

KEMENTERIAN PENDIDIKAN TINGGI JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI





# KINABALU MULTIDISCIPLINARY ACADEMIC RESEARCH JOURNAL (KIMARA)

**VOLUME 3, DISEMBER 2024** 

# KINABALU MULTIDISCIPLINARY ACADEMIC RESEARCH JOURNAL (KIMARA) VOLUME 3, DECEMBER 2024

# **Copyright Notice**

All rights reserved. The author is responsible for ensuring that his work does not violate any copyright. Editors and publishers are not liable for any copyright infringement by the author.

No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of Politeknik Kota Kinabalu, Sabah, Malaysia

# e-ISSN: 2967-3606

# KIMARA Vol. 3, DECEMBER 2024

Published by:

Unit Penyelidikan, Inovasi dan Komersialan Politeknik Kota Kinabalu No. 4, Jalan Politeknik KKIP Barat, Kota Kinabalu Industrial Park 88460 Kota Kinabalu Sabah, Malaysia





# **TABLE OF CONTENT**

| FOR | EWORD   |      |
|-----|---|------|
| PUB |   |      |
| NO  | PAPER TITLE AND AUTHOR(S)   | PAGE |
| CAT | EGORY: BUSINESS, ACCOUNTING, TOURISM & HOPITALITY, MANAGEMENT,<br>SISTIC, MARKETING & ENTREPRENUERSHIP  | 1    |
| 1   | The Impact of International Trade on Sustainable Development in Malaysia  | 2    |
|     | Melinda A. Tai Nyuk Chin, Nurul Hidayah Binti Mat Nor, Nuraini Bte Yusop , Farnidah<br>Jasnie   |      |
| 2   | Factors Affecting Business Finance Course Achievement of Business Studies Diploma Students  | 10   |
| •   | Zainordin Bin Zinon Abidin, Dr. Affizah Binti Mohamad Ghaffar, Nor Jannah Binti Ismail  |      |
| 3   | Halal Tourism in Sabah: Perception Among Sabah Community College Students   | 20   |
|     | Arif Ikhsan bin Azizi, Marjihah binti Mohd Azam, Wan Nur Syamimi binti Wan Sajiri   |      |
| 4   | The Impact of Environmental Awareness and Willingness to Pay on Students' Decisions to<br>Purchase Eco-Friendly Products  | 26   |
| 0   | Nina Shenna Kosumin   |      |
| 5   | Adapting to the Era of Independent Tourism: Challenges and Opportunities for Travel<br>Agencies   | 35   |
| 6   | The Effectiveness of Work-Based Learning: A Case Study of Diploma Hotel Management.   |      |
|     | Polytechnic Malaysia  | 44   |
|     | Nor Mazlina binti Mohamad Amin, Nurul Fathin Shahera binti Muhammad Fadzil, Khairul<br>Faizal bin Daros   |      |
| 7   | Youth's Satisfaction in Using Online Food Delivery (OFD) Services in East Malaysia<br>Nurafiqah Mohamad Musa , Rosevelt Kulong Anak Rudy, Enmmanuell Anak Ayang, Jerad<br>Jay Janis, Alvin Gatu, Nur Murniza Mohd Zaidi | 54   |
| 8   | The Insight of Sabahan Youths' Intention to Visit Dark Tourism Destination -The Case of Agnes Keith House, Sandakan, Sabah  | 64   |
|     | Dr. Boyd Sun Fatt, Anis Nadhirah Binti Romel Shaadat Khan, Suhaiza Shazleen Binti Balamis, Christy Bidder, Shirley Marylinda Bakansing  |      |
| 9   | The Effect Of Length Of Membership On Value Co-Creation Behavior And Loyalty Of Cooperative Members: A Proposed Conceptual Framework  | 76   |
|     | Akmal Nashren Bin Abd Malik, Yusman Bin Yacob, Jati Kasuma Bin Ali  |      |



| 10  | Assessing Tourism Potential And The Intention Of Community Participation In Kampung<br>Pahu Pinawantai, Ranau, Sabah, Malaysia                       | 83      |
|-----|--|---------|
|     | Dr Spencer Hedley Mogindol, Jewel Joy Justinus, Nor Ardyaana Edora Binti Mohd Ramli,<br>Julenah AG Nuddin  |         |
| 11  | The Influence of Knowledge and Skills on the Readiness to Adopt Digital Marketing Strategies Among Micro-Entrepreneurs in Malacca, Malaysia.         | 96      |
|     | Rabi'ah binti Seman, Rusmaini binti Ramly  |         |
| САТ | EGORY: SOCIAL SCIENCES   | 104     |
| 12  | Faktor Kebergantungan Terhadap Kecerdasan Buatan (Artificial Intelligence) Dalam   | 105     |
| 1   | Kalangan Pelajar   | • •     |
|     | Ts. Daniel Kimbin  | · • • • |
| 13  | Kesan Keterlibatan Atlet Sepaktakraw Terhadan Prestasi Akademik - Varsity Sepak  | 110     |
|     | Takraw League 2024 Sirkit 2  | 110     |
|     | Mohd Azuan Bin Ali, Ida Harianti Binti Hasan @ Talib, Mohd Nazaruddin Bin Hanapiah   |         |
| 14  | Kesan Media Sosial Dalam Mempengaruhi Etika Komunikasi Pelajar   | 119     |
|     | Razimah Binti Othman   | 1 . T   |
| 15  | Kecenderungan Pelaiar Untuk Menghasilkan Aplikasi Berunsurkan Islam Dalam Projek   | 125     |
| 10  | Akhir Pelajar  | 120     |
| ·   |  |         |
|     | Syed Muwayat Maqbul bin Syed Ali   |         |
| 16  | Program 'Exit Survey' Terhadap pelajar lepasan Diploma Pemasaran di Politeknik Kota  | 131     |
| 010 | Kilabalu bağı Sesi II 2022/2023  |         |
|     | Siti Syaheera Binti Azlam, Harziah Binti Ahmad Hanif   |         |
| 17  | Behavioral and Emotional Problems of Children Under Institutional Homes  | 137     |
|     | Dr. Cultorini Dinti Mat David, Jaidi Din, Abmad Murry 1940-rage Dinti Abmad Dabalan  |         |
| 10  | Dr Sunaini Binti Mat Daud, Jaidi Bin Anmad, Nurui Wazeera Binti Anmad Danaian  | 145     |
| 10  | Oleh Pengusaha Restoran Di Alam Mesra, Kota Kinabalu, Sabah  | 145     |
| 000 |  |         |
|     | Fredoline Galambun, Naisah Ujin, Adwina Vali @ Galus   |         |
| 19  | Analisis Faktor Pendorong Kerja Sambilan dalam Kalangan Pelajar di Kolej Komuniti<br>Kelana Jaya   | 152     |
|     | Salwa binti Anuar. Siti Munaliza binti Moharad   |         |
| 20  | Pembangunan dan Kebolehpercayaan Soal Selidik Maths Anxiety dalam Kalangan   | 161     |
| Lo  | Pelajar Engineering Mathematics 3 di Politeknik Kota Kinabalu, Sabah.  |         |
|     |  |         |
| 24  | Najwa Snanida Binti Monamad, NUr Alsyan binti Hammade, Norina binti Yadin<br>Stratagi Polojar Monghadapi Corok Dangajaran Parhaza Darinada Dangyarah | 169     |
| 21  | Siraleyi Felajar Menghadapi Corak Pengajaran Berbeza Daripada Pensyaran  | 801     |
|     | Azuyaria binti Mat Puzi  |         |
| 22  | Hibah Sebagai Instrumen Perancangan Harta Islam Dan Peranannya Kepada Golongan   | 175     |
|     | Kritikal   |         |
| 0   | Zubarvati binti Vusof  |         |
|     |  |         |



| 23  | Membentuk Kepimpinan dan Tingkah Laku Beretika Dalam Kalangan Pelajar Politeknik<br>Kuching Sarawak   | 186 |
|-----|---|-----|
|     | Shahidan Bin Shafie, Bibie Neo, Marcus Gee-Whai Kho   |     |
| 24  | Tahap Kesediaan Pensyarah Dalam Pembangunan Kerangka Berpandukan Data Bagi<br>Penilaian Kenaikan Pangkat di Kolej Komuniti Kota Marudu                        | 196 |
|     | Shazrin Neerwan bin Christopher, Liaw Yin Huat  |     |
| 25  | An Analysis of Code Switching and Code Mixing in Hospitality Jargon Used by Hotel<br>Operation Students of Politeknik Negeri Bali                             | 202 |
|     | Raden Roro Rieta Anggraheni, Indah Utami Chaerunnisah   |     |
| САТ | EGORY: EDUCATION  | 209 |
| 26  | Development and Validation of Peer Support for University Scale in China using<br>Exploratory and Confirmatory Factor Analysis                                | 210 |
|     | Cr. Dr. Ling Ying Leh, Zhang Kun  |     |
| 27  | The Utilization of Artificial Intelligence (AI) Tools in Learning and Assessment Among<br>Higher Learning Students in Kota Kinabalu Institutes                | 216 |
| 0   | Mohd Norhazli bin Jasman, Mohammad Aniq Bin Amdan, Freddy bin Pansoi  |     |
| 28  | The Impact of School Infrastructure on learning among Rural Areas in Sabah, Malaysia  | 224 |
| 0.0 | Mohamad Aidil Hazidi, Mohammad Aniq Bin Amdan, Naldo Janius   |     |
| 29  | Kesan Pengajaran Berbantukan Video Terhadap Pemahaman Pelajar Dalam Topik "Apply the Technique Of Integration"  | 231 |
|     | Razimah Binti Othman, Syed Muwayat Maqbul Bin Syed Ali, Rose Sharijan Binti Frey<br>Khan  |     |
| 30  | The Use Of AI-Tools Among the Educators In Unitar International University and Politeknik Kota Kinabalu   | 237 |
|     | Mohammad Aniq Bin Amdan, Mohd Norhazli Bin Jasman, Mohamad Aidil Hazidi Bin<br>Kasdiah  |     |
| 31  | Multi-Purpose Portable Bipod for Levelling and Traversing Work  | 247 |
|     | Jim J. Jinsin,, Joy Avenna Jully, Mercy Liana Lime, Ibun. Nur. Hanie Binti Hasipin  |     |
| 32  | Kesan Ketagihan Media Sosial Ke Atas Pencapaian Akademik: Kajian Perbandingan   | 253 |
| 209 | Antara Jantina  |     |
| Pag | Mohamad Hafizul Bin Mohd Zaid, Amirah Binti Othman  |     |
| 33  | Evaluating The Effectiveness of The Diploma In Quantity Surveying Program At Politeknik<br>Kota Kinabalu: Graduate Perspectives And Outcomes                  | 259 |
|     | Nor Aizan Binti Saari, Mohd Norhazli Bin Jasman, Freddy Bin Pansoi  |     |
| 34  | Evaluating Employer Satisfaction with Diploma in Quantity Surveying Graduates: A Survey on Technical Competence and Adaptability in The Construction Industry | 265 |
|     | Freddy Bin Pansoi, Mohd Norhazli Bin Jasman   |     |



| 35 | Hubungan Tahap Pencapaian Matematik SPM Terhadap Keputusan Matematik 1<br>Program Asasi Tvet di Politeknik Tuanku Syed Sirajuddin<br>Noor Laila Binti Asha'ari, Mohd Fuad Bin Omar                           | 273 |
|----|--|-----|
| 36 | Stres Dan Burnout Dalam Kalangan Pelajar Tahap Dan Kesannya Kepada Prestasi<br>Akademik<br>Heather Valarie Benilus, Razinah Sikul  | 280 |
| 37 | Evaluating Student Perspectives on Final Year Project (FYP) Idea Generation Programs<br>in IT Diploma Courses<br><i>Munirah Binti Abdullah, Aminah Bibi Binti Bawamohiddin, Nor Hanani Binti Mohd Yusoff</i> | 286 |
| 38 | Kajian Pencapaian <i>Program Educational Objective</i> (PEO) Alumni DHM Politeknik Kota<br>Kinabalu Tahun 2023   | 291 |
|    | Nur Azrı @ Anıs Binti Misban, Noor Intan Binti Tahir, Kamal Bin Ali  |     |
| 39 | Mathematics Anxiety and Its Relationship with the Student Achievement in Polytechnics<br>Siti Huzaifah binti Mohammad, Nor Hidayah binti Abdul Shukor, Aziana binti Che Aziz                                 | 300 |
| 40 | The Implications of 20% Minimum Passing Marks Policy Towards Academic Dishonesty<br>Among Students in Polytechnic Malaysia   | 310 |
| •  | Azrin Nur Farhana binti Abdullah Din @ Azman, Izyani binti Ahmad, Shahrom Nurrizam<br>bin Romli  |     |
| 41 | Kesahan Dan Kebolehpercayaan Instrumen Soal Selidik Kompetensi Pensyarah<br>Politeknik Dalam Pendidikan Stem<br>Falinah @ Fazlina Misol @ Nasip<br>Denis Andrew D. Lajium                                    | 321 |
| 42 | Investigating the Impact of LEW's Method on Student Motivation and Learning Outcomes<br>in Solving Systems of Equations<br>Dr. Lewis Liew Teo Piaw, Normala Binti Java, Noorul 'Ashikin Binti Md. Salih      | 331 |
| 43 | 'Teamwork Makes the Dream Work': A Collaborative Effort in Designing and Developing<br>Academic Writing Materials<br>Dr Nancy Chiuh @ Noemi, Jocelyn Lee Yee Vun, Delia Olaybal                              | 341 |
| 44 | Kit Pembelajaran ReTimer sebagai Media Pembelajaran Teknikal bagi Kursus<br>Programmable Logic Controller (PLC)<br>Muhammad Masri Bin Ahmad Tarmizi, Habshah Binti Abu Bakar, Siti Rohani Binti Abu          | 358 |
| 0  | Bakar  |     |
| 45 | The Impact of Training the Trainers (TTT) Programs on Enhancing Commitment to Teach<br>Digital Entrepreneurship Among Educators: Analyzing Readiness and Effectiveness                                       | 366 |
| 40 | Kusmaini Binti Kamiy, Kapian Binti Seman   | 074 |
| 46 | Rajian Persepsi Pelajar Ternadap Penggunaan Al Dalam Aktiviti Pembelajaran Dan<br>Pengajaran Dalam Program Sijil Teknologi Elektrik Di Kolej Komuniti  | 3/4 |
|    | Rosminah Binti Mustakim, Siti Huzaimah Binti Kamal Hamadi  |     |



| 47  | Effects of Kinesthetic Learning Approach using Moment Kit Board   | 382 |
|-----|---|-----|
|     | Fazaliana Rinti Zamzuri, Azlina Rinti Hassan, Puzita Rinti Md Vusoff  |     |
| 48  | The Implications Of Multilingualism On Cognitive Ability And Personality Elexibility  | 390 |
|     |   |     |
|     | Angeline Chong Suet Kee, Lee Pui Har  |     |
| 49  | Design, Development and Implementation of PLC Educational Trainer Kit as Teaching<br>and Learning Tool aid at Kolei Komuniti Beaufort | 400 |
|     | Shalizan Rin Kadir. Mohd Faroul Rafig Rin Romli, Ts. Nuratika Asvurah Abdullah  |     |
| 50  | Akta 174 Antara Kefahaman Dan Implikasinya Terhadap Pelajar Politeknik Dan Kolej  | 408 |
|     | Komuniti  |     |
|     | Mohd Fairus Bin Sulaiman, Norhadumanshah Lim, Imisamsor Bin Ismail  |     |
| 51  | Flipped Classroom As A Tool For Improving Engineering Mathematics Understanding In  | 416 |
| 01  | Repeater Students: A Qualitative Study  | 110 |
|     | Azlina Binti Hassan, Fazaliana Binti Zamzuri, Mohd Syukor Bin Che Omar  |     |
| САТ |   | 430 |
| CAI |   | 430 |
| 52  | Properties of Ceramic Tile Waste Aggregates for the Sustainable Aggregates  | 431 |
| 0.0 | Replacement in Concrete   |     |
| b.  | Ts Dr. Dalmon Bin Peter Manganii, Ts, Dr. Joan Wang Yee Juen  |     |
| 53  | Optimization of AISI 316LVM Austenitic Stainless Steel S Phase Layer for Medical  | 441 |
|     | Application   |     |
|     | Dr. Mohammad Firdaus hin Mohammad Azmi, Rafidah Laili hinti, Jaswadi  |     |
| 54  | Pengaruh Biomekanik Dan Psikofizikal Dalam Aktiviti Restoran Komersial Berkaitan  | 449 |
|     | Dengan Kejadian Tergelincir Dan Terjatuh  |     |
| 01  | Ts Dr. Sharifah Aznee Binti Said Ali @ Sved Ali, Nur Anita Hanim Bt Mohd Nizam Crin   |     |
| 0   | Raizizan Bin Rahim  |     |
| 55  | Utilizing Ceramic Tile Waste For The Production Of Eco-Tile Bricks: A Sustainable   | 458 |
|     | Construction Material   |     |
|     | Ts. Dr. Dalmon Bin Peter Manganii. Freddy Bin Pansoi  |     |
| 56  | Kesan Pengisaran Terhadap Mikrostruktur Komposit Poliester Bertetulang Gentian Kaca   | 465 |
| 0.0 | Muhammad Azam Bin Ngah, Haswa Sofilah Binti Ab Wahab  |     |
| 57  | Comparative Study Of The Optimum Water Content For Soil At Politeknik Kota Kinabalu   | 471 |
|     | Using The Atterberg Limit Method  |     |
|     | Dr. Rackford Bong   |     |
| 58  | Pembangunan Prototaip Mesin Pemotong Rumput Robotik   | 480 |
| 0   | Muhammad Masri Bin Ahmad Tarmizi, Azvan Bt Md Zahri, Rosliah Bt Ahu Bakar   |     |
|     |   | 400 |
| 59  | iviodelling And Control Of Chaotic Behaviour In A Nonlinear System  | 489 |
|     | Hartiny Abd Kahar, Fateme Bakhshande, Dirk Soeffker   |     |



| 60  | Utilizing Full Factorial Design (FFD) For Vehicle Chassis Optimization  | 496   |
|-----|---|-------|
|     | Hartiny Abd Kahar, Rizauddin Bin Ramli, Muhammad Faiz Bin Abdullah  |       |
| 61  | Accelerating Electric Vehicle Adoption: Key Factors And Barriers In Kota Kinabalu's<br>Transition To Sustainable Transportation<br>Associate Prof. Ir. Dr. Mohd Azizul Bin Ladin, Jazmina Bazla Binti Jun Iskandar, Lillian | 504   |
|     | Gungat, Jodin Makinda, Nazaruddin Abdul Taha , Hussin A. M. Yahia   |       |
| 62  | Liquefaction Mitigation Using Bored Pile Foundation   | 514   |
|     | I Made Wahyu Pramana, I Wayan Wiraga, I Wayan Arya, IGAG Suryanegara Dwipa RS   | 0 0 0 |
| САТ | EGORY AGRICULTURE & TECHNOLOGY  | 520   |
| 63  | A Review Of 100% Census Techniques In Oil Palm Plantations: Methods And<br>Applications   | 521   |
|     | Evy Michelle Emison, Dr. Alexius Korom, Hendry Joseph   |       |
|     | EGORY: APPLIED SCIENCE, COMPUTER SCIENCE, INFORMATION TECHNOLOGY, ORMATION SYSTEM MULTIMEDIA, IR 4.0  | 529   |
| 64  | Application Of lot For Smart Plant Monitoring And Employed Rainwater Harvesting   | 530   |
| 0.0 | Safinah Nawawi, Anding Nyuak, Nazrina Bakar   |       |
| 65  | Phytochemical Screening Of Farmed Edible Bird Nest Fortified With Propolis: Boosting<br>Economic Viability Through Scientific Research  | 541   |
|     | Emmai Anak Setina, Farnidah Binti Jasnie, Melinda Azzalea Tai Nyuk-Chin, Nurul<br>Hidayah Mat Nor, Nuraini Yusop  |       |
| 66  | PBM APP: A Comprehensive Solution for Efficient Workshop and Laboratory<br>Management in Civil and Electrical Departments   | 551   |
| 0   | Dr. Suzan Binti Impak, Ts.Benny Doimin@Mhd Azmi Mohd Zamlan   |       |
| 67  | Aplikasi Sistem Maklumat Geografi (GIS) Dalam Pembangunan Sistem Inventori Aset<br>Hidup Tumbuhan Bagi Politeknik Merlimau, Melaka (PMM)  | 556   |
|     | Norlydah Binti Othman Latpi, Ahmad Yusof Bin Sahdan, Azrina Binti Zolkifli  |       |
| САТ | EGORY: ENVIRONMENTAL SCIENCE & RENEWABLE ENERGY   | 577   |
| 68  | The Outcome of a Detailed Energy Audit at the Chancellery, University of Malaya (UM)<br>Rozaini Binti Rahi  | 578   |
| 69  | Water Volumes and pH Dependence in the Performance of Micro-Bacterial Voltaic Cells for Wastewater Treatment Application  | 588   |
|     | Dr. Rafidah Selaman, Dr. Mohd Faizal Achoi, Ts. Dr. Ajimi Jawan, Mohd Ruzaleh Nurdik, ,<br>Dr. Ajis Lepit   |       |

# PUBLICATION COMMITTEE KINABALU MULTIDISCIPLINARY ACADEMIC RESEARCH JOURNAL (KIMARA) VOLUME 3, NOVEMBER 2024

## PATRON

Md Noh bin Abdul Halim Director Politeknik Kota Kinabalu

## **ADVISOR I**

Abdul Razak bin Mohd Daim Deputy Academic Director Politeknik Kota Kinabalu

## **ADVISOR II**

Dr. Mohd Isa bin Jaffar Head of Unit Research, Innovation and Commercialization Unit

### PUBLICATION COORDINATOR OF RESEARCH, INNOVATION, AND COMMERCIALIZATION UNIT

Dr. Suzan binti Impak

#### SECRETARY

Georgina Alicia Ejus

## TREASURER

Kartini binti Kamarulzman

## **EDITORIAL BOARD**

Dr. Suzan binti Impak (Chief Editor) Tan Siew Ning Noor Intan bt Tahir Noraini binti Lunchin Mohd Farid bin Alias Nazrul Shazleen binti Nazri Kartini binti Kamarulzaman Nor Asyikeen binti Mohammad Amrin

# INFOGRAPHIC

Shairul bin Ludin

## REVIEWERS

Assoc. Prof. Ts. Dr. Leau Yu Beng Norhidayah Binti Ismail Dr. Ummi Kalsom Binti Noor Din Ts. Grisha Henry William Ts.Dr.Letchumanan Shanmugam

Assoc. Prof. Dr.Sylvia@Nabila Azwa Binti Ambad Dr. Mohd Isa Bin Jaffar Dr. Azrin Jalasi Dr. Dicky Wiwittan Bin Toto Ngadiman Dr Chanthirasekar A/L Karpan Dr Spencer Hedley Mogindol Assoc. Prof. Ir. Dr. Shahrul Niza Bin Mokhatar Dr. Rackford Bong Irene Tiurma Siagian Dr. Sitti Syamsiar Binti Muharram Ms. Marianne Estabella Fung Dr. Melvin Mojikon Dr Bayre Bin Suadik Cr. Dr. Ling Ying Leh Dr Geetha Nadesan Dr Mohammad Fahmi Bin Abdul Hamid Dr Nancy Chiuh @ Noemi Noorain Imbug Dr. Julia Binti Jantan Bibie Neo Dr. Fariza Bt Ahmad Mahyadin@Mahidin Gs. Ts. Dr. Hasnizam Ab Dulhamid Mazlina Binti Jamaludin Dr Sarmila Udin Dr Jain Yassin Jenny @ Janey Mosikon Dr Hylmee Bin Matahir Dr Azleen Binti Ilias Dr Sabariah Binti Abd Rahim Dr. Elinda Esa Dr Radziah Binti Mohd Dani Farnidah Binti Jasnie Rahida Abd Rahman Lindey Easter Apolonius Elavaraja Aruchunan Dr Abdul Aziz Lai Bin Mohd Fikri Lai Ts. Dr. Tshin Lip Vui Dayang Haryani Diana Binti Ag Damit Dg Kamisah Binti Ag Budin Dr. Rapheedah Musneh Sairah Saien Dr Dewi Tajuddin Nor Afifah Bt Yusof Assoc. Prof. Dr Sharifah Muzlia Binti Syed Mustafa Assoc. Prof. Dr Shahsuzan Zakaria Dr Rudy Bin Ansar Dr. Nor Afifah Bt Yusof Khairiah Mazdiah Binti Kalimin Dr Brahim Chekima

Dr. Oscar Dousin Phang Ing Assoc. Prof. Dr. Azaze @ Azizi Abdul Adis Dr Juliana Langgat Dr. Mohd Allif Anwar Bin Abu Bakar Dr Junaidah Zeno Dr. Ng Yen Phin Dr. Debbra Toria Nipo Dr Izyanti Awang Razli Associate Professor Dr. Zaiton Osman Dr. Dean Nelson Mojolou Dr Sylvester Mantihal Dr Faerozh Madli Dr. Mat Salleh @ Salleh Wahab Dr.Lilian Lee Shiau Gee Ts. Dr. Zinvi Fu Mr Yuzainy Janin Ts. Dr. Lim Hooi Peng Dr. Jakaria Dasan Dr. Bibianah Binti Thomas Dr. Nurul Kamalia Yusuf Siti Rosnita Sakarji Dr Maziidah Binti Ab Rahman Dr. Janet Ho Siew Ching Dr Pg Mohd Auza'e Pg Arshad Dr Malai Zeiti Sheikh Abdul Hamid Prof. Madya Dr Haji Mohd Shahnawi Jasmine Vivienne Andrew Dr Ng Yen Phin Dr Jaya Priah Kasinathan Muhamad Nova Indah Utami Chaerunnisah Gusti Nyoman Ayu Sukerti Raden Roro Rieta Anggraheni I Made Wahyu Pramana Dr. Dra. Ni Gst Nym Suci Murni, M.Par Dr. I Gede Mudana, M. Si Ni Nyoman Harini Puspita, S.T., M.Kom. Dr. I Ketut Budarma, M.Par., MMTHRL Dr. I Ketut Sutama, M.A. Dr. Mohammad Firdaus bin Mohammed Azmi Ts. Dr.Dalmon bin Peter Manganji Nur Angriani binti Nurja Dr. Ajis Lepit Dr. Mohd Allif Anwar bin Abu Bakar Dr. Rafidah binti Selaman



# **CATEGORY:**

# **EDUCATION**



## The Implications of 20% Minimum Passing Marks Policy Towards Academic Dishonesty Among Students in Polytechnic Malaysia

Azrin Nur Farhana Abdullah Din<sup>1\*</sup>, Izyani Ahmad<sup>2</sup>, Shahrom Nurrizam Romli<sup>3</sup> <sup>1,2,3</sup> Bahagian Peperiksaan dan Penilaian, Jabatan Pendidikan Politeknik dan Kolej Komuniti, W.P. Putrajaya, Malasia

\*Corresponding author: azrinnurfarhana@gmail.com

#### Abstract

Jabatan Pendidikan Politeknik dan Kolej Komuniti (JPPKK) offers a range of diploma programs designed to equip students with practical skills and knowledge for various industries. There are currently 36 Polytechnics in Malaysia, each offering a variety of diploma programs across 15 departments. Assessments in these programs include both continuous assessments and final examinations, which are critical for evaluating student performance and ensuring the attainment of learning outcomes. Bahagian Peperiksaan dan Penilaian (BPN) is a division under JPPKK, responsible for the management and implementation of examinations and assessments in Polytechnics Malaysia. To enhance academic standards and standardize assessment criteria, BPN implemented a policy requiring a minimum passing mark of 20% for final examinations. This policy has been in effect for all programmes in Polytechnics Malaysia starting from academic session SII:2022/2023. This investigation focuses on the impact of the policy on the occurrence of academic dishonesty during final examinations among diploma students in Polytechnic Malaysia, focusing on the periods before and after the enforcement of the policy. Data are taken from three academic sessions, before the enforcement (SI:2022/2023) and after the enforcement (SII:2022/2023 and SI:2023/2024). The departments involved, which have reported academic dishonesty, include JKE, JKM, JKA, JKPK, JP, JTMK, JPH, and JAB. The results indicate an initial increase in dishonesty cases during final examination across most departments following the policy implementation, with a subsequent decline in the second session. These findings suggest that students eventually adapted to the new standards over time, hence showing positive impact of the policy. However, academic dishonesty during final exams is not solely due to policy changes but also influenced by student attitudes and behaviors. This study provides valuable insights for policymakers and educators in developing strategies to foster academic integrity.

Keywords: - JPPKK, Polytechnic, Academic Dishonesty, Examination, Passing Marks

#### **1. Introduction**

Academic dishonesty is a common issue in educational institutions worldwide, and this collective act undermines the integrity of academic achievements. Jabatan Pendidikan Politeknik dan Kolej Komuniti (JPPKK) (Department of Polytechnic and Community College Education), which manage Malaysia's Polytechnic system, offers doper various diploma programs that lead to the attainment of knowledge and skills essential for pursuing career in different sectors. With a total of 36 Polytechnics countrywide, JPPKK plays a crucial role in overseeing Technical and Vocational Education and Training (TVET) in the country, ensuring they provide quality education and training in various technical and vocational fields.

Evaluation for student performance includes assessments such as continuous assessments and final examinations are critical to ensure the attainment of learning outcomes. Bahagian Peperiksaan dan Penilaian (BPN), a division under JPPKK, is responsible for the management and implementation of these examinations and assessments. To enhance academic standards and standardize assessment criteria, BPN implemented a policy requiring a minimum passing mark of 20% for final examinations, effective from the academic session SII:2022/2023. This policy was officially enforced through a letter from BPN dated February 18, 2023.

Despite efforts to enhance academic standards, the implementation of a minimum passing mark policy has raised concerns about its impact on academic dishonesty among students. This study examines the impacts of the 20% minimum passing marks policy on the incidence of academic dishonesty among diploma students during final examinations in Polytechnics Malaysia. This research intends to give insights into the effectiveness and unintentional consequences of the policy by investigating data from three academic sessions: before the enforcement (SII:2022/2023) and after the enforcement (SII:2022/2023 and SI:2023/2024).



#### 1.1 Problem Statement

The implementation of minimum passing mark policy of 20% for final examinations by Bahagian Peperiksaan dan Penilaian (BPN) in Polytechnic Malaysia, effective from the academic session SII:2022/2023, aims to enhance academic standard and standardize assessment criteria. However, this policy has raised concerns regarding its impact on academic dishonesty among students, specifically cheating cases during final exams. Preliminary observations indicate a notable increase in cheating cases during the initial academic session following the policy's enforcement. This raises critical questions about the policy's effectiveness in promoting academic integrity and its potential unintended consequences. Therefore, it is essential to investigate the implications of this policy on the occurrence of academic dishonesty and to understand students' readiness and motivations during final examinations. This study seeks to address these concerns by inspecting data from multiple academic sessions to provide understanding on the implications of the policy and to deal better with future strategies for curbing academic dishonesty at Polytechnic Malaysia.

#### 1.2 Objectives

The objectives of the study are:

- i. To identify the number of cheating cases before and after the enforcement of the 20% minimum passing marks policy.
- ii. to determine the differences in cheating cases between engineering and non-engineering department; and
- iii. to investigate students' readiness towards the enforcement and reason for cheating during final examination.

#### 1.3 Scope of study

This study involves data from academic departments across all Malaysian Polytechnics. 11 of 15 departments have reported at least one occurrence of cheating over the course of three academic sessions. This analysis includes eight departments, four of which are engineering departments and four of which are non-engineering. It focuses on departments with more than 1,000 diploma students taking final examinations, including both engineering and non-engineering departments. The departments involved are Jabatan Kejuruteraan Elektrik (JKE), Jabatan Kejuruteraan Awam (JKA), Jabatan Kejuruteraan Mekanikal (JKM), Jabatan Kejuruteraan Petrokimia (JKPK), Jabatan Perdagangan (JP), Jabatan Hospitaliti dan Pelancongan (JPH), Jabatan Teknologi Maklumat dan Komputer (JTMK), and Jabatan Agroteknologi & Bio-Industri (JAB).

This study adopted both quantitative and qualitative measures. The data was selected through purposive sampling involving all diploma students at Polytechnic from all over Malaysia. To ensure the authenticity of the data analysis findings, the investigation was carried out involving the student who had cheated during final examination.

#### 1.4 Significance of the Study

Understanding the impact of the 20% minimum passing marks policy on academic dishonesty is crucial for developing effective strategies to enhance assessment standards while maintaining academic integrity. This study provides essential strategic planning inputs for improving the quality of learning outcomes in polytechnic and community college programs. The findings offer valuable insights for policymakers, educators, and administrators to enhance assessment practices and foster a culture of honesty and inte grity among students.

#### **1.5** Conclusion

This paper is structured as follows: Section 2 reviews the literature on academic dishonesty, Section 3 describes the methodology, Section 4 presents the results and analysis, Section 5 discusses the findings and Section 6 conclude the implications and future recommendations.

#### 2. Literature Review

Cheating during exams has become one of the unethical practices at higher education institutions across the world. This literature review aims to investigate the contributing factors of academic dishonesty, the impact of assessment policies and the factors that limit student cheating.

A number of studies identified the main reasons for students participating in cheating. Salehi and Gholampour (2021) have stated that lack of preparation, ineffectiveness of learning material, and desire for



higher marks were considered as primary contributing factors to cheating behaviours of students. Additionally, the causes of stress and other pressures from the external environment are also considered an important reason that leads to academic dishonesty (Anderman et al., 2007).

According to research, exam design is also a factor that contributes to cheating behaviour. Hammoudi and Benzerroug (2021) reported that 90 per cent of students agreed that exams are mainly testing memory rather than comprehension are the main reason of cheating. Additionally, the study implies that educators could unintentionally contribute to the problem by failing to accommodate students' diverse learning styles and intelligences in the design of exam assessment. This might lead to exam anxiety, the survival instinct to cheat might kick in, and it might be done without conscious intent (Hammoudi & Benzerroug, 2021).

Recent studies have provided valuable insights into the factors contributing to academic dishonesty among students. Benson and Enstroem (2023) propose a model for preventing academic dishonesty whereby they argue that well-designed academic integrity modules can reduce cheating. According to their findings, such approaches can reduce cheating by up to 78 per cent when the intervention provides a comprehensive academic dishonesty intervention. Researchers Baran and Jonason (2020) investigated links between academic dishonesty among university students and psychiatric measures like psychopathy, motivation and self-efficacy. Overall, they wrote, 'our findings suggest that cheating is more common among students who are higher in psychopathy and lower in self-efficacy.' Wang and Zhang (2022) propose that there are also links between attitudes relating to rules regarding academic dishonesty. They mention that their research suggests that personality traits such as low conscientiousness can increase the likelihood of cheating. Söylemez (2023) discusses the impact of social factors, achievement motivation, and institutional policies on academic dishonesty, emphasizing the need for supportive environments to reduce cheating.

Cheating behavior in academic settings is a complex phenomenon influenced by various individual, social, and contextual factors. A new study by Allen and Kizilcec (2023) emphasises the importance of a holistic approach to academic integrity by classifying a variety of tools and tactics for cheating detection and prevention. This approach incorporates technological tools, policy changes, and educational initiatives to create a comprehensive framework for reducing academic misconduct. The study highlights that academic cheating is often driven by the actions of their peers and the broader educational environment, and that this becomes an important frame for understanding and addressing individuals' decisions to cheat. The study utilises game theory to predict the group-level effects on students and offers faculty practical guidelines for identifying institutional barriers to curbing cheating. It incorporates the best concepts from pedagogy, conflict management and organisational psychology in recommending a broad range of practical strategies for lowering the students' opportunity, motivation and rationalization to cheat. These include building trusting relationships between students and faculty, developing assessments that reduce the student's temptation to cheat, and cultivating an academic culture that values integrity. Additionally, policy changes that articulate standards of academic integrity and consequences for breach of the code are essential. Educational programs that promote academic integrity, such as training sessions and seminars, help to create a culture that discourages dishonest activity. By combining these components, the systemic model offers an impactful success in preventing academic dishonesty and cultivating academic integrity in educational institutions.

A study on academic dishonesty and academic adjustment among students found that while the number of reported cases of academic integrity violations has increased, there is also a trend towards a better understanding and reduced occurrence of severe forms of plagiarism. Clinciu, Cazan, and Ives (2021) emphasize the need for continuous education on academic integrity to help students adjust to academic expectations and reduce dishonest behaviors.

The literature on academic dishonesty highlights the complexity of the matter and the variety of variables that influence cheating behaviors. Effective assessment policies, coupled with supportive measures for students, are essential for fostering an environment of integrity in higher education. Addressing the root causes of cheating, which include exam anxiety, lack of preparation, and perceived unfairness, can help reduce the incidence of academic dishonesty and promote a culture of honesty and integrity among students. These studies offer a comprehensive viewpoint on the issue of academic dishonesty, highlighting cultural, psychological, and systemic factors that contribute to this behavior.

#### 3. Methodology

This paper investigates the effect of this policy on the occurrence of academic dishonesty, specifically on cheating incidents among diploma students during final exams. This study adopted both quantitative and qualitative measures. Three academic sessions were involved in this study, before the policy enforcement (SI: 2022/2023) and after the enforcement (SII: 2022/2023 and SI: 2023/2024).

#### KINABALU MULTIDISCIPLINARY ACADEMIC RESEARCH JOURNAL VOLUME 3, DECEMBER 2024 eISSN: 2976-3606 POLITEKNIK KOTA KINABALU



Data were collected from academic departments from 36 Malaysian Polytechnics. 11 from 15 departments has reported at least one occurrence of cheating over the course of three academic sessions. Only departments with more than 1,000 students taking the final exam were considered in this study. Eight academic departments were involved, encompassing both engineering and non-engineering fields. The number of cheating cases that occurred during final exams in each departments involved was collected to analyze the trend in the number of cheating cases and to identify the impact of the policy.

This investigation includes eight (8) departments, four of which are engineering departments and four of which are non-engineering. The departments that are involved are: Jabatan Kejuruteraan Elektrik (JKE), Jabatan Kejuruteraan Awam (JKA), Jabatan Kejuruteraan Mekanikal (JKM), Jabatan Kejuruteraan Petrokimia (JKPK), Jabatan Perdagangan (JP), Jabatan Hospitaliti dan Pelancongan (JPH), Jabatan Teknologi Maklumat dan Komputer (JTMK), and Jabatan Agroteknologi & Bio-Industri (JAB).

The qualitative data were collected by interviews with students who were caught cheating during final exams. These samples included students from all departments, including engineering and non-engineering. The investigation was carried out to identify reasons why students cheat during examinations. Questions concerning the purpose and reason of cheating during exams were posed to the research participants. The interview questions included: 'What made you engage in cheating activities during examinations?' and 'What motivates you to go above and beyond to pass the subject?'

The interviews were recorded and transcribed verbatim. Thematic analysis was used to analyze the data, with codes assigned to significant statements and grouped into broader themes. The transcripts were read multiple times to identify recurring themes. Codes were assigned to significant statements, which were then grouped into broader themes.

Ensuring the confidentiality of participants is paramount in this study. All data collected from the interviews were anonymized to protect the identity of the students. Each participant was assigned a unique code, and no personal identifiers were used in the analysis or reporting of the data. Additionally, any published results were presented in aggregate form to prevent the identification of individual participants. Informed consent was obtained from all participants prior to the interviews.

#### 4. Findings and Analysis

The data on cheating cases during the final examination, both before the enforcement (SI:2022/2023) and after the enforcement (SII:2022/2023 and SI:2023/2024), was descriptively analysed to summarize and aggregate the collected information. Following this, a comparison of the number of cheating cases between each department was presented by session.

| Department | Before enforcement | After enfo    | orcement     |
|------------|--------------------|---------------|--------------|
| Department | SI:2022/2023       | SII:2022/2023 | SI:2023/2024 |
| JKA        | 7                  | 9             | 3            |
| JKE        | 14                 | 17            | 14           |
| JKM        | 11                 | 15            | 10           |
| ЈКРК       | 0                  | 2             | 0            |
| JP         | 20                 | 44            | 32           |
| JTMK       | 3                  | 7             | 8            |
| JPH        | 1                  | 6             | 0            |
| JAB        | 2                  | 9             | 10           |

Table 1: Number of Cheating Cases Before and After the Enforcement





Figure 1: Number of Cheating Cases Before and After the Enforcement

Table 1 depicted the number of cheating cases during final examination before and after the enforcement of the 20% final examination passing marks policy. The number of cheating cases during final examination after the policy enforcement in SII:2022/2023 shows a significant increase compared to the previous session (SI:2022/2023) as illustrated in Figure 1. Cheating cases in JKA increased from 7 to 9 cases by 28.6%, cases in JKE increased from 14 to 17 cases (21.4%), while JKM showed an increase from 11 to 15 cases (36.4%). Cheating cases in JP rose by 120%, from 20 to 44 cases, JTMK increased from 3 to 7 cases (133%), and JAB showed a 350% increase, from 2 to 9 cases. JKPK reported 2 new cheating cases after the passing marks enforcement. Among all eight departments, JPH showed the highest increase in cheating cases with a 500% rise, from 1 to 6 cases.

Cheating cases during the final examination in the following session (SI:2023/2024), which is the second semester after the enforcement, were analysed and compared to the previous session (SII:2022/2023). The findings show a decline in the number of cheating cases for all departments except JTMK and JAB, both of which show an increase of 1 case each. According to the collected data, JPH and JKPK reported zero cases in SI:2023/2024. JKA shows the greatest reduction in cheating cases, with a 66.7% reduction from 9 to 3 cases. JKE decreased from 17 to 14 cases (17.7%), JKM decreased by 5 cases (33.3%), and JP decreased by 12 cases (27.3%).

To determine if there is a significant difference in the cheating cases, a t-test analysis was conducted. A Paired Samples T-Test was used in this study's analysis. The result for the Paired Samples T-Test for the session before (SI:2022/2023) and after (SII:2022/2023) the enforcement is shown in Table 2. The mean number of cheating cases increased by 6.375 from SI:2022/2023 to SII:2022/2023. Since the p-value (0.043) is less than 0.05, this result is statistically significant. This indicates that there is a significant difference in the number of cheating cases before and after the enforcement of the policy.

| Table 2: Paired-Samples T-test result for session before (SI:2022/2023) and after (SII:2022/2023) the enforcement |                                      |                  |             |                 |  |
|---|--------------------------------------|------------------|-------------|-----------------|--|
| Mea   | an o o o                             |                  |             |                 |  |
| Before enforcement<br>(SI:2022/2023)  | After enforcement<br>(SII:2022/2023) | Mean differences | t-statistic | Significance, p |  |
| 7.25  | 13.63                                | -6.375           | -2.467      | 0.043           |  |

The result for the Paired Samples T-Test for two sessions after the policy enforcement is shown in Table 3. The mean number of cheating cases decreased by 4.00 from SII:2022/2023 to SI:2023/2024. Since the p - value (0.033) is less than 0.05, this result is also statistically significant. This indicates that there is a significant difference in the number of cheating cases between the two sessions after the enforcement of the policy. There is a significant reduction in cheating cases between the two sessions after the policy enforcement, suggesting that the policy's impact continued to be effective over time.



| Table 3                              | 3: Paired-Samples T-test rest<br>an | sult for two sessions after t | he policy enforcen | nent            |
|--------------------------------------|-------------------------------------|-------------------------------|--------------------|-----------------|
| After enforcement<br>(SII:2022/2023) | After enforcement<br>(SI:2023/2024) | Mean differences              | t-statistic        | Significance, p |
| 13.63                                | 9.625                               | 4.00                          | 2.646              | 0.033           |

# 4.1 Analysis on Number of Cheating Cases Before and After the Enforcement among Engineering Departments

Table 4 displays the number of cheating cases before and after the enforcement of the 20% minimum passing mark for final examinations among engineering departments in Polytechnics Malaysia. On average, the cheating cases reported before the enforcement (SI: 2022/2023) are 40.7% lower than after the policy enforcement, increasing from 32 cases to 45 cases. Conversely, the cases decreased by 40% (from 45 cases to 27 cases) in the subsequent session (SI: 2023/2024). Among these engineering departments, JKE shows the highest average number of cheating cases reported during final examinations per session with 15 cases, followed by JKM with an average of 12 cases, JKA with 6 cases, and JKPK with 1 case as illustrated in Figure 2.

| Table 4: Number of Cheating | Cases Before and After the | Enforcement among | <b>Engineering Departments</b> |
|-----------------------------|----------------------------|-------------------|--------------------------------|
|                             |                            |                   |                                |

| Department | Before enforcement | After enfore  | cement       |
|------------|--------------------|---------------|--------------|
| Department | SI:2022/2023       | SII:2022/2023 | SI:2023/2024 |
| JKA        | 7                  | 9             | 3            |
| JKE        | 14                 | 17            | 14           |
| JKM        | 11                 | 15            | 10           |
| ЈКРК       | 0                  | 2             | 0            |



As illustrated in Figure 3, the number of cheating cases is significantly influenced by the total number of students taking final exams. Jabatan Kejuruteraan Elektrik (JKE) department, which has the highest number of students, also reported highest number of cheating cases. This correlation suggests that the large student population contributes to the higher incidence of academic dishonesty, as a larger student body increases the likelihood of encountering individuals who may resort to cheating. Conversely, the Jabatan Kejuruteraan





#### Petrokimia (JKPK) department, despite having a lower number of students, shows fewer cheating cases.



Figure 3: Number of Cheating Cases Before and After the Enforcement among Engineering Departments

# 4.2 Analysis on Number of Cheating Cases Before and After the Enforcement among Non-Engineering Departments

Table 5 displays the number of cheating cases before and after the enforcement of the 20% minimum passing mark for final examinations among non-engineering departments in Polytechnic Malaysia. On average, the cheating cases reported before the enforcement (SI: 2022/2023) are 157.69% lower than after the enforcement (SII: 2022/2023), increasing from 26 cases to 67 cases. Conversely, the cases decreased by 25.37% (from 67 cases to 50 cases) in the subsequent session (SI: 2023/2024). Among these non-engineering departments, JP shows the highest average number of cheating cases reported during final examinations with 32 cases, followed by JAB with an average of 7 cases, JTMK with 6 cases, and JPH with 2 cases as illustrated in Figure 4.

| e          |                    | 0 1           |              |
|------------|--------------------|---------------|--------------|
| Donortmont | Before enforcement | After enfor   | cement       |
| Department | SI:2022/2023       | SII:2022/2023 | SI:2023/2024 |
| JP         | 20                 | 44            | 32           |
| JTMK       | 3                  | 7             | 8            |
| JPH        | 1                  | 6             | 0            |
| JAB        | 2                  | 9             | 10           |

Table 5: Number of Cheating Cases Before and After the Enforcement among Non-Engineering Departments

KINABALU MULTIDISCIPLINARY ACADEMIC RESEARCH JOURNAL VOLUME 3, DECEMBER 2024 eISSN: 2976-3606 POLITEKNIK KOTA KINABALU





Figure 4: Number of Cheating Cases Before and After the Enforcement among Non-Engineering Departments

As illustrated in Figure 5, the number of cheating cases is shown to be significantly influenced by the number of students taking final exams. The Jabatan Perdagangan (JP) department, which has the highest number of students, also reports the highest number of cheating cases. This correlation suggests that the sheer volume of students contributes to the higher incidence of academic dishonesty, as a larger student body increases the likelihood of encountering individuals who may resort to cheating. Conversely, the Jabatan Agroteknologi & Bio-Industri (JAB) department, despite having a lower number of students, shows a relatively high number of cheating cases. This anomaly indicates that while the number of students is a critical factor, it is essential to consider other underlying causes such as departmental culture, exam difficulty, or specific student challenges that contribute to in influencing cheating behavior within different departments. Therefore, it is essential to consider both the student population size and other underlying causes when addressing academic dishonesty.



#### 4.3 Analysis on students' interviews and direct observations

The purpose of this analysis is to explore the reasons behind students' cheating behavior during exams. The qualitative data were collected from all involved institutions, including direct observations and face -to- face interviews with students who are caught cheating to gain insights into their motivations. From the



observations, students have been using various methods to cheat during exams, such as carrying notes and hiding them under clothes or beneath the exam script, concealing notes under thighs or using mobile phones hidden in the toilet. The information obtained from these incidents shows a consistent pattern in the methods used across all institutions.

Based on the interviews, students have expressed several reasons for their cheating behavior. Three main themes emerged from the interviews which are fear of failing, lack of confidence, and exam anxiety. Many students expressed fear of not passing the course due to new passing marks requirement as a primary reason for cheating. One student stated, "I cheat because I'm afraid I won't pass the course." Additionally, students with low coursework marks often lacked confidence in their ability to pass the final exam. Another student mentioned, "I don't think I can pass without cheating." High levels of exam anxiety and low expectations of success were also a significant factor. A student shared, "The pressure of the final exam makes me so anxious that I feel I have to cheat."

Other than that, special students whose classified as slow learners also mentioned that they face additional pressure to meet the passing criteria for the final exam. This pressure leads them to cheat as a coping mechanism. The fear of failing was a significant factor driving students to cheat, indicating a need for better support systems.

#### 5. Discussion

The results of this study show that the implementation of the 20% minimum passing marks policy had a significant impact on academic dishonesty among diploma students in Polytechnics Malaysia. The data revealed a significant increase in cheating cases during the first academic session after the policy was implemented (SII:2022/2023) compared to the previous session (SI:2022/2023). This initial spike suggests that the policy may have increased pressure on students, leading to more instances of academic dishonesty. The initial increase in cheating cases suggests that students may experience heightened anxiety and pressure when faced with stricter assessment criteria. This aligns with previous research indicating that exam anxiety and fear of failure are major contributors to academic dishonesty (Salehi & Gholampour, 2021; Anderman et al., 2007).

Conversely, there was an overall decrease in incidents of dishonesty in most departments in the following session (SI:2023/2024), indicating that students may have adapted to the new policy over time. This adaptation could be attributed to increased familiarity with the policy and improved coping mechanisms, such as better study habits and time management skills. This finding aligns with the literature on students developing better coping mechanisms and study habits (Hammoudi & Benzerroug, 2021). The decrease in cheating incidents suggests that while the initial implementation of stricter policies may cause a spike in academic dishonesty, students can adapt and develop strategies to cope with the increased pressure.

The investigation also revealed that non-engineering departments, such as JP and JTMK, experienced a higher increase in cheating cases compared to engineering departments like JKE and JKM. This implies that students in non-engineering fields may have faced more challenges adapting to the new policy, likely because non-engineering fields have more comprehensive final exams. The higher increase in cheating cases in non - engineering departments suggests that the nature of assessments in these fields may exacerbate the pressure on students, leading to more instances of academic dishonesty. This aligns with previous research indicating that different academic environments and departmental cultures can influence cheating behavior (Allen & Kizilcec, 2023).

Qualitative data from student interviews indicated that the major reasons for cheating are fear of failing, lack of confidence, and exam anxiety. The qualitative findings align with previous studies by Baran and Jonason (2020) and Wang and Zhang (2022), highlighting low self-confidence as key factors contributing to academic dishonesty. The consistency between the qualitative data and previous studies underscores the importance of addressing psychological factors such as self-confidence and exam anxiety to reduce academic dishonesty.

Besides that, special cases involving slow learners showed that additional pressure to meet the passing criteria led to cheating. The persistent pressure on slow learners highlights the need for targeted support for this group to ensure they can meet the passing criteria without resorting to cheating. Söylemez (2023) emphasizes the need for supportive environments to reduce cheating, including addressing social factors and achievement motivation. Educational institutions could provide peer mentoring for stu dents and confidence- building workshops to help students develop a positive view of themselves as students, resulting in less of a need for cheating behaviour. Benson and Enstroem (2023) propose that well-designed academic integrity modules can significantly reduce cheating.

#### KINABALU MULTIDISCIPLINARY ACADEMIC RESEARCH JOURNAL VOLUME 3, DECEMBER 2024 eISSN: 2976-3606 POLITEKNIK KOTA KINABALU



#### 6. Conclusion

This study explored the impact of the 20% minimum passing marks policy on academic dishonesty among diploma students in Polytechnic Malaysia. The analysis covered three academic sessions: before the enforcement (SI:2022/2023) and after the enforcement (SII:2022/2023 and SI:2023/2024). The findings showed a significant increase in cheating cases during the first session after the policy was implement ed. However, there was a general decline in dishonesty cases in the following session, indicating an initial adjustment period followed by adaptation to the new policy.

The initial rise in academic dishonesty suggests that students may feel more anxious and pressured when faced with stricter assessment criteria. This highlights the need for comprehensive support systems to help students adapt to new policies. Educational institutions should consider implementing additional measures such as academic counseling, workshops on study skills, and clear communication about the importance of academic integrity.

While the policy initially led to an increase in academic dishonesty, the subsequent decline in cheating cases suggests that students eventually adapted to the new standards. This adaptation indicates that the policy has a positive impact over time, as students learn to cope with the new requirements. It is important to note that academic dishonesty during final exams is not solely due to policy changes but also influenced by student attitudes and behaviors. Continuous efforts to support students and promote a culture of honesty and integrity are essential for the sustained success of such policies.

Future research should explore the long-term effects of the 20% minimum passing marks policy on academic dishonesty and student performance. It would be beneficial to conduct qualitative studies to gain deeper insights into students' perceptions and experiences regarding the policy. Additionally, analyzing students' performance before and after the policy change would also offer valuable insights into the policy's impact on academic performance and integrity.

#### Acknowledgment

We extend our heartfelt gratitude to the staff at Bahagian Peperiksaan dan Penilaian (BPN) and the examination unit officers across all 36 Malaysian Polytechnics. Your unwavering commitment and diligent efforts in collecting data have been the cornerstone of this study's success. Your dedication and hard work ensured the integrity and accuracy of the data, making this research possible. We are profoundly grateful for your invaluable contributions and cooperation.

#### References

- Allen, S. E., & Kizilcec, R. F. (2023). A systemic model of academic (mis)conduct to curb cheating in higher education. *Higher Education*, 87, 1529-1549. https://doi.org/10.1007/s10734-023-01077-x
- Anderman, E. M., & Murdock, T. B. (2007). The psychology of academic cheating. In E. M. Anderman & T.
  B. Murdock (Eds.), *Psychology of academic cheating, Academic Press*, 1–5. Elsevier Academic Press. https://doi.org/10.1016/B978-012372541-7/50002-4
- Baran, L., & Jonason, P. K. (2020). Academic dishonesty among university students: The roles of psychopathy, motivation, and self-efficacy. *PLoS One*, *15(8)*, e0238141. https://doi.org/10.1371/journal.pone.0238141
- Benson, L., & Enstroem, R. (2023). A model for preventing academic misconduct: Evidence from a large scale intervention. *International Journal for Educational Integrity*, *19*(25). https://doi.org/10.1007/s40979-023-00147-y
- Clinciu, A. I., Cazan, A.-M., & Ives, B. (2021). Academic dishonesty and academic adjustment among the students at university level: An exploratory study. *SAGE Open*, *11*(2). https://doi.org/10.1177/21582440211021839
- Hammoudi, A., & Benzerroug, S. (2021). Cheating on exams: Dishonest or justifiable behaviour?. *International Journal of English Language Studies (IJELS), 3(4)*, 79-88. https://doi.org/10.32996/ijels.2021.3.3.7



- Salehi, M., & Gholampour, S. (2021). Cheating on exams: Investigating reasons, attitudes, and the role of demographic variables. SAGE Open, 11(2). https://doi.org/10.1177/21582440211021839
- Söylemez, N. H. (2023). A problem in higher education: Academic dishonesty tendency. *Bulletin of Education and Research*, 45(1), 23-46. Retrieved from https://files.eric.ed.gov/fulltext/EJ1382211.pdf

Wang, H., Zhang, Y. (2022). The effects of personality traits and attitudes towards the rule on academic dishonesty among university students. *Scientific Reports* 12, 14181. https://doi.org/10.1038/s41598-022-18394-3

