Kajian

Hipotesis kajian ini ialah:

H₀₁: Tidak terdapat perbezaan yang signifikan bagi motivasi intrinsik antara ujian pra, ujian pasca dan ujian lanjutan bagi murid berpemikiran kritis tinggi dan murid berpemikiran kritis rendah.

5. Metodologi Kajian

Kajian ini menggunakan kaedah eksperimen yang melibatkan dua variabel tak bersandar yang dimanipulasikan iaitu waktu ujian (ujian pra, ujian pasca dan ujian lanjutan) dan kemahiran berfikir kritis murid (Murid berpemikiran kritis tinggi dan murid berpemikiran kritis rendah). Kajian ini melibatkan seramai 55 orang murid Tingkatan Empat sebagai sampel kajian ini melalui teknik persampelan bertujuan-rawak berstrata. Instrumen kajian ini terdiri daripada soal selidik motivasi intrinsik dan ujian pemikiran kritis yang diadaptasi dan telah ditentukan kesahannya oleh pakar penilai dalam bidang sejarah serta mempunyai nilai ketekalan dalaman iaitu 0.91 bagi soal selidik motivasi intrinsik dan 0.79 bagi ujian pemikiran kritis yang dianggap baik dan boleh diterima dalam kajian ini (Nunnally, 1978). Data kajian ini telah dianalisis berdasarkan statistik deskriptif dan inferensi iaitu ujian *Split-Anova* dengan menggunakan perisian “*IBM SPSS Statistics*” versi 24. Murid-murid telah ditadbirkan ujian pemikiran kritis terlebih dahulu sebelum rawatan dimulakan. Justeru, murid berpemikiran kritis rendah (skor 0-40) iaitu seramai 25 orang dan murid berpemikiran kritis tinggi (skor 41-80) pula seramai 30 orang telah ditentukan.

6. Dapatan Kajian

Berdasarkan Jadual 1, min ujian pasca amalan kemahiran pemikiran sejarah ($M=3.83$, $SD=0.40$) adalah lebih tinggi berbanding dengan min ujian pra ($M=2.94$, $SD=0.43$) dan ujian lanjutan ($M=3.79$, $SD=0.43$). Keputusan ujian *Multivariate* pada Jadual 2 menunjukkan terdapat kesan waktu ujian yang signifikan ($Wilks\ Lambda=0.24$, $F(2, 52)=86.33$, $p=0.00$) dan tidak terdapat kesan interaksi waktu ujian dan murid berbeza tahap pemikiran kritis ($Wilks\ Lambda=0.97$, $F(2, 52)=0.86$, $p=0.43$) terhadap motivasi intrinsik. Di samping itu, keputusan ujian kesferaan *Mauchly* yang tidak signifikan ($p=0.33$) pada Jadual 3 menunjukkan bahawa andaian kesferaan matriks varians adalah dipatuhi, maka keputusan ujian *univariate* pada Jadual 4 menunjukkan bahawa terdapat kesan waktu ujian yang signifikan ($F(2,106)=102.79$, $p=0.00$) dan tidak terdapat kesan interaksi waktu ujian dan

jantina yang signifikan ($F(2, 106)=0.74, p=0.48$) terhadap motivasi intrinsik. Hal ini menunjukkan bahawa waktu ujian mempengaruhi min motivasi intrinsik dalam kajian ini.

Jadual 1: Statistik Deskriptif untuk Min Motivasi Intrinsik

	Ujian Pra	Ujian Pasca	Ujian Lanjutan
N	55	55	55
Min	2.94	3.83	3.79
Sisihan Piawai	0.43	0.40	0.43

Jadual 2: Keputusan Ujian *Multivariate* untuk Min Motivasi Intrinsik

Kesan		Nilai	<i>F</i>	Hipotesis <i>df</i>	Ralat <i>df</i>	<i>p</i>	<i>Partial eta squared</i>
Waktu Ujian	<i>Wilks' Lambda</i>	0.24	86.33	2.00	52.00	0.00	0.76
Waktu ujian * Murid	<i>Wilks' Lambda</i>	0.97	0.86	2.00	52.00	0.43	0.03

Jadual 3: Keputusan ujian *Mauchly's W* Min Motivasi Intrinsik

Kesan dalam subjek	<i>Mauchly's W</i>	<i>Khi kuasa dua</i>	<i>df</i>	<i>p</i>	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Waktu ujian	0.96	2.22	2	0.33	0.96	1.00	0.50

Pada aras kesignifikan 0.05

Jadual 4: Keputusan Ujian *Univariate* untuk Min Motivasi Intrinsik

Kesan		Jumlah kuasa Dua Jenis III	<i>df</i>	Kuasa dua min	<i>F</i>	<i>p</i>	<i>Partial eta squared</i>
Waktu ujian	Andaian dipatuhi	26.99	2	13.50	102.79	0.00	0.66
Waktu ujian * murid	Andaian dipatuhi	0.19	2	0.10	0.74	0.48	0.01
	Ralat	14.11	106	0.13			

Seterusnya, keputusan ujian *Post Hoc Bonferroni* pada Jadual 5 menunjukkan bahawa min motivasi intrinsik bagi ujian pasca adalah lebih tinggi daripada ujian pra (perbezaan min ujian pasca-ujian pra=0.88, $p=0.00$) dan min motivasi intrinsik bagi ujian lanjutan adalah lebih tinggi daripada ujian pra (perbezaan min ujian lanjutan-ujian pra=0.84, $p=0.00$). Hal ini menunjukkan terdapat peningkatan min motivasi intrinsik antara ujian pra, ujian pasca dan sedikit penurunan dalam ujian lanjutan secara keseluruhan. Oleh itu hipotesis nol H_{01} telah ditolak iaitu terdapat perbezaan yang signifikan antara ujian pra, ujian pasca dan ujian lanjutan.

Jadual 5: Keputusan Ujian *Post Hoc Bonferroni* Min Motivasi Intrinsik

		Perbezaan Min	Ralat	<i>p</i>	95% selang keyakinan bagi perbezaan	
					Bawah	Atas
Ujian Pra	Ujian Pasca	-0.88	0.07	0.00	-1.03	-0.74
	Ujian Lanjutan	-0.84	0.07	0.00	-0.99	-0.69

Ujian Pasca	Ujian Pra	0.88	0.07	0.00	0.74	1.03
	Ujian Lanjutan	0.04	0.06	0.49	-0.08	0.17
Ujian Lanjutan	Ujian Pra	0.84	0.07	0.00	0.69	0.99
	Ujian Pasca	-0.04	0.06	0.49	-0.17	0.81

Berdasarkan *estimated marginal means*

*Perbezaan min adalah signifikan pada aras 0.05

Bentuk graf pola profil jelas menunjukkan bahawa min motivasi intrinsik bagi murid berpemikiran kritis tinggi meningkat dari ujian pra ($M=3.04$, $SD=0.45$) ke ujian pasca ($M=3.91$, $SD=0.44$) dan meningkat pada ujian lanjutan ($M=3.95$, $SD=0.40$) iaitu sebanyak 0.04. Hal ini menunjukkan bahawa rawatan yang diberikan adalah berkesan bagi murid berpemikiran kritis tinggi dan terdapat kesan kekekalan jangka panjang dalam motivasi intrinsik dalam kajian ini. Bagi murid berpemikiran kritis rendah pula, bentuk graf pola profil menunjukkan bahawa min motivasi intrinsik meningkat dari ujian pra ($M=2.83$, $SD=0.39$) ke ujian pasca ($M=3.72$, $SD=0.33$) dan sedikit penurunan pada ujian lanjutan ($M=3.60$, $SD=0.38$) iaitu sebanyak 0.12. Hal ini menunjukkan bahawa rawatan yang diberikan adalah berkesan bagi murid berpemikiran kritis rendah dan terdapat kesan kekekalan jangka panjang dalam motivasi intrinsik dalam kajian ini.



Rajah 1: Graf Pola Profil Motivasi Intrinsik

7. Perbincangan Kajian

Dapatan kajian ini yang menunjukkan terdapat kesan kekekalan dalam motivasi intrinsik adalah disebabkan oleh pelaksanaan pengajaran dan pembelajaran sejarah dengan penggunaan sumber teks yang berupaya untuk meningkat dan mengekalkan motivasi intrinsik dalam belajar sejarah dalam kalangan murid berbeza tahap pemikiran kritis. Hal ini kerana demikian murid-murid berpersepsi positif terhadap aktiviti pembelajaran sejarah yang melibatkan proses analisis sumber teka secara aktif seperti yang diutarakan oleh Nokes, (2014) dalam kajiannya dan pendapat ini disokong dengan dapatan kajian Kaviza, Fauziah dan Nurliyana (2019) telah melaporkan bahawa pembelajaran berasaskan sumber-sumber sejarah dan motivasi intrinsik adalah saling mempengaruhi antara satu sama lain. Tambahan pula, keseronokan belajar sejarah yang wujud dalam diri murid dapat meningkatkan keinginan untuk belajar secara semulajadi dengan lebih komprehensif dan tanpa mengharapkan sebarang ganjaran. Tambahan pula, kekekalan jangka panjang dalam motivasi intrinsik bagi murid berpemikiran kritis tinggi dan rendah adalah disebabkan oleh aktiviti pembelajaran sejarah dengan penggunaan sumber teks yang dapat menggalakkan proses pengkajian dan melibatkan proses pemikiran sejarah berupaya dalam meningkatkan minat dan kualiti pembelajaran mereka secara berterusan (Nurul Hafizah Ma'rof, Nurul Suzaina

Joli & Nur Nadia Lani, 2018).

8. Rumusan

Kesimpulannya, terdapat kekekalan dalam motivasi intrinsik yang berkesan melalui aktiviti pengajaran dan pembelajaran dengan penggunaan sumber teks dalam kajian ini. Kajian ini mencadangkan kepada guru-guru untuk melaksanakan aktiviti pengajaran dan pembelajaran dengan penggunaan sumber teks dalam kalangan murid dalam menjana motivasi intrinsik dalam belajar sejarah secara berterusan.

9. Rujukan

- Apaolaza-Liorente, D., & Arguero, B.E. (2019). Doing history: Historical sources and active methodologies to foster historical thinking in secondary school. *ENSAYOS: Revista de la Facultad de Education de Albacete*, 34(1), 29-40.
- Cowgill II, D.A., & Waring, S.M. (2017). Historical thinking: An evaluation of student and teacher ability to analyze sources. *Journal of Social Studies Education Research*, 8(1), 115-145.
- Godwin, K.A., & Quilan, K.M. (2019). How do we integrate skills and content in classics? An inquiry into student's use of sources. *Art and Humanities in Higher Education*, 1-21.
- Kaviza, M., Fauziah, A.R & Nurliyana, B. (2019). Hubungan antara Kesediaan dalam pembelajaran berasaskan sumber-sumber sejarah dengan motivasi intrinsik. *Jurnal Pendidikan Bitara UPSI*, 11, 51-63.
- Lorimer, M.R. (2019). Engaging adolescent struggling readers through decision making role play simulation: Using primary source document. *Reading & Writing Quarterly*, 35(3), 193-203.
- Nersater, A. (2019). Student's understanding of historical sources: A composite ability. *NORDIDACTICA: Journal of Humanities and Social Sciences Education*, 1, 105-131.
- Nokes, J.D. (2014). Elementary students roles and epistemic stances during document based history lessons. *Theory & Research in Social Education*, 42, 375-413.
- Nunnally, J.C. (1975). *The study of change evaluation research principle concerning measurement experimental design and analysis*. Dlm Struening, E.L. & Guttentag, M. (Pynt). *Handbook of Evaluation Research*, Hlm.231-272. Beverly Hills: Sage Merrill.
- Nurul Hafizah Ma'arof, Nurul Suzaina Joli & Nur Nadia Lani. (2018). Tinjauan kecenderungan pelajar pintar, cerdas dan berbakat dalam subjek sejarah Malaysia. *International Journal of Education, Psychology and Counseling*, 3(20), 51-64.
- Pintrinch, P., & Schnuk, D. (1996). *Motivation in Education: Theory, Research and Application*. New York: Prentice Hall.
- Pusat Perkembangan Kurikulum. (2003). *Huraian Sukatan Pelajaran Sejarah Tingkatan Empat*. Kuala Lumpur: Kementerian Pendidikan Malaysia.
- Rantala, J., & Van Den Berg, M. (2015). Finnish high school and university students' ability to handle multiple source documents in history. *Historical Encounters: A Journal of Historical Consciousness, Historical Cultures and History Education*, 2(1), 70-88.
- Reisman, A. (2012). The "Document-Based Lesson": Bringing disciplinary inquiry into high school history classrooms with adolescent struggling readers. *Journal of Curriculum Studies*, 44(2), 233-264.
- Reisman, A., & Fogo, B. (2016). Contributions of educative document based curricular materials to quality of historical instruction. *Teaching and Teacher Education*, 59, 191-202.

- Ryan, R.M., & Deci, E.L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52. Palo Alto: Annual Reviews.
- Wineburg, S. (1991). Historical problem solving: A study of the cognitive processes used in the evaluation of documentary and pictorial evidence. *Journal of Educational Psychology*, 83, 73-87.

Iran: Defense and Dominance in The Middle East

Cristina Cabrejas-Artola

Department of Social Science, University of Sains, Malaysia
Email: cabrejasartola@student.usm.my, ccabrejas@hotmail.com

Abstract

Ever since the invasion of Iraq, the Islamic Republic of Iran (IRI) has become the centre of growing geopolitical tensions in the Middle East. Research studies, however, remain limited to a dominant narrative against its theocratic democracy, a unique government system that has endured four decades of international economic, political and military isolation. The protracted retribution has caused Iran to strengthen its national sovereignty defense. Yet, in the struggle for state survival, Iran's political influence is growing steadily throughout the Middle East as well as Central Asia. Despite the assumptions of many international academics and policymakers, Iran has succeeded in asserting itself as a dominant state in the region. The aim of this study is to understand Iran's state behaviour and foreign policy by reviewing the political developments unfolded after the Islamic Revolution (1979) focusing particularly, on the current government rule of President Hassan Rouhani. The ontology of this research is chronologically consistent with the epistemological analysis of Iran's history, and the impact of its strategic geographical location in international relations. The methodology is framed under the orthodox theory of offensive realism and questions the rationality of neoliberalism when dealing with a morally driven democracy, as opposed to a liberal democracy.

Keywords: Iran; International Relations; State Behaviour; State Sovereignty; State Independence; Foreign Policy; International Relations; Offensive Realism.

1. Introduction

The Islamic Republic of Iran, often perceived as the main opponent of the 'free world', draws a great deal of controversy in international relations. Hence, it is fundamental to understand that the structure of Iran's government, a theocratic democracy, is unlike any other form of government rule in the world. Yet, Iran is perceived as a security threat to the neighbouring monarchies of Saudi Arabia, United Arab Emirates and Bahrain, as well as Israel, a non-Arab state, but equally supported by the supremacy of American foreign policy that demands Iran's regime change. However, since the election of President Hassan Rouhani (2013), the Islamic Republic has sought to improve its international relations, and restore a depleted economy caused by forty years of hefty economic sanctions. For President H. Rouhani and, his moderate party, reaching an agreement with the US would allow Iran to engage in international trade, exporting its wealth of raw materials such as gas, oil and minerals to Europe, Asia and Africa, the main beneficiaries. This research seeks to understand Iran's state behaviour and foreign policy in international relations.

2. State Sovereignty

Iran, previously known as the Persian Empire, was for centuries the hub of the world's most profitable trade and cultural richness. Its geographical location between the two continents, Asia and Europe, together with its opened international relations facilitated commerce and

cultural development, the pillars that sustained the greatness of the Persian civilization. However, back in 1906, with the discovery of oil, the Persian sovereignty was undermined by Russia and Britain who suppressed the state economic and political independence; the Persian Empire was beginning to crumble at the hands of the main European powers (Bonakdarian, 2002). In a first attempt to gain independence, an officer of the Persian Cossack Brigade, Reza Khan took control of the state in 1925 declaring himself Shah (King). Nonetheless, the new Shah, Reza Khan Pahlavi, failed to prevent a new domination of British and Soviet forces during World War II and, eventually, it would be the US in 1941 that forced him to abdicate his supreme powers to his son, Mohamed Reza Pahlavi (Ghods, 1991). The Soviets aspired to protect their Southern borders with Northern Iran, as well as its oil reserves in Baku, the Northern Iranian region of Azerbaijan. Britain, on the other hand, pursued to protect its own oil interests in Southern Iran as well as blocking any German invasion to India, its largest colony in Asia (Ramazani, 1974). As per the US, their only interests, at the time, were to defeat Germany and support the war efforts of the Grand Alliance. Almost ten years later, the British, French, Dutch and American oil companies were invited to settle their new business operations in Iran which was still considered the third largest reserve of oil in the world (Coleman, 2008). In return, Iran was guaranteed US military and economic protection, thus, close relations were established with Western powers. However, domestic dissatisfaction intensified and eventually political and religious forces were confronted. The tensions culminated in the Islamic Revolution that defended the universal principles of freedom, dignity and independence against Western dominance (Mousavian & Shahidsaless, 2014). In 1979, the Shah Mohamed Reza Pahlavi abandoned his duties, and Ayatollah Ruhollah Khomeini, an Islamic leader exiled in Paris, was to return home and lead the Theocratic Republic. What was original about the movement is that theocracy and democracy were to be, for the first time in history, a new type of government that assumes religious duty, Islam, and state constitution based on democratic principles, although subject to the clerical Supreme Leader veto (Mir-Hosseini & Tapper, 2006). Whilst the state regulation is implemented in accordance with the Sharia law, the Supreme Leader drafts the state constitution and, the President of the Republic is elected by universal suffrage (Colcombet, 2017). The officially established Islamic Republic set a new geopolitical framework in the Middle East; the revolution was feared to have a domino effect, threatening neighbouring states to relinquish their authoritarian power. Soon after, Iraq, with the consent of US, provoked a series of attacks on the Iranian-Iraqi border, a military conflict that lasted ten years. By then the Supreme Leader Khomeini had died and a successor was appointed, Ayatollah Ali Khamenei became the ultimate national decision maker, overseeing the control of Iran's military and the security forces (Mir-Hosseini & Tapper, 2006). Systematically Iran was left without foreign influence but faced with a host of international terrorist allegations. As retribution, the US imposed strict economic sanctions that would cripple the Iranian economy for the next forty years (Coleman, 2008). However, in 2013 when Dr Hassan Rouhani was elected president, the prospects of lifting economic sanctions and improving a nuclear settlement, as Iran was by then at an advanced stage of becoming a nuclear state, were praised nationally and internationally. It was considered an act of 'heroic flexibility', after four decades of international alienation (Rouhani, 2015). Such flexibility consisted in opening diplomatic relations with the US under the presidency of Barack H. Obama, whose administration was committed to reach a trade agreement for the first time in almost forty years. Consequently, a provisional nuclear agreement was signed in November 2013, the Joint Plan of Action (JPA). The accord paved the way to relieve the first set of sanctions in exchange for the termination of enriching levels of uranium, destroying its twenty per cent uranium stockpile and, ceasing to increase the three and half per cent uranium stockpile (Royce, 2015). As the negotiations progressed,

a Joint Comprehensive Plan of Action (JCPOA) was settled by the permanent members of the Security Council, Germany (P5+1) and endorsed by the United Nations Security Council Resolution 2231 (July, 2015). The main restrictions were to limit first, the development of ballistic missiles for a time period of eight years and, second, the trade of conventional arms for five years. Needless to say the JCPOA was a decisive factor to engage in non-nuclear proliferation and so, the International Atomic Energy Agency (IAEA) confirmed Iran's compliance for the sanctions to be lifted (Katzman, 2018). Nevertheless, on May 8th 2018 the succeeding American administration, led by President Donald J. Trump, reversed the JCPOA by withdrawing its endorsement and intensifying the severity of economic sanctions: *Any nation that helps Iran could also be strongly sanctioned by the United States* (US State Dept., 2019). Such reversal of US foreign policy carried detrimental consequences for foreign investment and trade with Iran. The new business activities that international companies had established after the implementation of the JCPOA in 2015 were to be terminated as per the new US foreign policy. Russia and China remained defiant to US supremacy and continued to engage in business with Iran. Russian enterprises Gazprom confirmed three gas projects with the National Iranian Oil Company (NIOC) to develop in Kish, Farzad A & B and South Pars (Iran Watch, 2018). China's investment to further develop Iranian national infrastructure stroke a new multi polar era against almost thirty years of unchallenged US hegemony.

3. State Behaviour

According to Neo-liberalists and Democratic Peace theorists, democratic states are "inherently peaceful". Yet, in the case of Iran, becoming a democratic state was to fall victim of regional and international aggression. Iraq's attack on the Iranian border, heavily supported by Saudi Arabia and US forces, prompted Iran to increase its military capability. Iran feared the threat of a new foreign invasion and, as "*fear is a motivating force in world politics*" (Mearsheimer, 2001) achieving hard power and securing state safety became Iran's primary incentive. Defensive realism would argue that Iran could have found ways to defend itself signaling their peaceful intentions, whereas offensive realism debates that the hostile structure of the international system forced Iran to behave offensively. Therefore, according to the offensive realist theory, the best way to guarantee state's survival and secure national interests is to become a regional hegemon. Hence, the struggle for state survival in the Middle East is the supreme goal, regardless of national ideologies. All states compete over their own strength advantage, "*always looking for opportunities to gain power over their rivals, with hegemony as their final goal*" (Mearsheimer, 2001), and their incentive is to change the distribution of power in their favour. The tragic fate of all states is subsequently, to compete for strength in order to ensure the state safety, as it is the case of Iran. For decades, Iran has been maximising its power to prevent foreign invasions. Another military attack similar to the Iraqi invasion in 1980 is assumed to be a real possibility, particularly when the region's military capability continues to increase. Iran's historical rival, Saudi Arabia, become for the first time in history the world's biggest importer of defense equipment in 2015 (IHS) followed by India (US\$5.6bn), China (US\$2.6bn) and surprisingly United Arab Emirates (US\$2.2bn), Saudi's major regional ally. Such unprecedented military power places the Kingdom of Saudi Arabia, in coalition with United Arab Emirates, in a position to tilt the military power in the Middle East and interfere with United States-Iranian relations. Iran's fear is then a primary motive (Mearsheimer, 2001) to engage in regional power rivalry with the ultimate aim to achieve regional hegemony.

The question remains, how can Iran provide for its own survival? According to offensive realism, states operate on a “*self-help*” strategy dictated by their own interests, and like Iran, refuse to compromise their interests to the interests of regional rivals. John Mearsheimer advocates that this political stance, considered selfish and resolute, pays dividends in the short and long term. That is, if the state succumbs to subordination in the short term, it would be difficult to show resilience in the long haul, or even worse, the state by then, could be completely defeated. Following this theory, if Iran had surrendered to international sanctions forty years ago, the state might have had to relinquish its national sovereignty and state security. But, its resilience for over four decades has brought the state to compete for regional hegemony as a means to ensure its survival. The stronger Iran becomes against its rivals, the less likely they are to invade its borders and/or threaten its state interests.

In this regard, states with strong economies such as Saudi Arabia and Israel will also seek regional hegemony, which leads to an everlasting power competition (Mearsheimer, 2001) with Iran, their biggest hard and soft power threat. As a consequence, the three power states tend to increase their regional influence by taking opportunities that will tilt the balance of power in their favour. In order to maximize their strength, states might use economic, military and diplomatic means. Their aggressive intentions are proportional to the regional power, the higher the power the greater the aggressiveness. This offensive realist approach mirrors Saudi Arabia and Israel’s tactics that have been influencing American and European relations to isolate Iran’s military, politically and economically. Iran, on the other hand, has strengthened its diplomatic relations with Qatar, Iraq and Syria and reinforced its economic ties with China, India, Russia and Turkey.

The essential argument in offensive realism is that to guarantee security the three states maximize their power to attain regional hegemony. Taking advantage from each other, optimising their opportunities and using their offensive as well as their defensive tactics which leads to a perpetual security competition. Furthermore, John Hertz who coined the “security dilemma” concept in 1950, highlights that in an anarchic system, states can only survive by taking advantage of other states and profit from their competitive advantage. This is the reason why offensive realism has been blamed, amongst many other scholars, to have a pessimistic approach toward world politics. However, despite academic criticisms, the security dilemma in an anarchic structure remains an unsettling predicament. Unfortunately, and to the chagrin of realist theorists, peace can hardly settle in a security race. This means Neo-liberalists still have room to further explore peace in the Middle East with perhaps a different approach to democracy, that will be best suited to destabilize the tensions in the region.

In the meantime, the question is how much aggression should be inflicted to take advantage of other states? Mearsheimer (2001) mentions that those states with greater power and, therefore, with more incentive to achieve hegemony will act more aggressively. This also explains why the purchasing power in military equipment has soared in Saudi Arabia and the United Arab Emirates in the past seven years. Before acting aggressively, Mearshiemer (2001) suggests that states are cautious about the balance of power and consider both the risks and costs against the benefits. If the risks are higher states wait for a more opportune timing. And so, Iran has maintained a conservative defense budget whilst providing support in the wars of Syria and Yemen and countering Islamic terrorism in Central Asia. This strategy has allowed Iran to take advantage of the balance of power not only in the Middle East, but in Central Asia too. Realists suggest that aggressive states pay devastating consequences, whilst threatened states, Iran in this case, take time to balance versus their

“aggressors” to finally defeat them. In other words, according to offensive realists, aggressors hardly succeed as often their motivation derives from malicious internal politics, rather than astute strategic policies that ensure their own security. In the general analysis, offensive realists suggest that, based on historical evidence, the key to maximize power is to know when to act aggressively and when to retrieve. Hence, it is the international structure, rather than a national strategy or indeed human nature that determines how states behave.

4. Conclusion

The purpose of this research is to study Iran’s state behaviour and its foreign policy decision making following President H. Rouhani attempt to lift four decades of hostile economic sanctions imposed by the international supremacy of US. The study shows that Iran has been a victim of foreign invasions throughout history, and protecting its national sovereignty continues to be the highest priority in securing both, the state sovereignty and its territorial borders. Despite defending the universal principles of freedom, dignity and independence, the main values of the Islamic Revolution against foreign dominance, Iran has been left with little option but to adopt an offensive approach which has been interpreted as a major threat to the states in the Middle East that remain heavily supported by the hegemonic power of US. The study proves that the tragedy of great power politics continues to be based on the strength of the state to guarantee its safety. Iran has been transformed from an isolated state to a feared power state, tilting not only the balance of power in the Middle East, but in Central Asia too. This is particularly relevant considering a new emerging multilateral order of political and economic co-operation in Asia, where Iran is reviving a historical presence challenging the current status of the US supremacy.

5. References

- Bonakdarian, M. (2002). Great Britain iv. British Influence in Persia, 1900-21. Vol. XI, Fasc. 2, pp. 218-224 and Vol. XI, Fasc. 3, pp. 225-231 pp.225-331 www.iranicaonline.org
- Colcombet F. (2017). OÙ va l’Iran? FEMO (Fondation d’Études pour le Moyen-Orient)
- Coleman, D.Y. (2013). 'History', pp. 7-10, Business Source Complete, EBSCOhost.
- Ghods, R. M. (1991). Government and Society in Iran, 1926-34, in “Middle Eastern Studies”.
- IHS (2015). Markit: [http://press.ihs.com/press-release/aerospace-defense-terrorism/saudi-arabia-replaces-india-largest-defence-market-us-ihs-Iran Watch–Tracking Iran’s Unconventional Weapon Capabilities, 2018](http://press.ihs.com/press-release/aerospace-defense-terrorism/saudi-arabia-replaces-india-largest-defence-market-us-ihs-Iran-Watch-Tracking-Iran's-Unconventional-Weapon-Capabilities,2018) www.iranwatch.org
- Katzman K. (2018). Iran’s Foreign and Defense Policies, Congressional Research Service. www.fas.org
- Mearsheimer J. J. (2001) The Tragedy of Great Power Politics.
- Mir-Hosseini Z., Tapper R. (2006). Islam and democracy in Iran.
- Mousavian S. H. & Shahidsaless S. (2014) Iran and the United States: An Insider’s View on the Failed Past and the Road to Peace.
- Ramazani K. R. (1974). Iran’s White Revolution: A Study in Political Development, in “Middle East Studies”.
- Rouhani H. (2015) We have no plan for meet with Obama. www.president.ir
- Royce E. (2015) Iran Nuclear Agreement, Summary and Analysis, House Committee on Foreign Affairs. www.foreignaffairs.house.gov
- UN (2015) United Nations Security Council Resolution 2231
- U.S. Department of State. (2019). Advancing the U.S. Maximum Pressure Campaign on Iran. www.state.gov

The Legalization Process of Persons of Indonesian Descents (PIDs) In Mindanao And Their Reasons to Remain In Mindanao After Nationality Awarding

Putrie Agusti Saleha^a, Benny Teh Cheng Guan^b*

^aSchool of Social Sciences, Universiti Sains Malaysia (USM)

^bSchool of Social Sciences, Universiti Sains Malaysia (USM)

*Email: ben@usm.my

Abstract

The issue of statelessness in the current time is still ongoing. Many people are still struggling to get their nationality in some parts of the world to have the rights as a nationality holder. One of the stateless issues barely known is the Persons of Indonesian descents (PIDs) in Mindanao, Philippines. In the 1870s, PIDs' ancestors crossed the sea using a traditional boat to reach the Philippines from the North Sulawesi province to Balut Island close to Sarangani Province in Mindanao. However, after both countries gain their independence and specific laws were applied mainly regarding the legal documents for travelling and staying in a foreign land, the issue started to rise. The PIDs do not have any supporting documents neither for themselves or their children. This leads them threatened to become stateless. Fortunately, the Indonesian government, the Philippines government, and UNHCR work together to legalize these people to have nationality. Some PIDs choose to become Filipino by this legalization, and others choose to be recognized as Indonesian. Nevertheless, after the nationality awarding, some of the PIDs who choose to be Indonesian nationality holders (known as RINs after the nationality awarding) still live in Mindanao and continue their lives in a foreign land. In contrast, most of the RINs (Registered Indonesian Nationals) chose to return to Indonesia. The legalization process itself could influence their decision, and specific reasons might become the central issue why are these RINs remain living in Mindanao.

Keywords: Legalization, statelessness, stateless person, Persons of Indonesian Descents (PIDs), Registered Indonesian Nationals (RINs).

1. Introduction

The issue of statelessness in current times is still ongoing. Many people are still struggling to get their nationality in some parts of the world to have the rights of a country. This issue even has been understood as one big challenge for the international community (Michelle Foster, 2016). Referring to *The World's Stateless* book, stateless is "Someone who is not considered as a national by any state under the operation of its law" (Inclusion, 2014). People with stateless status could not obtain or enjoy any rights or duties or protection from a particular state, and a group of people commonly abused them to fulfil their means. The majority of stateless persons are at high risk of discrimination, human rights abuses and even persecution. Most stateless people will end up becoming internally displaced persons (IDPs), asylum seekers and refugees (Inclusion, 2014). One of the reasons people have become stateless is because of the war in their previous country. Many of them then sailed a boat or risked their lives to cross the border to obtain asylum from developed countries. This situation has occurred in some countries, such as Palestine, Syria, Myanmar (Rohingya) and other

countries in conflict. They are trying to get protection from the nearest states or countries to have a better future. However, someone can also become stateless in a country where they were born and lived for their entire lives. An example of this is the Indonesian diaspora living in the southern part of the Philippines or Mindanao (Alam, 2006a).

2. What is PIDs?

Person of Indonesian descent (PIDs) is a phrase used to recognize the Indonesian diaspora living in the southern part of the Philippines. These people were threatened to become stateless because they do not have legal documents to prove their belongings. There are few perspectives on the historical background of the arrival of the PIDs in Mindanao. However, these people have been living without legal documents for four generations to this day (Alam, 2006b), and it has been a challenging and demanding life for them to live in. This phenomenon has begun to rise since the PIDs' ancestors migrated from northern Sulawesi (mostly from Sangir and Marore Island) to some parts of the Philippines, such as Balut Island Sarangani, around the 1870s (Saleha, 2017). As the former Immigration Attaché of the Indonesian Consulate in Davao City, Agus Abdul Majid, stated, the migration between these two countries occurred quickly during that time due to the close border. Traditionally, they had migrated from Indonesia, sailed a boat across the ocean, and arrived at Balut Island, Glan, and other places. Migration is not only done by the PIDs' ancestors (Majid, 2016a). The Filipinos who stayed in Glan, Sarangani province, often did the same thing. In the beginning, ancestral migration from these PIDs aims to have better trading activities. They used to sell products from their hometown to Mindanao, and they are going to bring another thing from Mindanao to be sold in their hometown. The Filipinos from Mindanao also visited North Sulawesi and did the same thing as them, and the cultural exchange took place as a result of this activity (Saleha, 2017).

By that time, these people did not feel any insecurities about their nationality because these countries were under colonization. Unfortunately, between 1945 and 1946, Indonesia gained independence from Japan, and the Philippines gained independence from the United States. The problem of statelessness for the Sangers started when both countries need to create adjustments for their countries, including the Sangers (SJAHPUTRA, 2019). These people need to decide whether they want to be Indonesian or Filipino. However, regarding the citizenship law of the Republic of Indonesia 1958, number 62 and renewed by the law of 2006, number 12 chapter 3 article 19 verse 2 stated that any person who would like to register as Indonesian citizen or descent need to stay at least five years in sequence or ten years non-sequential (RI, 2006). However, this law seemed to perform a problem for the Sangers or the Indonesian descendants since they were unwilling to come back to Indonesia and stay for that long time (Majid, 2016b).

3. The Cooperation among UNHCR, Indonesian Government and Philippines Government

In 1995, the first Joint Commission among the Indonesian Government and the Philippines government was launched, and the second Joint Commission was held in 1998. As part of the Joint Commissions deal, both governments have decided to create an Alien Certificate of Registration (ACR) for these PIDs as their identity card. To gain the ACR, the PIDs need to pay around 410.00 Philippines Peso for those above 14 years old, P210.00 for those below 14 years old, and P160 for the annual extending fee (Alam, 2006b). The benefit of having this ACR for these PIDs, they gain the residence permit to stay in the Philippines legally, the

ability to travel freely, the ability to legalize their work contract for those who worked in the companies or factories and efficiently manage the permissions for their business license to the local government offices, pursuing studies and application for travel documents (Alam, 2006b). However, some PIDs could still not get the ACR and live with illegal status because they lived in poverty that they cannot afford to pay for the ACR registration and the transport to come to the immigration office. With such conditions, the PIDs force to work as cheap labour in fishery factories, coconut plantations, or house assistants to support their families (Majid, 2016b). For those who lived near General Santos city, most of them working in the fishery factories using their ACR as their only legal document (Rahman, 2016). However, these workers sometimes were used by the owner of factories to catch the fishes near Indonesia's sea border. When the armed Indonesian Navy arrests them for illegal fishing, the factory owner will not take any responsibility in this case (Ridwan, 2016).

Looking at the matter that these people have faced, the United Nations High Commissioner for Refugees (UNHCR) held a meeting with the Indonesian Government and 8 Philippines government to find a solution for the PIDs and end the statelessness status. Since 2011, these three actors have been working to end Mindanao's statelessness, especially for the Indonesian descendants who lived without supporting documents their entire life. After the joint meeting, they came out with a solution, a pilot project to award the PIDs with the nationality they desired to have, whether Indonesian or Filipino (Majid, 2016b). The Philippines' Department of Justice – Refugees and Stateless Persons Unit (DOJ-RSPPU) took the lead during the project and the Bureau of Immigration, Public Attorney's Office, Indonesian Consulate, and UNHCR Philippines. Each agency has its specific roles and jobs to support Persons of Indonesian Descent (Tanggol, 2017). By 2016, before the nationality awarding process began, there were around 8745 persons of Indonesian Descents registered from different areas of Mindanao (SJAHPUTRA, 2019).

This research will be using the legalization concept and supported with push and pull factor theory to collect the final results of how the legalization process affects PIDs' lives. The reasons for RINs remain residing in Mindanao areas after nationality awarding. The methodology proposed by the writer is data collection by using an online interview with the related people, officials, organizations and other related stakeholders, and then some numbers of the online survey might be needed as well to collect different input from the RINs. After all those data collection processes, the data will be analysed to gain the final results.

4. The Nationality Awarding Process

The mission started by the registration system, which during the registration system, the persons of Indonesian descents will follow some steps which are obligate to be followed by the persons of Indonesian descents. After getting the registration systems results and having done in following all the steps, the actors will find out the permanent solution for the persons of Indonesian descents. The permanent results will be based on the options chosen by the persons of Indonesian descents at the registration.

4.1 The Registration System

The implementation of the registration is done by a joint team consisting of Indonesian Consulate representatives in Davao City, the Department of Justice, Bureau of Immigration, Public Attorney's Office, UNHCR and NGOs (Pasali). Before the implementation of the registration process, the field team of UNHCR and Pasali will stage the community

preparation to have a meeting with the LGU (Local Government Unit) to prepare for the registration place and spread the invitation to the PIDs with the help of the Liaison Officer (LO) of Consulate General in Davao City (Foundation, 2012).

i. Step 1: Orientation

Every person of Indonesian descents who comes (both carry the invitation or not) to the registration place will be placed in groups to attend a brief orientation about the necessary documents and details of activities in the registration process to follow all the stages of registration well (Majid, 2016b).

ii. Step 2: Reception

At this stage, each person of Indonesian descents will be given a serial number and booklet/information regarding citizens' rights and obligations. At this stage, they also will be given some facilitations that might be helpful for them, especially for the special assistance (such as interpreters, children and the elderly, persons with disabilities) (Majid, 2016b).

iii. Step 3: Data Verification

At this stage, each PIDs must show their documents to the joint team's representatives, whatever they have (passports, birth certificates, identity cards, voter cards, or others.). Each document will be checked for authenticity by the verifiers from the Joint Team representatives and short interviews related to the documents (Majid, 2016b).

iv. Step 4: Registration

At this stage, every person of Indonesian descents' data, information of the family (father, mother, wife/husband and children), their origins and occupation will be input into PIDs' registration system. At this stage, the joint team was also taking the biometric data (photograph and fingerprints) and scanning the documents that own by the persons of Indonesian descents into the database of the registration system of PIDs (Majid, 2016b).

v. Step 5: Counseling

At this stage, the person of Indonesian descents is allowed to consult with the Lawyer from the Public Attorney's Office and with the Indonesian Consulate representatives in Davao City to understand their citizenship status under the Act and the rules applied in Indonesia or the Philippines, to gain a complete understanding of citizenship countries' rights and responsibilities (both Indonesia and the Philippines) (Majid, 2016b).

After the registration processes, the most important agenda is the solution mission for Indonesian descendants. In this preparation for the permanent solution mission, the Philippines government has done some meeting with some agencies related to the internal of Philippines government, and also a bilateral meeting between the Philippines Department of Justice and the delegates of Indonesia's Ministry of Laws and Human Right to establish the joint policy which will be permanent in order to determine the clarity of the nationality status of the PIDs (Ariwibowo, 2016).

The permanent solutions and the follow up actions for the persons of Indonesian descents that offered by the actors can be described as follows:

Table 1: The Permanent Solutions and Follow up Actions

Status	Options	Follow-up Actions	Institutions
WNI (Indonesian)	Stay in Mindanao	Nationality Clarity	The ministry of Laws and Human Rights Republic of Indonesia & Indonesian Consulate in Davao City

		Passports granting, Regarding the PNBP, the passport needs to get the exemption.	Indonesian Consulate in Davao City/The immigration of the ministry of Finance
		The clarity of Philippines immigration permission	Philippines Bureau of Immigration
		Residing Visa	DOJ/Bureau of Immigration
WNI (Indonesian)	Return to Indonesia	Confirmation granting of the Indonesian nationality	The ministry of laws and Human rights of Republic Indonesia & Indonesian Consulate in Davao City
		SPLP Granting, Regarding the PNBP SPLP need to give exemption.	Indonesian Consulate in Davao City/The immigration of the ministry of Finance
		Returning process/repatriation	Indonesian Consulate in Davao City/Central government
		Living place and the source of livelihood in Indonesia	The ministry of village, PDT and transmigration, BNPP North Sulawesi
WNF (Philippines)	Settled in Mindanao	The withdrawing of the Indonesian nationality and all the documents related to republic of Indonesia	Indonesian Consulate in Davao City/ The ministry of laws and Human rights of Republic Indonesia
		The confirmation of Philippines nationality	Philippines government

Source: (Majid, 2016b)

After all the nationality awarding processes for the Persons of Indonesian Descendants in the Southern part of Mindanao the Philippines, they are currently known as Registered Indonesian Nationals (RINs). However, there are only a few numbers of RINs that return home to Indonesia (Yuliarti, 2019). Most of them who chose to be Indonesian prefer to stay and continue their life in Southern Mindanao. When the writer was visiting southern Mindanao back in 2016, these RINs that the writer met mentioned their willingness to go home to Indonesia since some of them never have any chance to visit their hometown since they were born. They would like to return and spend their lives in the place they can call their 'home'. However, they could not return to Indonesia due to a lack of legal documents such as passport and identity cards or other evidence that proves these people belong to either Indonesia or the Philippines. Nevertheless, there are around 2435 Registered Indonesian Nationals still residing in some areas of Mindanao (SJAHPUTRA, 2019).

5. The Impact of Legalization Process to the PIDs Life

Prior to the joint mission among UNHCR, Indonesian government and the Philippines government to end the statelessness, the life of Person of Indonesian Descents was very concerning. One of the issue is when the persons of Indonesian descents in Mindanao

sometimes also become an object for some actions of state or regional actors during the election time, such as a state or regional actor letting the persons of Indonesian descents participate in the election to win in local elections. Most of these actors treat the persons of Indonesian descents invariably depends on how dominant the persons of Indonesian descents respond to them (Talampas, 2015). The positive impacts that someone could get from having a nationality include gaining many support and easy access to the facilities that the government provided. Then, good quality of education, health facilities and access to a job field. The important thing is that someone will get his right to be protected by the country's law (Yuliarti, 2019).

After the legalization process ended, 2435 out of 8745 person of Indonesian descents chose to remain living in Mindanao (SJAHPUTRA, 2019). Most of the reason they chose to remain in Mindanao is that they married to the local and has built their family there, having better income instead of working in Indonesia, have no relation did to their relatives in Indonesia, and it is hard to start to build a new life in the place they have never been before. Nevertheless, they still choose to be Indonesian because that is the only thing they have from their ancestors and to show love to the place where they came from (Yuliarti, 2019).

6. Conclusion

The Persons of Indonesian descents were identified after the independence day of Indonesia and the Philippines. Most of them came from North Sulawesi province in Indonesia. They sailed the traditional boat and risked their lives to come to Balut island, which is the nearest place in Philippine's territory from Indonesia. Since their arrival, inter-marriage between the PIDs and residents happened, and their kids were threatened to be stateless since the parents did not have any legal documents which show their nationality. To stop them from being stateless, UNHCR, the Indonesian government and the Philippines government working together to award these people with nationality which they are desire to have. The Philippine's government will manage those who choose to be Filipino. The PIDs who chose to be Indonesian (RINs) will be under the Indonesian consulate's supervision, and gradually they will return to Indonesia. Nevertheless, not all these RINs wish to return to Indonesia; 2435 of the RINs chose to stay in Mindanao areas. From the previous visit to Glan and General Santos City, where most of the RINs resides, the common reasons are because their families are currently living in Mindanao, and they have a better job with better income than Indonesia.

7. References

- Alam, E. S. S. (2006a). *Menyibak Tabir WNI* (Second Edi). Konsulat Jenderal Republik Indonesia, Davao City, Filipina.
- Alam, E. S. S. (2006b). *Menyibak Tabir WNI* (Second Edi). Konsulat Jenderal Republik Indonesia, Davao City, Filipina.
- Ariwibowo, A. (2016). *KJRI Davao promosikan perlindungan WNI*. Retrieved from <https://www.antaraneews.com/berita/599823/kjri-davao-promosikan-perlindungan-wni>
- Foundation, P. P. (2012). *Mapping Stateless Indonesians in Mindanao*. Retrieved from https://issuu.com/manchamancha/docs/mapping_indonesians_pasali_philippines_unhcr
- Inclusion, I. on S. and. (2014). *The World's Stateless*. Wolf Legal Publishers.
- Majid, A. A. (2016a). *History of PIDs in Mindanao*.
- Majid, A. A. (2016b). *Registrasi Dan Konfirmasi Kewarganegaraan*.

- Michelle Foster, H. L. (2016). Stateless as a Human Right Issue: A Concept Whose Time Has Come. *International Journal of Refugee Law*, 564.
- Rahman, A. (2016). *PIDs in General Santos*.
- RI, D. (2006). *LAW OF THE REPUBLIC OF INDONESIA NUMBER 12 , YEAR 2006 ON CITIZENSHIP OF THE REP . OF INDONESIA IN THE NAME OF GOD ALMIGHTY. 12.*
- Ridwan. (2016). *PIDs in General Santos*.
- Saleha, P. A. (2017). *The Cooperation among UNHCR, Indonesian Government, and Philippines Government in Managing the Stateless Status Issue of PIDs in Mindanao*. Universitas Muhammadiyah Yogyakarta.
- SJAHPUTRA, H. R. T. (2019). *A DILEMMA BETWEEN LEGALITY AND WELFARE: A CASE STUDY: REGISTERED INDONESIAN NATIONALITY IN GLAN, SOUTHERN MINDANAO THE PHILIPPINES*. Universitas Muhammadiyah Yogyakarta.
- Talampas, R. (2015). *Indonesian Diaspora Identity Construction in a Southern Mindanao Border Crossing*. 136–168.
- Tanggol, F. (2017). *Philippine and Indonesian Governments work together to end statelessness in Mindanao*. <https://www.unhcr.org/ph/11753-philippine-indonesian-governments-work-together-end-statelessness-mindanao.html>
- Yuliarti, E. R. (2019). *The Return of RINs to Indonesia*.

An Investigation on Character Strengths and Well-Being Among Adolescents in Penang and Kedah

Cheng Chiau Chui^{a*}, Intan Hashimah Mohd. Hashim^b

^aSchool of Social Sciences, Universiti Sains Malaysia, Malaysia

*Email: sugeecheng@gmail.com

^bSchool of Social Sciences, Universiti Sains Malaysia, Malaysia

Abstract

The present study is to investigate the character strengths and flourishing among adolescents in Penang and Kedah. Participants were 217 adolescents aged 13 to 17 from three schools in Northern states of Malaysia. Mixed methods were applied with two studies. Study 1 revealed that kindness was ranked as the top character strength, and leadership was ranked as lowest strength among the adolescents. Perseverance and judgement agency were significant predictors of flourishing. Study 2 results indicated high kindness, humour, perseverance, love and self-regulation among the adolescents. Both studies reported moderate level of flourishing and high level of depression among adolescents in Penang and Kedah. Implications for the study of character strengths in adolescence, especially in explore appropriate approaches that can enhance flourishing among adolescents in context of Malaysia, are discussed.

Keywords: Character strengths, flourishing, adolescent, mixed method

1. Introduction

This study focuses on the adolescents in Malaysia. Adolescence is characterized by tremendous growth and change. According to Erik Erikson psychosocial development theory, adolescents undergo the fifth stage of psychosocial development and are in the stage of deciding their identity, recognizing their uniqueness, and searching for their life purpose (Santrock, 2007). It is to be expected that some character strengths may be consistent while others are inconsistent over the period of adolescence. (Zohar, Zwir, & Cloninger, 2018). However, empirical data about character strengths and the developmental process in Malaysian cultural are limited. This represents one research gap.

The influence of character strengths on adolescents' composite well-being remains unexplored in Malaysian context. Previous researchers have discovered the benefits of strengths for well-being in Western countries. People who practice their strengths have been found with greater vitality, psychological wellbeing, more progress towards their goals and enhanced resilience after stressful events (Linley, Nielsen, Gillet, & Biswas-Diener, 2010; Peterson & Seligman, 2004; Proctor, Maltby, & Linley, 2010). Study also revealed that participants experienced increased well-being and decreased depression after identifying their VIA strengths and using them in novel ways for six months (Seligman, Steen, Park, & Peterson, 2005). Furthermore, practicing an individual's strengths was found to predict wellbeing after a period. In short, the usage of character strengths has been proof benefits over time (Wood et al., 2010). Previous researchers in Malaysia only discussed character strengths as a positive personal resource from educational perspective (Majid, Ali, & Alias,

2014; Yin & Majid, 2018; Zakaria & Liang, 2019). The contribution of character strengths increasing the level of flourishing among the adolescents in Malaysia is still unknown. This represents another research gap.

2. Malaysia Adolescents

Malaysia is a country in Southeast Asia covered by three major ethnic groups: Malay, Chinese and Indian. According to Jomo and Hui (2002), Great Britain established colonies and protectorates in the area of current Malaysia around the late 18th and 19th centuries; these were occupied by Japan from 1942 to 1945. In 1948, the British-ruled territories in the Malay Peninsula, with the exception of Singapore, formed the Federation of Malaya (Jomo & Hui, 2002). The Federation of Malaya became an independent country on 31 August 1957. Malaysia is a federation of 13 states; the country's political system is a constitutional monarchy based on the British Westminster parliamentary system. Malaysia turns 63 in year 2020, and is facing many challenges as it is currently in a stage of rapid growth. Adolescents' development is one of the challenges.

2.1 The Importance of Critical Thinking among Malaysian Adolescents

In Malaysia, it has become an urgent concern to understand adolescent thoughts, feeling and behaviours. Hamzah, Suandi, Ismail and Muda (2018) estimated that by the year 2020, the number of adolescents in Malaysia would have increased to 6 million. However, Malaysian adolescents' thinking skills, especially critical thinking in Malaysian secondary schools and higher learning institutions, were below the expected proficiency level (Nagappan, 2001, 2010). According to an evaluative review study, there is a requirement in organising special courses that would help the adolescents to recognize their strengths and weaknesses (Ahmad, 2013). This is a central issue for the adolescent development process. It is important to note that an adolescence major task is the formation of a solid identity and the ability to understand their place in the world as a productive and contributing member of society. In this case, a complete and precise description of the character strengths would be helpful for this young generation to better understand their identity, thoughts, feelings and behaviour. In other words, more effort is needed to gain a better understanding of adolescents in Malaysia.

2.2 The VIA Classification of Character strengths

Positive psychology has contributed to a better understanding of the positive traits of human beings and their relationship with human flourishing. The fundamental beliefs in this field are built on the basis of people's understanding about their best selves and the desire to cultivate the best self to enhance positive life experiences. Peterson and Seligman (2004) took three years to investigate these human positive traits and described them as "character strength". The Values in Action (VIA) Classification of Strengths was created by Martin Seligman and Christopher Peterson and funded by the Manuel D. and Rhoda Mayerson Foundation in the year 2000 (Niemic, 2013). The VIA Classification of Character Strengths comprises twenty-four character strengths that fall under six broad virtue categories: wisdom and knowledge (i.e., creativity, curiosity, open-mindedness, love of learning, and perspective); courage (i.e., honesty, bravery, persistence, and zest); humanity (i.e., kindness, love, and social intelligence); justice (i.e., fairness, leadership, and teamwork); temperance (i.e., forgiveness, modesty, prudence, and self-regulation); and transcendence (i.e., appreciation of beauty and excellence, gratitude, hope, humour, and spirituality). Each individual possesses all twenty-four character strengths in varying degrees to make up a unique profile of a person.

2.3 Character Strengths among the Adolescents

A lot of studies have focused on character strengths among adolescents. However, not much research has been done on the character strength profile of adolescents in different cultural settings, especially in Eastern country. Most studies were conducted in Western countries such as the United States, Australia and Russia. The study by Shimai et al (2014) is the only study that shows the character strengths profile of adolescents from both the United States and Japan. The study stated that both samples have similar distributions across the twenty-four character strengths. Participants from these two different countries reported love, humour, and kindness as their top strengths, while prudence, self-regulation, and modesty were at the bottom (Shimai et al., 2014). The accumulated empirical evidences have shown that adolescents' character strengths profiles across the countries are unique, while containing certain similarity (Bogomaz, Litvina, Kozlova, & Atamanova, 2015; Malin, Liauw, & Damon, 2017; Steen, Kachorek, & Peterson, 2003). Furthermore, during the adolescent developmental process, the adolescents were found to increasingly endorse strengths over time through cognitive maturation (Steen et al., 2003). The research findings stressed that the possibility of change and varying character strengths may emerge during the period of adolescence. Taken together, character strengths profiles among the adolescents are unique across the countries and varying during adolescence development process.

3. Present Study

This research aimed to identify the character strengths profile of adolescents and the relationship with adolescent's flourishing. Data collection was conducted in two studies: Study 1 took a quantitative approach and used survey and Study 2 employed qualitative approach, using open ended questions. In study 1, analysis focused more on frequency, percentage, mean scores, and standard deviation while Study 2 applied thematic analysis to evaluate the qualitative data. Two studies were conducted to gain more complete understanding the variables their real-world roles, represent their views and perspectives, identify important contextual conditions, and discover new or additional insights.

4. Method

Study 1

Study 1 used survey research. Participants were selected based on arrangement made by the school and their availability. Consent forms were obtained from both parents and students. On the day of data collection, participants gathered to answer a set of questionnaires. The questionnaire consists of 166 questions with two different instruments. Researchers were available throughout the process of the survey. **Participant.** 117 secondary school students in Penang were participated in this study. There were 63 males and 54 females in the sample, and the average age was 14.5 years old. **Instrument.** *VIA-Youth Survey.* VIA designed a 96-item short-form face-valid self-report questionnaire contains the four items of the twenty-four character strengths (Niemi, 2013). *Flourishing Scale (FS).* The Flourishing Scale (FS) is a self-reported assessment with 8-item questions ($\alpha = .85$) to measure self-perceived success in significant areas in life, including relationships, self-esteem, purpose, and optimism (Diener et al., 2009).

Study 2

Study 2 took a qualitative approach using open-ended questions. The researcher went to 3

schools on three different days. The procedure was the same for all 3 schools in which those who agreed to participate in the study were gathered in a classroom after consent form were collected. Again, consent forms were obtained from both parents and students understand the concept of character strengths and enable them to describe themselves more when answering the questions. **Participant.** Study 2 was conducted in 3 secondary schools with 100 participants selected by the schools. Current study applied a large sample as compared with other qualitative studies as to understand a maximum variation in the development process among the adolescents. **Instrument.** In Study 2, the researcher conducted a survey research with 2 open-ended questions. **Data Analysis.** In Study 2, Thematic Analysis (TA) was applied to analyse written text data provided by the participants in Study 2.

5. Results

What are the character strengths of adolescents in Penang and Kedah?

Study 1. The result from study 1 stated that kindness was ranked as top 1 character strength among the participants with an average $M = 3.81$ ($SD = .86$). Top 2 was spirituality with average $M = 3.80$ ($SD = .84$), top 3 was teamwork $M = 3.71$ ($SD = .81$), top 4 was humor $M = 3.68$ ($SD = .95$) and top 5 was curiosity $M = 3.68$ ($SD = .78$). Character strengths that ranked at 6th to 24th were judgment $M = 3.66$ $SD = .88$, appreciation of Beauty & Excellence $M = 3.66$ $SD = .73$, bravery $M = 3.63$ $SD = .77$, social Intelligence $M = 3.62$ $SD = .79$, love of Learning $M = 3.61$ $SD = .99$, fairness $M = 3.60$ $SD = .75$, prudence $M = 3.57$ $SD = .78$, zest $M = 3.55$ $SD = .74$, forgiveness $M = 3.49$ $SD = .69$, love $M = 3.48$ $SD = .88$, hope $M = 3.47$ $SD = .760$, gratitude $M = 3.47$ $SD = .63$, humility $M = 3.46$ $SD = .77$, honesty $M = 3.44$ $SD = .74$, self-regulation $M = 3.40$ $SD = .69$, perseverance $M = 3.30$ $SD = .85$, perspective $M = 3.29$ $SD = .84$, creativity $M = 3.26$ $SD = .97$ and the last one was leadership $M = 2.90$ $SD = .93$.

Study 2. In study 2, the findings show that participants in this study are generous, caring, altruistic, playful and able bring smiles to others. **Generous:** Participants reported they were generous to their friends and strangers. For example, "I will give money to the beggar, and believe helping people is a moral action and the right thing to do". **Caring:** The participants described they care about other's feeling and listening to their problem. A participant explained she always listen to her friend to make them feel like they are not alone, and she feels happy when she took care of children (e.g. "I am good in taking care of children and persuade them when they are in bad mood"). **Altruistic:** Most of the participants reported that they love to offer help to their friends, family members, and teachers. For example, "I love to give help to others when they need me". **Playful:** Having fun with friends and enjoy their company is a component of humour. Twelve participants described themselves as a humorous person, and enjoy having fun with their friends, e.g. "I love to make my friend happy by telling them different jokes daily". **Brings smiles to others:** A few participants in the study stated "I love to make my friends happy so that they won't feel boring when they with me" in their answer sheet. This quote showed that these participants love to make people around them feel happy. Some of the participants revealed they would make jokes and play some tricks to make their friends laugh because they love to see the smile on their face.

What is the level of the flourishing of adolescents in Penang and Kedah?

Study 1. The flourishing level among the adolescents in Malaysia was at moderate level ($M = 3.80$, $SD = 1.63$).

Study 2. The results of study 2 revealed that the participants were in moderate flourishing level. In the study, the participants have discussed and expressed the four components which important to their flourishing: meaningful life, positive social relationships, self-esteem and competent and mastery of skills. **Meaningful life:** Most of the participants reported the belief in sense of belonging, and serving to something believe as bigger than self in the study. These participants expressed their wish to achieve good grades in studies and to make their parents feel proud of them. A few participants have emphasized their desire to help others after they succeed. They mentioned the phrases like, “ I hope to save people life as a doctor”, “I wish to build an orphan house or charity organisation to support those that need help in the future” in the study. **Positive social relationships:** In further, the participants mentioned that positive and meaningful relationships with people around are core to well-being. I enjoy attending school because I am able to interact with my friends”, “I love to learn new knowledge and enjoyed does activities together my friends in school” were the phrases used by these participants to describe their relationship with people around them. **Competent and mastery of skill:** In addition, the participants revealed that having their own interest and passion in hobbies will contribute to their flourishing. According to the participants, the school have conducted many different activities and they love to participate in these activities. **Self-esteem:** The participants claimed that they feel happy and were aware with their strengths. They are filled with hope and appreciate what they have. “I feel happy because I have a loving family and able to love others”, “I am grateful because I know my parents work hard to provide everything I need and wish I am happy”, these statements were wrote by the participants on the answer sheet.

6. Discussion

The main focus and broad aim of this study is to discover the character strengths profile and level of flourishing among the adolescents in a Malaysian context. The results from Study 1 showed that adolescents’ character strengths profile in Penang and Kedah are unique. This finding supported the empirical evidence stated that the adolescents’ character strengths profile across countries is unique, yet, contains some similarities. Current findings show that high endorsed strengths among the adolescents in these two samples were kindness and humour. This result is largely consistent with the study by previous researches (Bogomaz et al., 2015; Park & Peterson, 2008; Seligman et al., 2005; Shimai et al., 2014; Steen et al., 2003). Given that character strengths are aspects of personality that are morally valued. It is notable that the strengths of kindness and humour among adolescents are aligned with caring behaviour as described in the adolescents’ moral developmental process (Brown & Gilligan, 1993). Adolescents are recognised as at conventional thinking stage in their moral developmental progress. In this stage, adolescents are in the process of learning to attach to social roles such being kind, generous, and compassionate, listening intently to others’ suffering and providing support to people around them. At the same time, they also developed the strengths of humour, which is a desirable component in social interactions.

On the other hand, both samples in this study revealed least endorsed strength was leadership. Study 2 have revealed that adolescents seldom practiced skills that involved organising and encouraging members of the group to get things done. Taken together, findings from Study 1 and Study 2 suggested that adolescents in Malaysia still need improvement in terms of their capacity to lead. There is a possibility that educators lack the resources and are unable to provide the students with helpful guidance on recognising the cognitive skills to assess their strengths and weaknesses, or the way to acquire and develop these strengths (Nikitina & Furuoka, 2011). The adolescents lack of the strengths to lead as they are not able to know

what strengths they endorse or notice how well they endorse these strengths. In addition, Niemiec and McGratch (2019) further explain leadership as an ability to set goals and accomplish those goals through enlisting effective help, building coalitions, and smoothing ruffled feathers. Effective leaders are equipped with a positive vision or message that inspires dedicated followers to feel empowered and inspired. Taken together, the current study offers the need to enhance critical thinking skills among adolescents in order for them to recognize and improve their strengths and build good group functioning.

Another aim of the current research is to assess adolescents' flourishing level in Malaysia. The overall results of both studies indicated that adolescents may not perceive their life as going well. One of the possible reasons is the developmental process during puberty. For example, the participants in the study explained that one of the sources or factors of depression was low self-esteem. From the perspective of the development theory, this is an expected process during adolescence as self-esteem is in decline during this period. During puberty, adolescents experience a decline in body image, and the emerging capacity to think abstractly about one's self as well as one's future (Robins & Trzesniewski, 2005). They also Erikson's theory also mentioned that adolescents are in the stage of trying to build their own values which "best fit" to the society (Santrock, 2007). Thus, their self-esteem is in a stage of instability. However, these problems could be improved if the adolescents are able to make rational, logical choices, and analytically evaluate ideas. These abilities referred to the strength of judgment. Judgment is important in guiding the adolescents to recognize their strengths and solving problems in life. Unfortunately, the adolescents in this study still lack of this strength. These findings illustrate the importance of developing strength of judgment during adolescence.

7. Limitations and Future Directions

This study has several limitations. Firstly, the results are limited to a sample of adolescents in the northern region of Malaysia, whose character strengths and developmental processes may differ from those of adolescents in other regions. Secondly, this study focused only on the flourishing level among the adolescents. This leaves room for an investigation on the development process of the character strengths profiles among the adolescents in Malaysia context. Thus, to increase the generalisability of the results to other regions, it would be helpful if comparative studies are conducted with similar groups of young people in different regions and states of Malaysia. Other means of extending the present study include conducting a longitudinal study examining the stages of character strength development among adolescents, and using in-depth interviews and focus groups to collect more qualitative data.

8. Conclusion

In general, this study suggested two crucial facets of character strengths among the adolescents. First, the characteristics of the adolescents in Penang and Kedah are loved to do for others, caring, generous, responsible, willing to contribute to group efforts and are able to seek novelty. Second, educators and policy makers should pay attention to enhance highly endorsed strengths such as kindness and humour; and build up badly endorsed strengths e.g. leadership among adolescents. Third, developing the strengths of judgement may help in improve the adolescents' critical thinking ability and increase their flourishing level. Results from the current study have important implications for schools, educators, parents, stakeholders and policy makers who are concerned with the promotion of positive

development among adolescents.

9. References

- Ahmad, S. B. S. (2013). Soft Skills Level of Malaysian Students at a Tertiary Institution: A Comparative Case Study Based On Gender, Area of Residence and Type of Schools. *International Journal of Asian Social Science*, 3(9), 1929–1937. Retrieved from <https://econpapers.repec.org/scripts/redir.pf?u=http%3A%2F%2Fwww.aessweb.com%2Fdownload.php%3Fid%3D2365;h=repec:asi:ijoass:2013:p:1929-1937>
- Bogomaz, S. A., Litvina, S. A., Kozlova, N. V., & Atamanova, I. V. (2015). Culture-Specific Subjective Evaluation of Character Strengths. *Procedia - Social and Behavioral Sciences*, 200(2015), 92–100. <https://doi.org/10.1016/j.sbspro.2015.08.024>
- Brown, L. M., & Gilligan, C. (1993). Meeting at the Crossroads : Women ' s Psychology and Girls ' Development. *Feminism & Psychology*, 3(1), 11–35. <https://doi.org/10.1177/0959353593031002>
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2009). New measures of well-being : Flourishing and positive and negative feelings New Well-being Measures : Short Scales to Assess Flourishing and Positive and Negative Feelings. *Soc Indic Res*, 2010(97), 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Hamzah, S. R., Suandi, T., Ismail, M., & Muda, Z. (2018). Association of the personal factors of culture , attitude and motivation with health behavior among adolescents in Malaysia. *International Journal of Adolescence and Youth*, 3843, 1–11. <https://doi.org/10.1080/02673843.2018.1482772>
- Jomo, K. S., & Hui, C. W. (2002). *The political economy of Malaysian federalism: Economic development, public policy and conflict containment* (ISBN 9291903531 No. 2002/113). Helsinki. Retrieved from <http://hdl.handle.net/10419/52740>
- Linley, A. P., Nielsen, K. M., Gillet, R., & Biswas-Diener, R. (2010). Using signature strengths in pursuit of goals: Effects on goal progress, need satisfaction, and well-being, and implications for coaching psychologists. *International Coaching Psychology Review*, 5(April), 6–15.
- Majid, R. A., Ali, M. M., & Alias, A. (2014). Teacher character strengths and talent development. *International Education Studies*, 7(13), 175–183. <https://doi.org/10.5539/ies.v7n13p175>
- Malin, H., Liauw, I., & Damon, W. (2017). Purpose and Character Development in Early Adolescence. *Journal of Youth and Adolescence*, 46, 1200–1215. <https://doi.org/10.1007/s10964-017-0642-3>
- Nagappan, R. (2001). The Teaching of Higher-Order Thinking Skills in Malaysia. *Journal of Southeast Asian Education*, 2(1), 42–65.
- Nagappan, R. (2010). Teaching Thinking Skills at Institutions of Higher Learning : Lessons Learned. *Pertanika J. Soc. Sci. & Hum*, 18(S), 1–14.
- Niemiec, R. M. (2013). VIA character strengths: Research and practice (The first 10 years). *Well-Being and Cultures: Perspectives from Positive Psychology*, 11–30. <https://doi.org/10.1007/978-94-007-4611-4>
- Nikitina, L., & Furuoka, F. (2011). Sharp focus on soft skills: a case study of Malaysian university students' educational expectations. *Educational Research for Policy and Practice*, 11(3), 207–224. <https://doi.org/10.1007/s10671-011-9119-4>
- Park, N., & Peterson, C. (2008). Positive Psychology and Character Strengths : Application to Strengths-Based School Counseling. *Professional School Counseling*, 12(2), 1–12. <https://doi.org/10.5330/PSC.n.2010-12.85>

- Peterson, C., & Seligman, M. (2004). *Character Strengths and Virtues*. American Psychological Association, Oxford University Press.
- Proctor, C. L., Maltby, J., & Linley, A. P. (2010). Strengths Use as a Predictor of Well-Being and Health-Related Quality of Life Strengths Use as a Predictor of Well-Being and Health-Related Quality of Life. *J Happiness Stud*, 2011(12), 153–169. <https://doi.org/10.1007/s10902-009-9181-2>
- Robins, R., & Trzesniewski, K. (2005). Self-Esteem Development Across the Lifespan. *Current Directions in Psychological Science*, 14(3), 158–162. <https://doi.org/10.1111/j.0963-7214.2005.00353.x>
- Santrock, J. W. (2007). *Topical Life-Span Development (3rd Ed.)* (3rd ed.). New York: McGraw-Hill.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive-Psychology-Progress.
- Shimai, S., Otake, K., Park, N., Peterson, C., & Seligman, M. E. P. (2014). Convergence of Character Strengths in American and Japanese Young Adults. *Journal of Happiness Studies*, 7(February 2006), 311–322. <https://doi.org/10.1007/s10902-005-3647-7>
- Steen, T. A., Kachorek, L. V., & Peterson, C. (2003). Character Strengths Among Youth. *Journal of Youth and Adolescence*, 32(1), 4–16. <https://doi.org/10.1023/A>
- Wood, A. M., Wood, A. M., Linley, P. A., Maltby, J., Kashdan, T. B., & Hurling, R. (2010). Using personal and psychological strengths leads to increases in well-being over time : A longitudinal study and the development of the Strengths Use Questionnaire Using personal and psychological strengths leads to increases in well-being over time : A longitudinal study and the development of the strengths use questionnaire. *Personality and Individual Differences*, 50(1), 15–19. <https://doi.org/10.1016/j.paid.2010.08.004>
- Yin, L. C., & Majid, R. A. (2018). The Goodness of Character Strengths in Education. *International Journal of Academic Research in Business and Social Sciences*, 8(6), 1237–1251. <https://doi.org/10.6007/IJARBS/v8-i6/4512>
- Zakaria, M. H., & Liang, K. D. (2019). Character Building in ESL Materials : Values and Malaysian English Curriculum Jurnal Teknologi Full paper Character Building in ESL Materials : Values and Malaysian English Curriculum. *JurnalTeknologi (Social Sciences)*, 65(2), 39–45. <https://doi.org/10.11113/jt.v65.2348>
- Zohar, A. H., Zwir, I., & Cloninger, R. (2018). The development of temperament and character during adolescence : The processes and phases of change. *Development and Psychopathology*, 31(2), 601–617. <https://doi.org/10.1017/S0954579418000159>

Malaysian Online Pharmacy Market Analysis: Initial Insights After The COVID-19 Pandemic Outbreak

Mohamad Saleem Anis^{a*}, Mohamed Azmi Hassali^b

^aSchool of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia

*Email: saleem.anees@yahoo.com

^bSchool of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang, Malaysia

Abstract

Objective: In order to gain a good understanding of Malaysian online pharmacy market as an emerging market through evaluating a number of companies that operating in it based on fixed criteria. **Methods:** The secondary (desk) research method was used. A number of online pharmacies that operates in Malaysia were chosen based on their ranking on the Google search engine's results. The data was collected using Alexa Internet, Inc. analysis tool. **Key findings:** Doctor on Call website comes in the first place among the studied online pharmacies, recording the rank of nearly 100,000 in the world and 375 in Malaysia. **Conclusion:** Overall, the digital marketing strategy followed markedly differs between companies for several reasons, depending on the company size and the number of its employees in addition to its values and priorities in the market. However, considering the noticeable absence of official data, it is crucial to address this lack of data on Malaysian online pharmacy market with the aim of achieving regulatory mechanisms governing this emerging market and forming a transparent environment that produces sufficient accuracy statistics with comprehensive accessibility to all stakeholders.

Keywords: Online Pharmacy; Internet Pharmacy; Social and Administrative Pharmacy; Malaysia.

1. Introduction

Online pharmacies are platforms which play an intermediary role between vendor and consumers for the sale of medicines and related products. The vast majority of market analysis reports issued by various research institutions indicate that the online pharmacy market is growing and is expected to continue over the coming years. This is attributed to the increasing number of Internet users and the growing culture of buying online, especially the world currently in the midst of global pandemic crisis, novel Coronavirus (COVID-19), which forced a high proportion of the world's population to stay in their homes most of the day as well as the increasing demand for medical products such as face mask and sterilizers. For instance, two recent industry reports, from Infinium Global Research and Mordor Intelligence, have indicated that although the largest global market is currently North America, the market in the Asia Pacific region is the fastest growing globally during the current period due to the increasing in investments and government initiatives (Infinium Global Research, 2018; Mordor Intelligence, 2019).

Although there is a number of enterprises that started working in the online pharmacy industry in Malaysia, but in light of the emergence of any new market, the data and statistics available on this market are still very scarce. Meanwhile, government agencies such as

pharmaceutical services division, in turn, is trying to control this market by issuing some regulations and curbing the trading of pharmaceutical products that violate the provisions of law in the digital medium. For instance, currently, only over-the-counter (OTC) drugs, traditional medicines, and health supplements are allowed to be sold by online pharmacies while 224 websites and 97 social media pages that selling pharmaceutical products were blocked by the Malaysian communications and multimedia commission during 2014 due to due to violating the law (MOH Pharmaceutical Services Programme, 2020).

2. Methods

Basically, the researcher used secondary (desk) research method. However, as a consequence of the insufficient data available regarding the online pharmacy market in Malaysia, viable alternative methods had to be found that could analyze the market and the competing between its players. Initially, it was necessary to define a methodology for selecting companies in the market whose website would be analyzed. Therefore, the companies that appeared as organic results of the first page, on 24th of March 2020, were chosen after writing the keywords "online pharmacy Malaysia" on the Google search engine.

The next step was to select the appropriate tool for analyzing the websites of these virtual pharmacies, taking into account the fact that the back-end database of these websites cannot be accessed, which will reduce the options of the tools that can be used in many instances. Ultimately, the most prominent data for analyzed pages of the previously selected online pharmacies websites were collected on 24th and 25th of March 2020 using Alexa Internet, Inc. analysis tool. On the other hand, it was investigated whether these companies have pages on the leading social media channels, and thereafter a comparison is made between of their total followers. Finally, the data obtained has been presented in the form of appropriate tables and figures.

3. Results and Discussion

The results, that demonstrated below, were divided into two categories according to their type and comparability. Firstly, Alexa Traffic Rank was employed to rank websites both globally and within Malaysia. Secondly, the social media pages of the discussed companies were highlighted.

3.1 Alexa Traffic Rank

Alexa Traffic Rank was employed to rank websites both globally and within Malaysia. It is a key metric published by Alexa Internet analytics, which is a subsidiary of Amazon. Indeed, it can be useful for comparing the popularity of evaluated websites through providing an estimate traffic after calculating a combination of page views and reach, where the reach is defined as the quantity of unique visits to a website in one day. In addition, it is a ranking tool ranging between 1 and 24 million, and the top websites are typically appeared in the range between 1 and 100 thousand (Fulham, 2016). First of all, and according to the same ranking, Doctor on Call website comes in the first place among the studied online pharmacies, recording, at the time of the analysis, the rank of nearly 100,000 in the world and 375 in Malaysia. Thus, as just mentioned, it is a very good ranking and among top websites worldwide, especially when considering that the site's target audience is not quite broad compared to other websites. As it is clear from the name, the company is a Malaysia's first online Medical Video-consultation platform and this could be one of the factors that drives it

to the front, particularly during the current global pandemic crisis. Guardian Malaysia, the company that operate more than 440 physical stores and it became part of the Dairy Farm International Group, which has operations throughout six countries (Guardian, 2020). It ranked second, with global ranks of nearly 160,000, while it was just over a thousand on the Malaysian level. Full results are demonstrated in table 1 below.

Table 1: Alexa Traffic Rank of online pharmacy websites on March 24, 2020

No.	Online Pharmacy Name	Worldwide Ranking	Malaysia Ranking
1	Doctor on Call	100,519	375
2	Guardian Malaysia	159,551	1,056
3	Youbeli	169,662	2,336
4	CARiNG Pharmacy	295,661	2,182
5	Big Pharmacy	770,075	3,567
6	Apex Pharmacy	1,260,491	10,594
7	Esyms	3,257,304	-
8	iCare Pharmacy	3,607,354	-
9	Super Pharmacy	4,330,842	-
10	Lovy Pharmacy	4,439,411	-

Many emerging businesses that fall under the niche online pharmacy market should be aware of the current situation implications by taking advantage of the transition stage in the Malaysian and global markets alike in the light of the pandemic of novel coronavirus (Covid-19), which forces millions of people to stay at homes most of the time and led to an increase in demand for pharmaceutical products such as immune-enhancing drugs and face masks. For example, a survey involved 1082 Malaysians by Vase.ai indicated that there is an increased interest in the purchase of wellbeing products as 86% of consumers bought hand sanitizers, face masks, or disinfectants (BERNAMA, 2020). According to Alexa traffic rank, by comparing the ranks that were recorded by a number of online pharmacy websites within one-month period, starting from the first date of the movement control order (MCO) in Malaysia on 18th of March 2020, a noticeable increase was observed during this period and the highest progress was achieved by Big Pharmacy by more than 400 thousand ranks (Figure1).

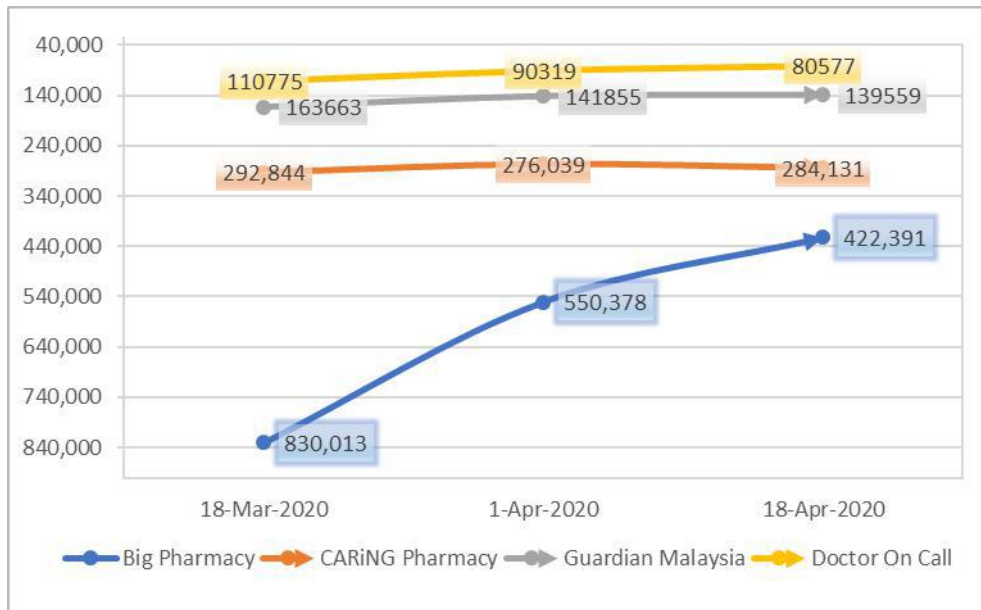


Figure 1: Alexa Traffic Rank of online pharmacy websites during MCO in Malaysia

Therefore, integrated adaptation comes through immediate and appropriate amendment of plans and marketing content in line with the changes taking place that will inevitably lead to an increase in electronic orders. According to online survey conducted by Engine Insights, online shopping has risen 74 percent since 13th of March in response to Covid-19 (Maras, 2020). Thus, a core shift in the purchasing behavior of consumers is not only happening during the outbreak but may also extend to the medium and long term. For instance, Nielsen's COVID-19 dipstick revealed that Singaporeans who shopped online for the first time during the current pandemic period are expected to do so again in the following twelve months (The Nielsen Company, 2020).






3.2 Social Media Presence

Secondly, it is undeniable that the growing importance of social media as an added value for business nowadays, it has become low-cost and effective marketing platforms to communicate with the target audience and keep them abreast of the latest promotions and company's messages. Online pharmacies that adopt a business model based on e-commerce should employ social media channels as effective channels to ultimately attract followers to its marketplace by publishing periodically the latest industry news, health information and tips to its audience.

The digital marketing strategy followed in any market noticeably differs between companies for several reasons, depending on the company size and the number of its employees in addition to its values and priorities in the market, but they should at the same time not be behind, so they lose competitive advantages and part of their market share. For instance, while CARiNG Pharmacy and Guardian Malaysia have sought to cover almost all the popular social media channels, iCare Pharmacy has only one Facebook page with close to 10,000 likes. However, it appears from the figures in Table 2 that it is readable that Guardian Malaysia outperforms in the social media race, regardless of its presence on various platforms, it has a high number of followers, and hence potential consumers, compared to its peers in the market. This may be due to their strong physical presence and brand seniority within the Malaysian pharmaceutical market. Taking a more holistic view, it can be seen that

all companies depend primarily on Facebook and then Instagram, where 9 out of 10 companies have account on it, and this is to be expected given the compatibility of this with the Malaysian community's use of social media sites as Facebook (81%) and Instagram (64%) are within the most used platforms by Malaysian (Ho, 2019). On the other hand, these companies are less adoption of Twitter and LinkedIn by only five companies per channel and follower numbers are generally low.

Table 2: Online pharmacies' presence on social media channels on March 25, 2020

Online Pharmacy					
Big Pharmacy	38,792 L	1,579 F	29 S	-	458 F
Apex Pharmacy	1,201 L	230 F	1 S	-	-
iCare Pharmacy	9,637 L	-	-	-	-
CARiNG Pharmacy	112,000 L	10,200 F	419 S	3,737 F	438 F
Yubeli	67,234 L	2,476 F	43 S	357 F	-
Esyms	1,146 L	1,959 F	7 S	-	20 F
Guardian Malaysia	704,000 L	346,000 F	1,130 S	46,000 F	2,067 F
Doctor on Call	35,092 L	2,554 F	1,960 S	324 F	191 F
Lovy Pharmacy	9,036 L	247 F	-	48 F	-
Super Pharmacy	2,352 L	162 F	2 S	-	-

L: Likes, F: Followers, S: Subscriber/s

4. Conclusion

There is no doubt that several factors may make marketing within the pharmaceutical industry have different characteristics from other industries, such as concern about patient privacy while collecting data for digital marketing campaigns. Moreover, recent reports have emphasized the importance of the shift in digital marketing strategies to focus on health education and emotional support rather than advertising the products or services provided in societies that are moving towards greater self-medication (DMI, 2018).

5. References

- BERNAMA. (2020). COVID-19 influences customer purchase behaviour - Survey. Retrieved from <https://www.bernama.com/en/region/news.php?id=1831819>
- DMI. (2018). A Digital Marketing Strategic Blueprint for the Pharma Industry. Retrieved from <https://my.digitalmarketinginstitute.com/library/entry/a-digital-marketing-strategic-blueprint-for-the-pharma-industry-s1t-a2r>
- Fulham, L. (2016). How & Why to Improve Your Alexa Ranking. Retrieved from <https://www.salesoptimize.com/improve-your-alexa-ranking/>
- Guardian. (2020). About Us. Retrieved from <https://guardian.com.my/index.php/company>
- Ho, K. (2019). Malaysians spend almost a quarter of their day on social media. Retrieved from <https://my.yougov.com/en-my/news/2019/04/30/malaysians-spend-almost-quarter-their-day-social-m/>
- Infinium Global Research. (2018). Online Pharmacy Market. Retrieved from <https://www.infiniumglobalresearch.com/healthcare-medical-devices/global-online-pharmacy-market>
- Maras, E. (2020). Will COVID-19 change consumer buying habits long term? Retrieved from <https://www.retailcustomerexperience.com/articles/will-covid-19-change->

- consumer-buying-habits-long-term-2/
MOH Pharmaceutical Services Programme. (2020). Enforcement action. Retrieved from <https://www.pharmacy.gov.my/v2/en/content/enforcement-action.html>
- Mordor Intelligence. (2019). E-Pharmacy Market - Growth, Trends, and Forecast (2020 - 2025). Retrieved from <https://www.mordorintelligence.com/industry-reports/epharma-market>
- The Nielsen Company. (2020). COVID-19: Entering A New Norm in Consumer Behaviour. Retrieved from <https://www.nielsen.com/sg/en/insights/article/2020/covid19-new-norm-consumer-behaviour/>