



## PERSONAL DETAILS

**Name** : Johari bin Surif  
**Gender** : Male  
**Date of Birth/Age** : 29 March 1976  
**Nationality** : Malaysian  
**Marital Status** : Married  
**Permanent Address** : No. 9, Jalan Pulau Bestari 12, Bandar Baru Kangkar Pulai, 81300 Johor Bahru  
**Correspondent Address** : Dept. of Education Science, Mathematics & Multimedia Creative, School of Education, Faculty of Social Science & Humanities, Universiti Teknologi Malaysia, 81310 Johor Bahru, Johor  
**Tel** : (Mobile):013-7229759 (Office):07-5537556  
**E-mail** : johari\_surif@utm.my, johari\_surif@yahoo.com  
**Website** : educ.utm.my/johari\_surif/  
**ID Staff** : 9039  
**Expertise** : Chemistry Education; Science Education; Teaching and Learning  
**H-Index (WOS)** : 2  
**H-Index (SCOPUS)** : 7  
**H-Index (G. Scholar)** : 16  
**H-Index (Researchgate)** : 10

## ACADEMIC QUALIFICATIONS

| NO | LEVEL OF EDUCATION | COURSE  | UNIVERSITY   | STARTING DATE | ENDING DATE |
|----|--------------------|---|--|---------------|-------------|
| 1. | Ph.D.              | Chemistry Education                             | Universiti Teknologi Malaysia, Skudai, Johor, Malaysia | 2005          | 2009        |
| 2. | M.Sc.              | Chemistry Education                             | Universiti Teknologi Malaysia, Skudai, Johor, Malaysia | 2002          | 2004        |
| 3. | B.Sc.              | Honors in Environment Science (Major Chemistry) | Universiti Kebangsaan Malaysia, Bangi,                 | 1995          | 1998        |

## AWARD AND HONORS RECEIVED

| Summary                     |    |
|-----------------------------|----|
| International Awards/Honors | 11 |
| National Awards/Honors      | 5  |
| UTM Awards/Honors           | 17 |
| Faculty Awards/Honors       | 2  |

| NO | AWARD   | LEVEL<br>(FACULTY /UTM<br>/NATIONAL<br>/INTERNATIONAL) | YEAR        |
|----|---|--|-------------|
| 1  | Best Paper Award in recognition of "AR Module for Learning Changes of Matter in Chemistry" on 2nd International Conference on Creative and Innovative Technology in Education                       | INTERNATIONAL  | 2021        |
| 2  | Silver Award In NALI 2021 Exhibition & Competition- The Innovation Procar Module As Media In Chemistry Learning   | INTERNATIONAL  | 2021        |
| 3  | Silver Award In NALI 2019 Exhibition & Competition - Modul Q STEM Berpotensi Dalam Menghasilkan Pelajar Bersahsiah Mulia Dan Berpemikiran Kritikal  | INTERNATIONAL  | 2019        |
| 4  | Anugerah Kertas Kerja Terbaik 3rd International Educational Postgraduate Seminar 2016   | INTERNATIONAL  | 2016        |
| 5  | Bronze Medal Award in International Innovation in Teaching and Learning 2016  | INTERNATIONAL  | 2016        |
| 6  | Bronze Medal Award In International University Carnival on E-Learning (IUCEL 2016) - 'E-Project: Educational Research Study Management System'  | INTERNATIONAL  | 2016        |
| 7  | Gold Medal Award in The International Conference and Exposition on Inventions by Institutions of Higher Learning (PENCIPTA) - 'Enhancing Students Higher Order Thinking Skills (Hots) Through Mygsp | INTERNATIONAL  | 2015        |
| 8  | Silver Medal Award in International Invention, Innovation & Design Competition (IID Johor 2015) - 'Chemmol4: Pengembaraan Bersama Haikal'   | INTERNATIONAL  | 2015        |
| 9  | Bronze Medal Award in Konvensyen Antarabangsa Jiwa Pendidik - 'Chemmol: Pengembaraan Haikal'  | INTERNATIONAL  | 2014        |
| 10 | Gold Medal Award in Konvensyen Antarabangsa Jiwa Pendidik   | INTERNATIONAL  | 2014        |
| 11 | Silver Medal Award in Konvensyen Antarabangsa Jiwa Pendidik - 'Myreflection Mobile Apps'  | INTERNATIONAL  | 2014        |
| 12 | Gold Medal Award in STEM-Mate Competition   | NATIONAL   | 2019        |
| 13 | Silver Medal Award in New Academic Learning Innovation (NALI 2019) Exhibition and Competition   | NATIONAL   | 2019        |
| 14 | Gold Award in National University Carnival on E-Learning (NUCEL 2016) 'Myreflection Mobile Apps'  | NATIONAL   | 2016        |
| 15 | Silver Award In National University Carnival on E-Learning (NUCEL 2016) 'I-Bonding: Strengthen Students Understanding In Chemistry'   | NATIONAL   | 2016        |
| 16 | Geology Award, National University Of Malaysia  | NATIONAL   | 1995 - 1999 |
| 17 | AWARD EXCELLENCE IN MPPK1353-01 PENYELESAIAN MASALAH DALAM KIMIA (PROBLEMS SOLVING IN CHEMISTRY) in recognition of valuable contribution ACTIVE BLENDED LEARNING COURSE                             | UTM  | 2021        |
| 18 | MHPK1113-01 MODEL PENGAJARAN DAN PEMBELAJARAN DALAM KIMIA (MODELS IN TEACHING AND LEARNING CHEMISTRY) in recognition of valuable contribution ACTIVE BLENDED LEARNING COURSE                        | UTM  | 2021        |
| 19 | Active Blended Learning   | UTM  | 2020        |
| 20 | Anugerah Citra Karisma 2020   | UTM  | 2020        |
| 21 | Anugerah Perkhidmatan Cemerlang Tahun 2019  | UTM  | 2019        |
| 22 | Award Excellence In Design and Implementation Process of Chemistry Curriculum   | UTM  | 2018        |
| 23 | Award Excellence In Models Of Teaching And Learning In Chemistry  | UTM  | 2018        |
| 24 | Innovative Practice In Education And Industry 2016  | UTM  | 2016        |
| 25 | Silver Medal Award In Innovative Practices In Education And Industry (I-PEINX 2016)   | UTM  | 2016        |
| 26 | Anugerah Penerbitan UTM   | UTM  | 2015        |
| 27 | Anugerah Citra Karisma UTM  | UTM  | 2020        |

|    |  |         |             |
|----|--|---------|-------------|
| 28 | Gold Medal Award in Research, Higher Education Expo (I-Phex 2014) 'Mygsp To Enhance Higher Order Thinking Skills'                                    | UTM     | 2014        |
| 29 | Gold Medal Award in Research, Higher Education Expo (I-Phex 2014) 'Service Learning to Strengthen Students Attitude Towards Science and Mathematics' | UTM     | 2014        |
| 30 | Anugerah Perkhidmatan Cemerlang Tahun 2013   | UTM     | 2013        |
| 31 | SLAB Fund, Universiti Teknologi Malaysia   | UTM     | 2009        |
| 32 | SLAB Fund, Universiti Teknologi Malaysia   | UTM     | 2006 - 2008 |
| 33 | SLAB Fund, Universiti Teknologi Malaysia   | UTM     | 2002 - 2004 |
| 34 | Anugerah Khas Personaliti dan Individu. Majlis Eureka Odyssey! The Celebration of You.   | FAKULTI | 2021        |
| 35 | Anugerah Khas Inovasi, Jabatan Timbalan Naib Canselor (Penyelidikan dan Inovasi)   | FAKULTI | 2021        |

## WORKING EXPERIENCE

| NO | POSITION           | STARTING DATE | ENDING DATE | DEPARTMENT/ORGANISATION  |
|----|--------------------|---------------|-------------|--|
| 1. | Director           | 1/9/2022      | 31/8/2024   | Centre for Community and Industry Network (CCIN), Department of Deputy Vice Chancellor (Research & Innovation) |
| 2. | Director           | 1/9/2020      | 31/8/2022   | Centre for Community and Industry Network (CCIN), Department of Deputy Vice Chancellor (Research & Innovation) |
| 3. | Director           | 1/9/2017      | 31/8/2020   | Centre for Community and Industry Network (CCIN), Department of Deputy Vice Chancellor (Research & Innovation) |
| 4. | Associate Profesor | 12/02/2017    | Now         | School of Education, Faculty of Social Sciences & Humanities, UTM  |
| 5. | Senior Lecturer    | 2011          | 2017        | Faculty of Education, UTM  |
| 6. | Lecturer           | 2005          | 2011        | Faculty of Education, UTM  |
| 7. | Tutor              | 2002          | 2005        | Faculty of Education, UTM  |
| 8. | Lecturer           | 1998          | 2002        | Kolej Islam Johor  |

## PROFESSIONAL MEMBERSHIP / QUALIFICATIONS / RECOGNITION

| Summary  |   |
|--|---|
| International Professional Membership / Qualifications / Recognition | 6 |
| National Professional Membership / Qualifications / Recognition      | 6 |

| NO | NAME OF PROFESIONAL MEMBERSHIP  | LEVEL (FACULTY /UTM /NATIONAL /INTERNATIONAL) | ROLE      | YEAR        |
|----|---|---|-----------|-------------|
| 1. | World Universities Association for Community Development (WUACD)        | INTERNATIONAL                                 | Committee | 2020 – Now  |
| 2. | Asia-Pacific University – Community Engagement Network (APUCEN)         | INTERNATIONAL                                 | Committee | 2018 – Now  |
| 3. | National Science Teaching Assosiation (NSTA)                            | INTERNATIONAL                                 | Member    | 2013 – Now  |
| 4. | Institute Electrical and Electronic Engineering (IEEE) Malaysia Section | INTERNATIONAL                                 | Member    | 2015 – 2021 |
| 5. | World Association for Online Education                                  | INTERNATIONAL                                 | Member    | 2014 – 2016 |
| 6. | Asian Journal of Engineering Education Publication Workhsop             | INTERNATIONAL                                 | Member    | 2020        |

|     |  |          |           |             |
|-----|--|----------|-----------|-------------|
| 7   | National Science Movement                      | NATIONAL | Committee | 2018        |
| 8.  | Persatuan Pendidikan Sains dan Matematik Johor | NATIONAL | Committee | 2013 - 2016 |
| 9.  | Persatuan Pendidikan Sains dan Matematik Johor | NATIONAL | Member    | 2006 - Now  |
| 10  | Persatuan Pendidikan Sains dan Matematik Johor | NATIONAL | Secretary | 2006 - 2013 |
| 11. | Qualitative Research Association of Malaysia   | NATIONAL | Member    | 2008        |
| 12. | National Science Teacher Education             | NATIONAL | Member    | 2008        |

## ADMINISTRATIVE EXPERIENCE

| NO | POSITION   | STARTING DATE    | ENDING DATE      | DEPARTMENT/ FACULTY/ DIVISION                  |
|----|--|------------------|------------------|--|
| 1. | Senat Member, Universiti Teknologi Malaysia  | 16 Januari 2023  | 31 Ogos 2024     | Universiti Teknologi Malaysia                  |
| 2. | Senat Member, Universiti Teknologi Malaysia  | 16 Febuari 2020  | 15 Januari 2023  | Universiti Teknologi Malaysia                  |
| 3. | Director Centre for Community and Industry Network (CCIN)                              | 1 September 2023 | 31 Ogos 2024     | Deputy Vice Chancellor (Research & Innovation) |
| 4. | Director Centre for Community and Industry Network (CCIN)                              | 1 September 2020 | 31 Ogos 2022     | Deputy Vice Chancellor (Research & Innovation) |
| 5. | Director Centre for Community and Industry Network (CCIN)                              | 1 September 2017 | 31 Ogos 2020     | Deputy Vice Chancellor (Research & Innovation) |
| 6. | Head of Research Group (Science and Mathematics Education) K-Economy Research Alliance | 1 Februari 2012  | 28 Februari 2020 | Deputy Vice Chancellor (Research & Innovation) |
| 7. | Head Department (Acting), Department of Science, Mathematics and Multimedia Creative   | 1 November 2015  | 28 Februari 2016 | Faculty of Education                           |

## CONSULTATION WORKS

| Summary                      |                                    |
|------------------------------|------------------------------------|
| Consultation Project-UTM     | <b>1 projects (RM 8,000.00)</b>    |
| Consultation Project- Others | <b>10 projects (RM 367,200.00)</b> |

| NO | YEAR | TITLE  | VALUE       |
|----|------|--|-------------|
| 1. | 2023 | Pembangunan Modul Penarafan Bintang dan Pengukuran Berimpak Program-Program YPKDT Berkaitan Kemahiran dan Pengetahuan OKU                          | RM 5,000    |
| 2. | 2022 | Projek Low Hanging Fruit Di Bawah Johor Innovation Valley dan Kerajaan Negeri Johor  | RM 300,000  |
| 3. | 2021 | Ketua Projek Webinar Hari Sungai Sedunia: Pengurusan Sungai Mampan Dan Kesan Terhadap Ekosistem Blue Carbon di bawah Jabatan Pengairan dan Saliran | RM 7,000    |
| 4. | 2021 | Ketua Perunding Projek: Webinar Sungai Kim Kim: Tragedi Dan Solusi di bawah Jabatan Pengairan dan Saliran  | RM 10,000   |
| 5. | 2016 | International Conference on Education and Higher Order Thinking Skills (ICE-HOTS)  | RM8,000.00  |
| 6. | 2015 | Kem Kepimpinan di Kulai  | RM3,000.00  |
| 7. | 2013 | Program Science and Mathematics Exploration di Pontian   | RM5,200.00  |
| 8  | 2014 | Program Science and Mathematics Exploration di Pasir Gudang  | RM5,000.00  |
| 9  | 2012 | Projek Service Learning Di Bawah Tajaan Unit Perancang Ekonomi Negeri Johor di Sekolah-Sekolah Menengah Daerah Muar                                | RM15,000.00 |
| 10 | 2012 | UTM dan Khidmat Komuniti Dengan Kerajaan Negeri Melaka di Bukit Katil, Melaka  | RM5,000.00  |
| 11 | 2012 | Program Science And Mathematics Exploration di Sekolah-Sekolah Menengah Pasir Gudang   | RM12,861.00 |

**INTERNATIONAL/NATIONAL/UNIVERSITY COMMITTEE**

| Summary                 |    |
|-------------------------|----|
| International Committee | 8  |
| National Committee      | 10 |
| University Committee    | 37 |
| Faculty Committee       | 35 |
| Community Committee     | 1  |

**International**

| NO | NAME OF COMMITTEE  | ROLE             | STARTING DATE     | ENDING DATE      |
|----|--|------------------|-------------------|------------------|
| 1. | World Universities Association for Community Development (WUACD)                       | Committee Member | 1 Januari 2020    | 31 Disember 2023 |
| 2. | Asia-Pacific University – Community Engagement Network (APUCEN)                        | Committee Member | 1 Januari 2018    | 31 Disember 2023 |
| 3. | 2nd International Seminar on Quality and Affordable Education (ISQAE 2013)             | Committee Member | 7 October 2013    | 10 October 2013  |
| 4. | International Seminar on Science and Mathematics Education (ISSME 2012)                | Secretary        | 10 September 2012 | 15 Oktober 2012  |
| 5. | International Conference on Education and Higher Order Thinking Skills (ICE-HOTS 2016) | Committee Member | 11 April 2016     | 13 April 2016    |
| 6. | 3rd International Postgraduate Conference on Science and Mathematics 2015 (IPCSM'15)   | Committee Member | 10 October 2015   | 11 October 2015  |
| 7. | 2nd International Education Postgraduate Seminar (IEPS2015)                            | Committee Member | 20 December 2015  | 21 December 2015 |
| 8. | Konvensyen Antarabangsa Jiwa Pendidik 2014   | Committee Member | 11 August 2014    | 13 August 2014   |

**National**

| NO  | NAME OF COMMITTEE   | ROLE                   | STARTING DATE | ENDING DATE |
|-----|---|------------------------|---------------|-------------|
| 1.  | Program UniTY Kementerian Pengajian Tinggi                      | Head of South Zone     | 14 Jan 2023   | 2023        |
| 2.  | Program University for Society (U4S) Zon Selatan                | Head of South Zone     | 14 Jan 2020   | 2022        |
| 3.  | Program University for Society (U4S) Zon Utara                  | Reviewer and Evaluator | 1 Okt 2020    | 2 Okt 2020  |
| 4.  | Task Force Committee for Science and Mathematics Issues in MRSM | Committee Member       | 2019          | 2019        |
| 5.  | Malaysian Journal of Higher Order Thinking Skills in Education  | Reviewer               | 2017          | 2017        |
| 6.  | Inovative Practices in Education and Industry Exhibition 2016   | Judge                  | 2016          | 2016        |
| 7.  | Jawatankuasa Syahadah Pengurusan Islam Musleh (SPIM)            | Speaker                | Jan 2013      | Jan 2013    |
| 8.  | Persatuan Pendidikan Sains dan Matematik Johor                  | Secretary              | 2006          | 2013        |
| 9.  | Program Kemahiran Berfikir Aras Tinggi Peringkat Kebangsaan     | Principal Trainer      | 2013          | 2013        |
| 10. | Buletin of Science and Mathematics Education Association        | Editor                 | 2006          | 2022        |

## University

| NO  | NAME OF COMMITTEE  | ROLE                   | STARTING DATE   | ENDING DATE     |
|-----|--|------------------------|-----------------|-----------------|
| 1.  | Task Force Envision 2025   | Committee Member       | 1 Mac 2020      | 1 Mac 2021      |
|     | Task Force Pembangunan Dashboard Lembaga Pengarah Universiti (LPU)                             | Committee Member       | 1 April 2022    | 31 Julai 2022   |
| 2.  | Task Force Baseline Competences for Differentiated Career Pathway                              | Member                 | 2019            | 2019            |
| 3   | Task Force Program Innovate Johor  | Member                 | 2019            | 2019            |
| 4.  | Task Force SISTEM Pengurusan Kualiti (Penyelidikan & Inovasi)                                  | Committee Member       | 2019            | 2019            |
| 5.  | Jawatankuasa Induk Anugerah Majlis Citra Karisma TNCP  | Chairman               | 2019            | 2019            |
| 6.  | Jawatan Kuasa Anugerah Inovasi Naib Canselor (AICN 2018)                                       | Committee Member       | 2018            | 2019            |
| 7.  | Jawatan Kuasa Persediaan Audit Universiti Penyelidikan   | Member                 | 2019            | 2019            |
| 8.  | Jawatankuasa Induk Majlis Citra Karisma 2019   | Member                 | 2019            | 2019            |
| 9.  | Taskforce Mentoring for Excellence (M4E)   | Committee Member       | 2019            | 2019            |
| 10. | Jawatan Kuasa Innovate Johor 2018  | Member                 | 2018            | 2018            |
| 11. | Pengarah Program Anugerah Academia – Industry Gala Night 2018                                  | Committee Member       | 2018            | 2018            |
| 12. | Taskforce MYRA 2018  | Committee Member       | 2018            | 2018            |
| 13. | Jawatankuasa Anugerah Inovasi Naib Canselor 2018   | Committee Member       | 2018            | 2018            |
| 14. | Pengarah UTM We Care Charity Shop  | Chairman               | 2018            | 2018            |
| 15. | Task Force Bidang Tumpuan Utama 3  | Committee Member       | 2018            | 2018            |
| 16. | Jawatankuasa Inovasi, Keusahawanan, Komersialisasi, Jaringan Industri & Masyarakat             | Committee Member       | 2017            | 2017            |
| 17. | Jawatankuasa Majlis Santapan Di Raja - UTM Royal DGala Dinner 2017                             | Member                 | 2017            | 2017            |
| 18. | Jawatankuasa Program Profesor Pelawat - TARA   | Member                 | 2017            | 2017            |
| 19. | Jawatankuasa Lawatan Akedemik Phu Yen Universiti   | Member                 | 2017            | 2017            |
| 20. | Jawatankuasa Jaringan Masyarakat, Industri dan keushawanan                                     | Committee Member       | 2017            | 2017            |
| 21. | Jawatankuasa Bengkel Penerbitan Buku Isu-Isu Pendidikan Kontemporari 1/2017                    | Committee Member       | 2017            | 2017            |
| 22. | Task Force MYRA 2017   | Committee Member       | 2017            | 2017            |
| 23. | Jawatankuasa Pemandu UTM Research Computing  | Committee Member       | 2017            | 2017            |
| 24. | Jawatankuasa Program Anti Rokok  | Committee Member       | 2017            | 2017            |
| 25. | Jawatankuasa Innovative Practices in Education and Industry Exhibition                         | Member                 | 2016            | 2016            |
| 26. | Jawatankuasa Kualiti Fakulti Pendidikan  | Committee Member       | 2016            | 2016            |
| 27. | Jawatankuasa Science and Mathematics Education, Universiti Teknologi Malaysia (UTM)            | Head of Research Group | 2012            | 2016            |
| 28. | Jawatankuasa Book Chapter: Relationship Between Affect and Achivement in Science, RA K-Economy | Editor                 | Feb 2015        | Mar 2015        |
| 29. | Jawatankuasa Penilai Teknikal Fakulti Pendidikan   | Evaluator              | Oct 2013        | Sept 2015       |
| 30. | Jawatankuasa Panel Penilai Dokumen Video UTM-MIT Blossoms 2014                                 | Committee Member       | 2014            | 2014            |
| 31. | Taskforce New Academia Learning Innovation (NALI)  | Committee Member       | 2014            | 2014            |
| 32  | Jawatankuasa Pemilihan Projek Komuniti dan Industri, Fakulti Kejuruteraan                      | Evaluator              | 17 Ogos 2020    | 2020            |
| 33  | Jawatan Kuasa Sebut Harga (JKSB B)   | Chairman               | 1 Feb 2020      | 31 Jan 2022     |
| 34  | Jawatankuasa Anugerah Inovasi Naib Canselor (AINC2020)   | Committee Member       | 26 Januari 2021 | 31 Januari 2021 |

|    |   |                  |                   |                  |
|----|---|------------------|-------------------|------------------|
| 35 | Jawatankuasa Bengkel 1 Task Force Pengoperasian: Pemerkasaan Struktur dan Tadbir Urus Fakulti UTM Sinergi 4.0 | Committee Member | 30 September 2021 | 15 Ogos 2021     |
| 36 | Jawatankuasa Anugerah Gemilang Mahasiswa (GEMA) 2020  | Evaluator        | 27 Januari 2021   | 15 Februari 2021 |
| 37 | Jawatankuasa Bengkel Kriteria Anugerah Iovasi Naib Canselor 2021  | Committee Member | 11 Februari 2021  | 18 Februari 2021 |

## **Faculty**

| <b>NO</b> | <b>NAME OF COMMITTEE</b>  | <b>ROLE</b>      | <b>STARTING DATE</b> | <b>ENDING DATE</b> |
|-----------|---|------------------|----------------------|--------------------|
| 1         | Jawatankuasa Peningkatan Pengajaran dan Pembelajaran Fakulti Pendidikan                                   | Secretary        | Jun 2004             | May 2006           |
| 2         | Dokumen Jaminan Kualiti (QA), Jawatankuasa Jaminan Kualiti Fakulti Pendidikan                             | Editor           | Sept 2006            | Sept 2006          |
| 3         | Task Force 8 Jawatankuasa Jaminan Kualiti   | Committee Member | April 2006           | April 2007         |
| 4         | Jawatankuasa Penubuhan Pusat Kecemerlangan Fakulti Pendidikan   | Secretary        | May 2006             | May 2008           |
| 5         | Jawatankuasa Kesarjanaan Pengajaran Fakulti Pendidikan  | Secretary        | May 2006             | May 2008           |
| 6         | Jabatan Pendidikan Sains dan Matematik, Jawatankuasa Projek Sarjana Muda Fakulti Pendidikan               | Committee Member | May 2006             | May 2008           |
| 7         | Kelab Keluarga, Fakulti Pendidikan  | Committee Member | May 2006             | May 2008           |
| 8         | Kelab Keluarga, Fakulti Pendidikan  | Committee Member | 2009                 | 2010               |
| 9         | Jawatankuasa Pelaksana Program Harvard Business Case Study, Fakulti Pendidikan                            | Committee Member | 2010                 | 2014               |
| 10        | Jawatankuasa Pelaksana Program How to Get Yourself Employed (Sem I dan Sem II), Fakulti Pendidikan        | Committee Member | 2011                 | 2012               |
| 11        | Kelab Keluarga Fakulti Pendidikan   | Committee Member | 2012                 | 2104               |
| 12        | Research Methodology Short Courses Committee (MPU 0020 & PPU 0020)  | Facilitator      | 2013                 | 2013               |
| 13        | Jawatankuasa Penilaian Teknikal Fakulti Pendidikan  | Technical Panel  | Okt 2013             | Sept 2015          |
| 14        | Panel Penilai Dokumen Video UTM-MIT Blossoms  | Committee Member | 2014                 | 2014               |
| 15        | Green Office Committee, Fakulti Pendidikan  | Committee Member | 2014                 | 2014               |
| 16        | Kem Spirit of Togetherness, Jabatan Pendidikan Sains, Matematik dan Multimedia Kreatif Fakulti Pendidikan | Committee Member | May 2014             | 2014               |
| 17        | Jawatankuasa Student Centered Learning, Fakulti Pendidikan  | Committee Member | April 2014           | March 2016         |
| 18        | Kem Spirit of Togetherness Fakulti Pendidikan   | Committee Member | 2016                 | 2016               |
| 19        | Kelab Keluarga Fakulti Pendidikan   | Committee Member | 2014                 | 2016               |
| 20        | Jawatankuasa Kajian Penyelidikan (Research Study I & II) Fakulti Pendidikan                               | Committee Member | Julai 2015           | 2015               |
| 21        | e-Projek Kajian Pendidikan  | Committee Member | 2016                 | 2016               |
| 22        | Jawatan Kuasa Service Learning Faculty  | Committee Member | 2016                 | 2016               |
| 23        | Kursus Kajian Pendidikan I dan II (MPPT 1105 & MPPT 1205) Bagi Semester II Sesi 2015/2016                 | Coordinator      | 2015                 | 2016               |
| 24        | Jawatankuasa Penyemak Penilaian Kajian Pendidikan   | Committee Member | 2016                 | 2016               |
| 25        | Kelab Kebajikan Staf Fakulti Pendidikan   | Chairman         | 2016                 | 2016               |
| 26        | Jawatankuasa Penyemak Borang Penilaian Kajian Pendidikan II   | Committee Member | 2016                 | 2016               |

|    |   |                 |             |             |
|----|---|-----------------|-------------|-------------|
| 27 | Program First Year Experience                               | Coordinator     | 2016        | 2016        |
| 28 | Jawatankuasa Inovasi Fakulti Pendidikan                     | Coordinator     | 2016        | 2016        |
| 29 | Jawatankuasa Penerbitan Buku Isu Kontemporari Pendidikan    | Commitee Member | 2017        | 2017        |
| 30 | Jawatankuasa Data MYRA                                      | Commitee Member | 2017        | 2017        |
| 31 | Jawatankuasa Program Kimia Pasca Siswazah                   | Coordinator     | 2017        | 2017        |
| 32 | Structured Study Plan Committe                              | Commitee Member | 2017        | 2017        |
| 33 | Jawatankuasa Semakan Strategi Fakulti                       | Commitee Member | 2018        | 2018        |
| 34 | Jawatankuasa Maklumat KPLI                                  | Commitee Member | 2018        | 2018        |
| 35 | Asian Journal of Engineering Education Publication Workshop | Commitee Member | 17 Jan 2020 | 21 Feb 2020 |

### Community

| NO | NAME OF COMMITTEE   | ROLE   | STARTING DATE | ENDING DATE |
|----|---|--------|---------------|-------------|
| 1  | Persatuan Pendidikan Sains, Teknologi, Kejuruteraan dan Matematik (STEM) Malaysia | Member | 2015          | 2022        |
| 2  | HALUAN Malaysia   | Member | 2013          | 2022        |
| 3  | Persatuan Kakitangan Akademik UTM   | Member | 2013          | 2022        |
| 4  | Kelab Catur UTM   | Member | 2013          | 2022        |

### **SELECTED ACTIVITIES / WORKSHOPS / SEMINARS / COURSES**

| NO | NAME OF ACTIVITIES   | FIELD                                    | PLACE OF ACTIVITIES | STARTING DATE | ENDING DATE |
|----|--|--|---------------------|---------------|-------------|
| 1  | ICCubeX Competent Series: CSC02 Develop & Market Using Bmc                     | Penyelidikan Dan Penerbitan              | UTM                 | 5/4/2022      | 6/4/2022    |
| 2  | Workshop On Patent Search  | Penyelidikan Dan Penerbitan              | UTM                 | 28/3/2022     | 30/3/2022   |
| 3  | Competence Stage 1 (CSC03) Business Negotiation and Product Pitching           | Penyelidikan Dan Penerbitan              | UTM                 | 14/3/2022     | 15/3/2022   |
| 4  | ICCubeX Competence Stage 1 : CSE01 - Commercialisation Funding                 | Penyelidikan Dan Penerbitan              | UTM                 | 8/3/2022      | 9/3/2022    |
| 5  | Bengkel Pemurnian Rubrik e-Kandungan   | Kepimpinan Akademik                      | UTM                 | 5/7/2022      | 5/7/2022    |
| 6  | Baseline Competencies For Differentiated Career Pathway (Bc4dcp) - Kumpulan 2  | Sijil Pengajaran Pengajian Tinggi (Sppt) | UTM                 | 6/9/2021      | 27/9/2021   |
| 7  | Baseline Competencies Differentiated Career Pathway (BC4DCP) 2021 - Kumpulan 1 | Sijil Pengajaran Pengajian Tinggi (Sppt) | UTM                 | 8/8/2021      | 30/8/2021   |
| 8  | Supervisory Orientation Course (AS101)   | Penasihat Dan Penyeliaan Pascasiswazah   | UTM                 | 15/3/2021     | 15/3/2021   |
| 9  | Supervisory Evaluation Pack (AS103)  | Penasihat Dan Penyeliaan Pascasiswazah   | UTM                 | 20/12/2021    | 20/12/2021  |
| 10 | Supervisory Development Program (AS102)-Fe 8-9/12/2021                         | Penasihat Dan Penyeliaan Pascasiswazah   | UTM                 | 8/12/2021     | 9/12/2021   |

|    |  |  |     |            |            |
|----|--|--|-----|------------|------------|
| 11 | Kursus Kepimpinan Akademik: ALP103 - Leveraging Power To Achieve Organizational Objective  | Kepimpinan Akademik                          | UTM | 20/6/2021  | 20/6/2021  |
| 12 | Kursus Kepimpinan Akademik: ALI101 - Communication Skills  | Kepimpinan Akademik                          | UTM | 15/6/2021  | 15/6/2021  |
| 13 | Supervisory Development Program (AS102) - Fssh   | Penasihat Dan Penyeliaan Pascasiswazah       | UTM | 31/5/2021  | 2/6/2021   |
| 14 | Kursus Kepimpinan Akademik : ALP105 - Advanced Presentation Skill  | Kepimpinan Akademik                          | UTM | 25/5/2021  | 25/5/2021  |
| 15 | Supervisory Evaluation Pack (AS103)  | Penasihat Dan Penyeliaan Pascasiswazah       | UTM | 24/5/2021  | 24/5/2021  |
| 16 | Kursus Kepimpinan Akademik : ALC102 Change Management  | Kepimpinan Akademik                          | UTM | 12/4/2021  | 12/4/2021  |
| 17 | Supervisory Development Program (AS102) - Fs   | Penasihat Dan Penyeliaan Pascasiswazah       | UTM | 23/2/2021  | 3/3/2021   |
| 18 | Lifting Ai Innovation In Asean   | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 16/3/2022  | 16/3/2022  |
| 19 | K-Sharing : Big Data Visualization - Challenge and Tools   | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 28/2/2022  | 28/2/2022  |
| 20 | Webinar Bicara Pakar Uirl 2022-Siri 1- Ask An Expert-Particle Size Analyzer  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 28/2/2022  | 28/2/2022  |
| 21 | Webinar Bicara Pakar Uirl 2022-Siri 1- Step By Step Guide To 1d Nmr Interpretation Of Organic Compound                             | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 27/2/2022  | 27/2/2022  |
| 22 | Bengkel Pembangunan Modul Latihan (Akademik) 2022  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 20/1/2022  | 22/1/2022  |
| 23 | Konvensyen Kumpulan Inovatif & Kreatif (KIK) Kali Ke-14 Peringkat UTM 2021   | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 27/12/2021 | 27/12/2021 |
| 24 | Leadership Talk Series: "Leading In Vuca Times" A Practitioner's Perspective - Institutionalisation, Integrity And Good Governance | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 19/12/2021 | 19/12/2021 |
| 25 | Bengkel Pembangunan Kompetensi Siri 20/2021 (Fungsian Akademik)  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 11/11/2021 | 13/11/2021 |
| 26 | Program : Librarian's Talk Series Iii Tajuk : Pembangunan Dan Pengurusan Koleksi Galeri Universiti : Cabaran & Inisiatif           | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 27/10/2021 | 27/10/2021 |
| 27 | Webinar Kelestarian Sungai : Peranan Kita  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 17/10/2021 | 17/10/2021 |
| 28 | Program UTM Agriculture Consortium Showcase  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 7/10/2021  | 7/10/2021  |
| 29 | Klinik Penarafan Bintang Siri 3  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 5/10/2021  | 5/10/2021  |
| 30 | Program K-Sharing: Engagement With Researchers: Research @ UTM - Where Are We Heading  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 30/9/2021  | 30/9/2021  |

|    |  |  |     |            |            |
|----|--|--|-----|------------|------------|
| 31 | Program K-Sharing: Projek Bangsa Johor Bahagia Untuk Pembangunan Komuniti  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 26/9/2021  | 26/9/2021  |
| 32 | Webinar Sempena Hari Sungai Sedunia: Pengurusan Sungai Mampan Dan Kesan Terhadap Ekosistem Blue Carbon                       | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 24/9/2021  | 24/9/2021  |
| 33 | Sesi K-Sharing - Keseimbangan Alam Sekitar Dan Pembangunan Komuniti Johor  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 22/9/2021  | 22/9/2021  |
| 34 | Sesi K-Sharing - Membina "Antibodi" Jiwa Menghadapi Pembelajaran Norma Baharu  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 20/9/2021  | 20/9/2021  |
| 35 | Bengkel Pembangunan Indeks Penilaian Impak Prpogram Pelajar  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 30/8/2021  | 30/8/2021  |
| 36 | Webinar AIM4STAR High Performance Delivery: Sustainable Relationship In Industrial Linkages                                  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 30/8/2021  | 30/8/2021  |
| 37 | Bengkel Strategi Review Envision UTM 2025 Bil 3/2021   | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 29/8/2021  | 29/8/2021  |
| 38 | Program Bicara Karya - Merungkai..... Sejarah Pagoh  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 29/8/2021  | 29/8/2021  |
| 39 | International Webinar Series On Composites Research, Technology And Innovations Talks: Ramie Research Programme In Indonesia | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 18/8/2021  | 18/8/2021  |
| 40 | Strengthening Resilient Communities : A Quintuple Helix Model  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 17/8/2021  | 17/8/2021  |
| 41 | Rural Technology : Hydro Power, Solar And Ram Pump   | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 11/8/2021  | 11/8/2021  |
| 42 | Program Perkongsian Ilmu : Keselamatan Bahan Kimia Di Rumah - 2 Ogos 2021  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 2/8/2021   | 2/8/2021   |
| 43 | IBD Webinar 2021 Siri 7 - Hazardous Waste KIMIA's Perspective  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 29/7/2021  | 29/7/2021  |
| 44 | Program Perkongsian Ilmu Staf Ppp Fssh 2.0 Siri 3 " Marathon Jauh Tapi Dekat" - 26 Jul 2021                                  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 26/7/2021  | 26/7/2021  |
| 45 | Mendekati Industri Menyantuni Budi   | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 30/6/2021  | 30/6/2021  |
| 46 | Bangsa Johor Bahagia: Libat Sama Komuniti Untuk Masyarakat Bandar  | Kursus/Taklimat/Bengkel/Latihan/Seminar Khas | UTM | 21/4/2021  | 21/4/2021  |
| 47 | Bengkel Penstrukturan Semula Latihan Akademik UTM  | Kepimpinan Akademik                          | UTM | 14/10/2020 | 15/10/2020 |
| 48 | Pra Bengkel Menstruktur Semula Kursus Staf Akademik Dalam Bidang Kepimpinan, Penyelidikan Dan Khidmat Profesional            | Kepimpinan Akademik                          | UTM | 5/8/2020   | 5/8/2020   |
| 49 | Taklimat Pengisian Data Sistem TESDCP (Untuk Staf Akademik FSSH) 2020  | Pengajaran Dan Pembelajaran                  | UTM | 5/7/2020   | 5/7/2020   |
| 50 | Kursus Intermediate Video Editing- Dr.Shaharudin Md Salleh - 1 Jul 2020  | Pengajaran Dan Pembelajaran                  | UTM | 1/7/2020   | 1/7/2020   |

|    |  |                             |     |                  |                  |
|----|--|-----------------------------|-----|------------------|------------------|
| 51 | Kursus : Sesi 1 - "Introduction To Video Editing (Basic)" -Prof.Madya.Dr.Noraffandy Yahaya- 10 Jun 2020    | Pengajaran Dan Pembelajaran | UTM | 10/6/2020        | 10/6/2020        |
| 52 | Training For FSSH Repository 'Introduction to FSSH Repository & Video Editing'                             | Pengajaran Dan Pembelajaran | UTM | 10/6/2020        | 10/6/2020        |
| 53 | Bengkel Hands On Artikel Bukan Ilmiah Merakyatkan Penulisan Akademia                                       | Penyelidikan Dan Penerbitan | UTM | 29/9/2020        | 29/9/2020        |
| 54 | Taklimat Khusus FE Gold 3 - Trek Geran Komuniti  | Penyelidikan Dan Penerbitan | UTM | 16/6/2020        | 16/6/2020        |
| 55 | MIL100 : Success Factors In R&D Leadership   | Penyelidikan Dan Penerbitan | UTM | 3/2/2020         | 3/2/2020         |
| 56 | Seminar UTM-MIT Blossoms Training Workshop 2015  | Pengajaran                  | UTM | 5 Oktober 2015   | 10 Oktober 2015  |
| 57 | Seminar UTM-MIT Blossoms Training Workshop 2015  | Pengajaran                  | UTM | 5 Oktober 2015   | 7 Oktober 2015   |
| 58 | Bengkel Pensyarah/Jurulatih Kokurikulum  | Pengajaran                  | UTM | 25 Ogos 2015     | 27 Ogos 2015     |
| 59 | Bengkel Penyediaan Buku Panduan NALI   | Pengajaran                  | UTM | 22 Oktober 2015  | 23 Oktober 2015  |
| 60 | Bengkel New Academia Learning Innovation (NALI)  | Pengajaran                  | UTM | 7 September 2015 | 9 September 2015 |
| 61 | Program Engagement RMC dengan Staf Akademik Fakulti Pendidikan   | Pengajaran                  | UTM | 3 Ogos 2015      | 3 Ogos 2015      |
| 62 | Program Engagement Timbalan Naib Canselor (Penyelidikan & Inovasi) dengan Staf Akademik Fakulti Pendidikan | Penyelidikan Dan Penerbitan | UTM | 22 Oktober 2015  | 22 Oktober 2015  |
| 63 | Penasihat Akademik (Finalis)   | Penasihat Akademik          | UTM | 30 Mac 2015      | 30 Mac 2015      |

## RESEARCH ACTIVITIES

| Summary                                      |                                     |
|--|-------------------------------------|
| Principal Investigator- International Grants | <b>0 projects (RM0)</b>             |
| Principal Investigator- National Grants      | <b>6 projects (RM469,280)</b>       |
| Principal Investigator- UTM Grants           | <b>9 projects (RM248,000)</b>       |
| Member- International Grants                 | <b>4 projects (RM42,550)</b>        |
| Member- National Grants                      | <b>16 projects (RM3,530,840)</b>    |
| Member- UTM Grants                           | <b>38 projects (RM1,844,345.15)</b> |
| Member-Others                                | <b>14 projects (RM183,061)</b>      |

### As a principal investigator

| BIL | NAME OF GRANT  | ROLE           | CATEGORY OF GRANT (UTM / OTHERS) | TYPE OF GRANT    | AMOUNT (RM) | STARTING DATE | ENDING DATE | VOTE NO        |
|-----|--|----------------|----------------------------------|------------------|-------------|---------------|-------------|----------------|
| 1.  | MG2 - 7.1 : Improving Understanding Of Concepts, Aspects And | Project Leader | National                         | Matching Grant – | 10,000      | 1/4/2023      | 31/3/2025   | Q.J130 000.300 |

|     |   |                |               |  |         |            |            |                      |
|-----|---|----------------|---------------|--|---------|------------|------------|----------------------|
|     | Levels Of Representation Competence Among Indonesia And Malaysia Pre-Service Chemistry Teacher: A Comparative Studies   |                |               | International Funding                  |         |            |            | 9.04M44              |
| 2.  | MG2 - 7.0.1 : Improving Understanding Of Concepts, Representations, Aspects And Levels Of Representational Competence Of Prospective Chemistry Teacher                | Project Leader | International | Matching Grant – International Funding | 20,000  | 1/4/2023   | 31/3/2025  | R.J130000.7609.4B864 |
| 3.  | MG2-7.0.2: A Cross - Cultural Study Of High School Chemistry Self Efficacy In Indonesia And Malaysia Context: A Confirmatory Factor Analysis                          | Project Leader | National      | Matching Grant – International Funding | 2,550   | 1/4/2023   | 31/3/2025  | R.J130000.7309.1U036 |
| 4.  | MG2 - 7.0.2 : The Pictorial-Based Learning For Building Students' Argumentation Skills & Deep Understanding Of General Chemistry                                      | Project Leader | International | Matching Grant – International Funding | 10,000  | 1/4/2023   | 31/3/2025  | R.J130000.7609.4B865 |
| 5.  | Projek EDC 5: Kesan sosio-ekonomi dan kesedaran masyarakat terhadap sebatian pengganggu endokrin (EDC) di air sungai Malaysia   | Project Leader | National      | Contract                               | 158,400 | 13/04/2021 | 12/04/2023 | R.J130000.7609.4C501 |
| 6.  | Tanggungjawab sosial universiti (University Social Responsibility): model dan pelaksanaan bagi menyokong matlamat pembangunan lestari (Sustainable development goals) | Project Leader | UTM           | UTM Fundamental Research               | 70,000  | 01/01/2020 | 30/06/2022 | Q.J130000.2509.21H20 |
| 7.  | Flagship Program Pemuliharaan Sungai Kim Kim University For Society (U4S) Zon Selatan   | Project Leader | National      | Dana University for Society, KPT       | 150,000 | 07/11/2020 | 06/11/2021 | S.J130000.0809.4Y269 |
| 8.  | HIR 3.2 : Data Driven Curriculum Innovation in STEM   | Project Leader | UTM           | High Impact Research Grant             | 36,000  | 01/04/2018 | 30/09/2021 | Q.J130000.2409.04G91 |
| 9.  | UTM Face Shield Dan Intubation Box: Penyediaan Perlindungan Untuk Petugas Kesihatan Menangani Covid-19  | Project Leader | UTM           | UTM R&D Fund                           | 10,000  | 15/03/2020 | 30/09/2020 | R.J130000.7709.4J455 |
| 10. | Pemeriksaan Keprofesionalan Guru STEM Menerusi Kaedah   | Project Leader | UTM           | Tier 1                                 | 20,000  | 01/02/2018 | 31/01/2020 | Q.J130000.250        |

|     |  |                |          |                                   |        |            |            |                      |
|-----|--|----------------|----------|-----------------------------------|--------|------------|------------|----------------------|
|     | Pengajaran Abad Ke-21: Inkuiri Berintegrasikan Visual  |                |          |                                   |        |            |            | 9.18H61              |
| 11. | Scenario Based Learning: Strategi dan Pelaksanaan dalam Membangunkan Kemahiran Abad ke-21  | Project Leader | UTM      | Dana Pembangunan Pengajaran       | 10,000 | 15/07/2016 | 14/07/2018 | R.J130000.7731.4J249 |
| 12. | Kerangka Pemikiran Saintifik Berpaksikan Penyepaduan Domain Afektif, Kognitif Dan Psikomotor Bagi Membangunkan Pelajar Beradab Mithali | Project Leader | National | FRGS FUND                         | 52,200 | 16/12/2013 | 15/12/2016 | R.J130000.7831.4F414 |
| 13. | Designing 21st Century Learning Spaces   | Project Leader | UTM      | UTM R&D Fund                      | 20,000 | 01/07/2014 | 30/06/2016 | R.J130000.7731.4J139 |
| 14. | Pembangunan Insan dan Pengurusan Trauma Mangsa Banjir di Pusat Pemindahan  | Project Leader | National | FRGS FUND                         | 58,680 | 01/04/2015 | 31/03/2016 | R.J130000.7831.4F694 |
| 15. | UTM SPACES : Pembangunan UTM SPACES Bagi Menyokong Keberkesanan Pembelajaran Berpusatkan Pelajar                                       | Project Leader | UTM      | UTM R&D Fund                      | 32,000 | 16/10/2013 | 15/10/2015 | A.J160000.7731.4J108 |
| 16. | Kemahiran Visualisasi Dalam Pendidikan Kimia: Kajian Eksploratori terhadap Permasalahan, Model dan Keberkesanan                        | Project Leader | National | Exploratory Research Grant Scheme | 50,000 | 15/06/2012 | 14/06/2014 | R.J130000.7831.4L082 |
| 17. | Pemikiran saintifik Abad ke-21   | Project Leader | UTM      | Tier 2                            | 40,000 | 01/04/2011 | 31/07/2012 | Q.J130000.2631.04J00 |
| 18. | Inkuiri terbuka saintifik dalam Memperkasakan Kursus Amali di Universiti Teknologi Malaysia  | Project Leader | UTM      | UTM R&D Fund                      | 10,000 | 19/05/2011 | 18/05/2012 | R.J130000.7731.4J027 |

### **As a scientific member**

|     |  |        |          |                             |            |            |            |                      |
|-----|--|--------|----------|-----------------------------|------------|------------|------------|----------------------|
| 16. | A Multiple Stakeholders Model For Community Linkages                               | Member | UTM      | UTM R&D Fund                | 436,184.80 | 01/03/2020 | 31/08/2023 | R.J130000.7755.4J437 |
| 17. | A Multiple Stakeholders Model For Industrial Linkages                              | Member | UTM      | UTM R&D Fund                | 519,788.10 | 01/03/2020 | 31/08/2023 | R.J130000.7755.4J439 |
| 18. | Effect of NALI Framework on Teaching and Learning at Universiti Teknologi Malaysia | Member | UTM      | Dana Pembangunan Pengajaran | 15,000     | 01/07/2021 | 30/06/2023 | R.J130000.7716.4J519 |
| 19. | Program EDC: Penyelidikan Kehadiran Bahan Kimia Pengganggu                         | Member | National | Contract                    | 2,700,000  | 13/04/2021 | 12/04/2023 | R.J130000.760        |

|     |   |        |          |   |        |            |            |                      |
|-----|---|--------|----------|---|--------|------------|------------|----------------------|
|     | Endokrin (EDC) Dalam Sumber Air Di Malaysia: Pengesanan, Rawatan, Impak Kepada Kesihatan Manusia Dan Kesan Sosio-Ekonomi  |        |          |   |        |            |            | 1.4C495              |
| 20. | Model Pembelajaran STEM Luar Bilik Darjah (PSLBD) Dalam Meningkatkan Kemahiran Abad 21                                    | Member | National | FRGS FUND                                   | 65,000 | 01/11/2020 | 31/10/2022 | R.J130000.7853.5F399 |
| 21. | Q STEM Virtualreality/Augmented Reality Self Learning Module For Appreciation Of Al Quran And Critical Thinking           | Member | National | Prototype Development Research Grant Scheme | 84,600 | 01/12/2019 | 31/08/2022 | R.J130000.7853.4L711 |
| 22. | A Malaysian Model of Inquiry-based Learning for STEM Teachers   | Member | National | FRGS FUND                                   | 60,000 | 01/09/2019 | 31/05/2022 | R.J130000.7853.5F140 |
| 23. | Model Pendekatan STEM Belantara Berteraskan Nilai Murni bagi Pendidikan Orang Asli  | Member | National | FRGS FUND                                   | 60,000 | 01/09/2019 | 31/05/2022 | R.J130000.7853.5F267 |
| 24. | VITAL Framework for STEM Higher Education Teaching and Learning   | Member | National | FRGS FUND                                   | 55,200 | 01/09/2019 | 31/05/2022 | R.J130000.7853.5F125 |
| 25. | Kerangka Hubungan Pemikiran Komputasional dan Penyelesaian Masalah Matematik Bukan Rutin Dalam Pembelajaran Abad ke-21    | Member | UTM      | Tier 2                                      | 15,000 | 01/08/2019 | 31/01/2022 | Q.J130000.2653.16J12 |
| 26. | Mathematics Teachers' Competencies In Inculcating Higher-Order Thinking Skills In Secondary School                        | Member | UTM      | Tier 2                                      | 10,000 | 01/08/2019 | 31/01/2022 | Q.J130000.2653.16J36 |
| 27. | Penguasaan Kemahiran Berfikir Aras Tinggi Dalam Matematik Menerusi Strategi Pembelajaran Kooperatif Think-Talk-Write      | Member | UTM      | Tier 2                                      | 15,000 | 01/08/2019 | 31/01/2022 | Q.J130000.2653.16J38 |
| 28. | Developing Instruments For Assessing Outcomes Of Informal Science Learning  | Member | UTM      | Tier 2                                      | 15,000 | 01/08/2019 | 31/01/2022 | Q.J130000.2653.16J97 |
| 29. | Teachers-Students' Scientific EpiSTEMology Model Through Critical Theory As Social Innovation Mechanism In STEM Education | Member | National | FRGS FUND                                   | 64,140 | 01/01/2019 | 31/12/2021 | R.J130000.7853.5F067 |
| 30. | SMART STEM  | Member | National | Prototype Development Fund                  | 20,000 | 01/04/2020 | 30/09/2021 | R.J130000.7753.4J461 |

|     |   |        |          |                             |        |            |            |                                  |
|-----|---|--------|----------|-----------------------------|--------|------------|------------|----------------------------------|
| 31. | Kajian Ke Atas Kemahiran Penyelesaian Masalah STEM (Sains, Teknologi, Kejuruteraan Dan Matematik) Dalam Kalangan Pelajar Tahun 6 Sekolah Rendah Islam Hidayah | Member | National | Contract Research DTD       | 2,000  | 01/09/2019 | 30/09/2020 | R.J130<br>000.765<br>3.4C31<br>2 |
| 32. | Kajian Isu Penyalahgunaan Dadah Dan Pelencongan Sosial Daerah Mersing   | Member | National | Business Entity             | 15,000 | 01/12/2019 | 28/02/2020 | S.J130<br>000.085<br>1.4Y22<br>2 |
| 33. | Keberkesanan Aktiviti STEM Anjuran Kelab Suka Belajar UTM Di PSI Cawangan Kg Melayu   | Member | UTM      | Tier 1                      | 30,000 | 01/02/2018 | 31/01/2020 | Q.J130<br>000.253<br>1.18H4<br>4 |
| 34. | Enhance Student-Centered Pedagogy Skills Among Utm Students Through Service Learning  | Member | UTM      | Dana Pembangunan Pengajaran | 10,000 | 15/07/2016 | 30/09/2019 | R.J130<br>000.773<br>1.4J248     |
| 35. | Kerangka Pembelajaran Inkuiri Untuk Aktiviti Eksperimen Kimia Bagi Meningkatkan Kemahiran Kreativiti Sainifik Dalam Kalangan Pelajar                          | Member | National | FRGS FUND                   | 53,000 | 15/08/2017 | 14/08/2019 | R.J130<br>000.783<br>1.4F93<br>0 |
| 36. | KTP-NMG 2019: Pemindahan Ilmu Kemahiran Pemikiran Komputasional Kepada Murid Daripada Keluarga Berpendapatan Rendah   | Member | UTM      | Business Entity             | 5,000  | 01/02/2019 | 31/07/2019 | S.J130<br>000.085<br>3.4Y17<br>4 |
| 37. | KTP NMG 2019 : Pemindahan Pengetahuan STEM Terhadap Guru Dan Murid Sek. Men. Keb Seri Pulai Perdana Menerusi Modul Pengajaran I STEM                          | Member | UTM      | Business Entity             | 5,000  | 01/02/2019 | 31/07/2019 | S.J130<br>000.085<br>3.4Y15<br>2 |
| 38. | Program Kem Kecemerlangan Akademik Dan Pemantapan Sahsiah Murid Sek Men Keb Seri Pulai Perdana  | Member | Others   | Networking Grant            | 13,000 | 01/06/2018 | 31/05/2019 | S.J130<br>000.735<br>3.4X48<br>9 |
| 39. | Program Pemindahan Ilmu Kemahiran Belajar Murid Tahun 6 Sekolah Kebangsaan Indahpura 1  | Member | Others   | Networking Grant            | 1,000  | 06/01/2019 | 31/03/2019 | S.J130<br>000.735<br>3.4X49<br>0 |
| 40. | Bengkel Berkala Pembangunan Modul Pengajaran STEM dan PAK 21  | Member | Others   | Networking Grant            | 2,000  | 01/01/2018 | 31/01/2019 | S.J130<br>000.735<br>3.4X48<br>3 |
| 41. | Development Of An Assessment Instrument On Scientific Reasoning In Preparing For The Fourth Industrial Revolution   | Member | UTM      | Tier 2                      | 10,000 | 01/02/2018 | 31/01/2019 | Q.J130<br>000.263<br>1.14J82     |
| 42. | Hubungan antara Kecerdasan Emosi dan Motivasi Pelajar dalam   | Member | UTM      | Tier 2                      | 10,000 | 01/02/2018 | 31/01/2019 | Q.J130<br>000.263<br>1.14J97     |

|     |  |        |          |                  |        |            |            |                      |
|-----|--|--------|----------|------------------|--------|------------|------------|----------------------|
|     | Menyelesaikan Masalah Matematik Bukan Rutin  |        |          |                  |        |            |            |                      |
| 43. | Non-Routine Mathematical Problem Solving for Students Across Multiple Intelligence: A Framework to Support 21st Century Learning | Member | UTM      | Tier 1           | 30,000 | 01/02/2018 | 31/01/2019 | Q.J130000.2531.19H09 |
| 44. | Healthy Teeth Program With Children Of Kampong Kra Nhoung, Sanchey, Kratie, Cambodia   | Member | Others   | Networking Grant | 730    | 1708/2018  | 27/12/2018 | S.J130000.7353.4X557 |
| 45. | Healthy Teeth Program With Children Of Kampong Kra Nhoung, Sanchey, Kratie, Cambodia   | Member | Others   | Business Entity  | 10,000 | 01/08/2018 | 27/12/2018 | S.J130000.0853.4Y143 |
| 46. | Educational Programme For The Parents In Kampong Kra Nhoung, Sanchey, Kratie, Cambodia   | Member | Others   | Networking Grant | 250    | 17/08/2018 | 26/12/2018 | S.J130000.7353.4X361 |
| 47. | Faktor-Faktor Yang Mempengaruhi Minat Sainifik : Pembelajaran STEM Sebagai Strategi Penyelesaian                                 | Member | UTM      | Tier 1           | 50,000 | 01/07/2016 | 30/09/2018 | Q.J130000.2531.13H69 |
| 49. | Tingkah laku Metakognitif Pelajar Semasa Menyelesaikan Masalah Matematik Pentaksiran Tingkatan Tiga (PT3)                        | Member | UTM      | Tier 1           | 40,000 | 01/07/2017 | 31/08/2018 | Q.J130000.2531.16H62 |
| 49. | Pembinaan Telaga Pam Kampung San Chay Kemboja : Projek Pembangunan Komuniti Lestariutm Kemboja Vietnam 2018                      | Member | Others   | Business Entity  | 43,150 | 30/05/2018 | 25/08/2018 | S.J130000.0852.4Y140 |
| 50. | The Effectiveness of "Young Innovate Program" on Students' Interest and Success in STEM  | Member | UTM      | Tier 1           | 50,000 | 01/07/2016 | 30/06/2018 | Q.J130000.2531.13H68 |
| 51. | Mengenalpasti keberkesanan karnival suka belajar dalam meningkatkan minat dan sikap pelajar terhadap STEM                        | Member | Others   | Networking Grant | 10,000 | 01/02/2017 | 31/12/2017 | S.J130000.0314.X264  |
| 52. | Perlaksanaan Amalan Refleksi Menerusi Kajian Tindakan Dalam Kalangan Guru  | Member | Others   | Networking Grant | 2,660  | 02/05/2017 | 22/12/2017 | S.J130000.7731.4X258 |
| 53. | Pembinaan dan Pengujian Model Penerapan Al-Quran Bagi Pendidikan Sains, Teknologi, Kejuruteraan dan Matematik                    | Member | NATIONAL | FRGS FUND        | 95,500 | 02/11/2015 | 01/11/2017 | R.J130000.7831.4F743 |

|     |  |        |        |                          |        |            |            |                      |
|-----|--|--------|--------|--------------------------|--------|------------|------------|----------------------|
| 54. | Mathematics Education Postgraduates' Recontextualisation Of Teaching And Learning Mathematics In School  | Member | UTM    | Potential Academic Staff | 20,000 | 01/11/2016 | 31/10/2017 | Q.J130000.2731.02K68 |
| 55. | Kemahiran Metakognitif Pelajar Dalam Penyelesaian Masalah Matematik Aras Tinggi  | Member | UTM    | Tier 1                   | 43,450 | 01/07/2016 | 30/06/2017 | Q.J130000.2531.13H32 |
| 56. | Piawain Strategi Service Learning Berfokuskan Disiplin Dalam Academia Baru   | Member | Others | UTM R&D Fund             | 15,000 | 01/06/2015 | 31/05/2017 | R.J130000.7731.4J152 |
| 57. | Meningkatkan peranan ibu bapa, komuniti dan masyarakat dalam pembangunan akademik, sahsiah, disiplin murid serta kokurikulum melalui Karnival STEM di Kluang | Member | Others | Networking Grant         | 10,500 | 01/02/2017 | 30/04/2017 | S.J130000.7331.4X262 |
| 58. | Developing Green and Microscale Experiments to Enhance 21 Century Science, Mathematics, Engineering and Mathematics (STEM) Education in Malaysia             | Member | UTM    | Encouragement Grant      | 20,000 | 01/09/2015 | 30/11/2016 | Q.J130000.2631.11J38 |
| 59. | Pembangunan Siri Buku Item Kemahiran Berfikir Aras Tinggi (KBAT) Matematik Bagi Kegunaan Guru Maktab Rendah Sains MARA                                       | Member | Others | Networking Grant         | 18,500 | 01/11/2015 | 31/10/2016 | S.J130000.7331.4X051 |
| 60. | Scaffolding Framework in Communication Process of Learning Using Blossoms  | Member | UTM    | UTM R&D Fund             | 30,000 | 01/07/2015 | 30/09/2016 | R.J130000.7331.4J157 |
| 61. | The relation of BLOSSOMS and 21st century learning aspirations   | Member | UTM    | UTM R&D Fund             | 30,000 | 01/07/2015 | 30/09/2016 | R.J130000.7331.4J158 |
| 62. | Membentuk Kemahiran Penyelesaian Masalah Dari Perspektif Metakognitif Menggunakan Pembelajaran Melalui Web   | Member | UTM    | Encouragement Grant      | 20,000 | 01/05/2015 | 31/07/2016 | Q.J130000.2631.10J72 |
| 63. | The Patterns and Behaviours of Mathematical Higher Order Thinking Skills (HOTS) Problem Solving Among Secondary School Students                              | Member | UTM    | Encouragement Grant      | 20,000 | 01/05/2015 | 31/07/2016 | Q.J130000.2631.10J70 |
| 64. | Collaborative Strategy in Learning Chemistry Through Blossom   | Member | UTM    | UTM R&D Fund             | 30,000 | 01/07/2015 | 30/06/2016 | R.J130000.7331.4J156 |

|     |  |        |          |                          |        |            |            |                      |
|-----|--|--------|----------|--------------------------|--------|------------|------------|----------------------|
| 65. | Model Pengajaran untuk Penjanaan Kemahiran Berfikir Aras Tinggi (KBAT) Bagi Tiga Komponen Utama Kurikulum Matematik Sekolah                        | Member | NATIONAL | FRGS FUND                | 68,200 | 01/07/2014 | 30/06/2016 | R.J130000.7831.4F426 |
| 66. | Physics Problem Solving From Metacognitive Perspective   | Member | NATIONAL | FRGS FUND                | 68,200 | 01/07/2014 | 30/06/2016 | R.J130000.7831.4F427 |
| 67. | Pembangunan Model Refleksi Berfokuskan Pengetahuan Pedagogi Kandungan Secara Kolaborasi Dalam Kalangan Pendidik Sains dan Teknologi Peringkat IPTA | Member | UTM      | Tier 1                   | 23,000 | 01/04/2014 | 31/03/2016 | Q.J130000.2531.08H19 |
| 68. | Seminar & Bengkel Bio Komuniti Utm-Uty Dan Penduduk Felda Tawar 3, Kota Tinggi   | Member | Others   | Networking Grant         | 55,000 | 08/03/2016 | 15/03/2016 | S.J130000.7631.4X182 |
| 69. | English Language Camp Programme  | Member | Others   | Networking Grant         | 1,271  | 10/03/2016 | 11/03/2016 | S.J130000.7631.4X213 |
| 70. | Pembinaan Model UTM_Scenario Based Learning (SBL) dan Integrasi Model UTM-SBL dalam SiSTEM E-learning UTM  | Member | UTM      | UTM R&D Fund             | 34,000 | 16/10/2013 | 16/01/2016 | R.J130000.7731.4J123 |
| 71. | Pembinaan Model UTM_Scenario Based Learning (SBL) dan Integrasi Model UTM-SBL dalam SiSTEM E-learning UTM  | Member | UTM      | UTM R&D Fund             | 34,000 | 16/10/2013 | 15/10/2015 | A.J160000.7731.4J111 |
| 72. | Students' and Teachers' EpiSTEMoligical Beliefs in Learning and Teaching Science   | Member | NATIONAL | FRGS FUND                | 60,000 | 01/04/2013 | 30/09/2015 | R.J130000.7810.4F162 |
| 73. | Model Kurikulum Sains Berasaskan Karakter Nobel Saintis Muda Islam Masa Hadapan  | Member | NATIONAL | FRGS FUND                | 60,000 | 01/04/2013 | 31/03/2015 | R.J130000.7831.4F199 |
| 74. | Pembangunan MyGSP: Sumber Atas Talian Bahan Pengajaran Matematik Berbantuan Perisian Geometer's Sketchpad (GSP)                                    | Member | UTM      | Potential Academic Staff | 20,000 | 01/10/2013 | 30/09/2014 | Q.J130000.2731.00K58 |
| 75. | Future Pedagogy Model  | Member | UTM      | Flagship                 | 15,000 | 01/04/2013 | 31/03/2014 | Q.J130000.2431.00G99 |
| 76. | Technological Pedagogical Content Knowledge of   | Member | UTM      | Flagship                 | 30,000 | 01/04/2013 | 31/03/2014 | Q.J130000.           |

|     |   |        |     |                          |           |            |            |                         |
|-----|---|--------|-----|--------------------------|-----------|------------|------------|-------------------------|
|     | Postgraduates in Learning to Teach With Blossom Videos  |        |     |                          |           |            |            | 2431.01 G29             |
| 77. | Keberkesanan Pengetahuan Pedagogi Kandungan (PCK) bagi membantu Pensyarah UTM Melaksanakan Penambahbaikan Berterusan dalam Proses Pengajaran dan Pembelajaran | Member | UTM | UTM R&D Fund             | 12,000    | 01/08/2012 | 31/01/2014 | A.J160 000. 7731.4J 086 |
| 78. | Exploring the intentions and expectations of female PhD international students in Education and Engineering at Universiti Teknologi Malaysia                  | Member | UTM | Tier 2                   | 32,000    | 01/12/2012 | 31/12/2013 | Q.J130 000. 2631.09 J09 |
| 79. | Framework Of Critical And Creative Thinking In Complex Engineering Problem-Solving  | Member | UTM | UTM Fundamental Research | 84,922.25 | 01/01/2020 | 30/06/2013 | Q.J130 000.255 3.20H8 6 |
| 80. | Students' and Teachers' EpiSTEMoligical Beliefs in Learning and Teaching Science as Pedictors of Students' Tendency Towards Enrolling Science Stream          | Member | UTM | Tier 2                   | 40,000    | 01/04/2011 | 30/09/2012 | Q.J130 000. 2631.02 J97 |
| 81. | Relationship Between Cognitive Styles, Levels of Cognitive Thinking and Chemistry Archievement Among Form Four Science Students                               | Member | UTM | Short Term               | 40,000    | 30/09/1999 | 29/09/2000 | 75024                   |

#### COLLABORATION / MOU

| NO | NAME OF MOU  | LEVEL OF MOU (NATIONAL/INTERNATIONAL) | STARTING DATE | ENDING DATE |
|----|--|---------------------------------------|---------------|-------------|
| 1  | MoU Kerjasama Antara Yayasan KRU Dengan UTM  | NATIONAL                              | 12/10/2021    | 29/12/2022  |
| 2  | MoA Donation Of Goods Agreement Between UTM And Huawei Technologies (Malaysia) Sdn. Bhd  | INTERNATIONAL                         | 28/11/2021    | 31/12/2021  |
| 3  | MoA Aerosol Box Research Between Chaipattana Foundation Thailand - Universiti Teknologi Malaysia   | INTERNATIONAL                         | 2/12/2021     | 31/12/2021  |
| 4  | MoU Collaboration Between Zubedy Education Sdn Bhd And UTM   | NATIONAL                              | 2/12/2019     | 31/12/2020  |
| 5  | MoU bagi Kajian Pelaksanaan Pengukuran Pulangan Pelaburan Bagi Penyelidikan, Pembangunan, Dan Pengkomersialan Antara UTM Dengan Kementerian Pengajian Tinggi | NATIONAL                              | 1/2/2019      | 31/7/2019   |
| 6  | MoU Perkongsian Pintar Program Kebun Kejiranan antara UTM dan IRDA   | NATIONAL                              | 27/12/2018    | 31/12/2019  |

|    |   |               |           |            |
|----|---|---------------|-----------|------------|
| 7  | MoU Sit In Latihan Mengajar Mahasiswa Indonesia Antara UTM Dan Universitas Marang | INTERNATIONAL | 31/7/2017 | 27/8/2017  |
| 8  | MoU Local Agenda 21 Kuala Lumpur Antara UTM Dan Bandaraya Kuala Lumpur            | NATIONAL      | 24/9/2017 | 31/12/2018 |
| 9  | MoU Synergy PhD Program Between UTM And Kementerian Pelajaran Malaysia            | NATIONAL      | 26/5/2014 | 31/12/2014 |
| 10 | MoU Mit Blossom Between Massachusetts Institute of Technology And UTM             | INTERNATIONAL | 1/1/2013  | 31/12/2013 |

## TEACHING ACTIVITIES

| Summary            |     |
|--------------------|-----|
| Total Credit Hours | 174 |

## UNDERGRADUATES

| YEAR OF SEMESTER | SEMESTER (1/2) | SUBJECT CODE | NAME OF SUBJECT  | CREDIT HOUR | SECTION |
|------------------|----------------|--------------|--|-------------|---------|
| 2021/2022        | 2              | MHPN1113     | Model Pengajaran Dan Pembelajaran Sains                | 3           | 1       |
| 2021/2022        | 2              | MHPK1213     | Inovasi Dan Kreativiti Dalam Pendidikan Kimia          | 3           | 1       |
| 2021/2022        | 1              | MHPK1113     | Model Pengajaran Dan Pembelajaran Dalam Kimia          | 3           | 1       |
| 2020/2021        | 2              | MPPK1353     | Penyelesaian Masalah Dalam Kimia                       | 3           | 1       |
| 2020/2021        | 2              | MPPU1070     | Analisis Kritikal                                      | 0           | 1       |
| 2020/2021        | 2              | MPPU1074     | Kaedah Penyelidikan Dan Analisis Data Dalam Pendidikan | 4           | 1       |
| 2020/2021        | 2              | MPPU1080     | Penulisan Akademik                                     | 0           | 1       |
| 2020/2021        | 2              | UHPP0010     | Kaedah Penyelidikan Dan Analisis Data                  | 0           | 1       |
| 2020/2021        | 1              | MPPK1113     | Model Pengajaran Dan Pembelajaran Dalam Kimia          | 3           | 1       |
| 2020/2021        | 1              | MPPU1070     | Analisis Kritikal                                      | 0           | 1       |
| 2020/2021        | 1              | MPPU1074     | Kaedah Penyelidikan Dan Analisis Data Dalam Pendidikan | 4           | 1       |
| 2020/2021        | 1              | MPPU1080     | Penulisan Akademik                                     | 0           | 1       |
| 2020/2021        | 1              | UHPP0010     | Kaedah Penyelidikan Dan Analisis Data                  | 0           | 1       |
| 2019/2020        | 2              | MPPK1313     | Inovasi Dan Kreativiti Dalam Pendidikan Kimia          | 3           | 1       |
| 2019/2020        | 1              | MPPK1313     | Inovasi Dan Kreativiti Dalam Pendidikan Kimia          | 3           | 1       |
| 2019/2020        | 1              | MPPK1113     | Model Pengajaran Dan Pembelajaran Dalam Kimia          | 3           | 1       |
| 2018/2019        | 1              | PPS 2303     | Reka Bentuk Dan Perlaksanaan Kurikulum Fizik           | 3           | 1       |
| 2018/2019        | 1              | MPPK1103     | Reka Bentuk Dan Perlaksanaan Kurikulum Kimia           | 3           | 1       |
| 2018/2019        | 1              | MPPK 113     | Model Pengajaran Dan Pembelajaran Dalam Kimia          | 3           | 1       |
| 2018/2019        | 1              | MPS 1303     | Model Pengajaran Dan Pembelajaran Kimia                | 3           | 1       |
| 2017/2018        | 1              | MPS 1353     | Inovasi Dan Kreativiti Dalam Pendidikan Kimia          | 3           | 1       |
| 2017/2018        | 1              | MPPK 313     | Inovasi Dan Kreativiti Dalam Pendidikan Kimia          | 3           | 1       |
| 2017/2018        | 1              | MPS 1343     | Komputer Dalam Pendidikan Kimia                        | 3           | 1       |
| 2017/2018        | 1              | MPPK1343     | Teknologi Dalam Pendidikan Kimia                       | 3           | 1       |
| 2017/2018        | 1              | MPS 1303     | Model Pengajaran Dan Pembelajaran Kimia                | 3           | 1       |
| 2017/2018        | 1              | MPPK1113     | Model Dan Pengajaran Dan Pembelajaran Dalam Kimia      | 3           | 1       |
| 2017/2018        | 1              | MPPK 353     | Penyelesaian Masalah Dalam Kimia                       | 3           | 1       |
| 2016/2017        | 2              | DSS 3122     | Sains, Teknologi Dan Masyarakat                        | 2           | 1       |

|               |   |                    |   |     |   |
|---------------|---|--------------------|---|-----|---|
| 2016/2017     | 2 | DSCS 122           | Isu-Isu Samasa Sains Hayat                    | 2   | 1 |
| 2016/2017     | 1 | MPPK 323           | Kemahiran Berfikir Dalam Pendidikan Kimia     | 3   | 1 |
| 2016/2017     | 1 | MPPK1353           | Penyelesaian Masalah Dalam Pendidikan Kimia   | 3   | 1 |
| 2016/2017     | 1 | MPPK1313           | Inovasi Dan Kreativiti Dalam Pendidikan Kimia | 3   | 1 |
| 2016/2017     | 1 | MPPK1343           | Teknologi Dalam Pendidikan Kimia              | 3   | 1 |
| 2015/2016     | 2 | MPS 1313           | Penyelesaian Masalah Dalam Pendidikan Kimia   | 3   | 1 |
| 2015/2016     | 2 | MPS 1313           | Komputer Dalam Pendidikan Kimia               | 3   | 1 |
| 2014/2015     | 1 | UKQL3012           | UTM And Service Learning                      | 1   | 1 |
| 2013/2014     | 2 | MPS 1313           | Komputer Dalam Pendidikan Kimia               | 3   | 1 |
| 2013/2014     | 2 | UKQL1012           | Utm And Service Learning                      | 1   | 1 |
| 2013/2014     | 2 | MPS 1313           | Penyelesaian Masalah Dalam Pendidikan Kimia   | 3   | 1 |
| 2012/2013     | 2 | MPS 1313           | Komputer Dalam Pendidikan                     | 3   | 1 |
| 2012/2013     | 2 | SPU 4904           | Projek Sarjana Muda                           | 4   | 1 |
| 2012/2013     | 1 | MPS 1313           | Penyelesaian Masalah Dalam Pendidikan Kimia   | 3   | 1 |
| 2012/2013     | 1 | PPS 2393           | Isu-Isu Semasa Dalam Pendidikan Kimia         | 3   | 1 |
| 2011/2012     | 2 | MPS 1353           | Rekabentuk Dan Pelaksanaan Kurikulum Kimia    | 3   | 1 |
| 2011/2012     | 2 | MPS 1143 / MPS1343 | Komputer Dalam Pendidikan Kimia               | 3   | 1 |
| 2010/2011     | 2 | SPN 4142           | Pendidikan Kimia                              | 2   | 1 |
| 2010/2011     | 2 | SPN 2112           | Kaedah Mengajar Kimia                         | 2   | 1 |
| 2010/2011     | 2 | SPN 3131           | Pendidikan Amali Kimia li                     | 1   | 1 |
| 2010/2011     | 2 | SPN 2001           | Pengajaran Mikro                              | 1   | 1 |
| 2010/2011     | 1 | SPN 1022           | Pembelajaran Sains Dan Matematik              | 2   | 1 |
| 2010/2011     | 1 | SPN1012            | Kurikulum Sains Dan Matematik                 | 2   | 1 |
| 2010/2011     | 1 | SPN 3131           | Pendidikan Amali Kimia I                      | 1   | 1 |
| 2010/2011     | 1 | SPA 3008           | Latihan Mengajar                              | 8   | 1 |
| 2005/2006     | 2 | SPN 1022           | Pembelajaran Sains Dan Matematik              | 2   | 1 |
| 2005/2006     | 2 | SPN 3131           | Pendidikan Amali Kimia li                     | 1   | 1 |
| 2005/2006     | 2 | SPN 2052           | Pengurusan Dan Keselamatan Makmal             | 2   | 1 |
| 2005/2006     | 2 | SPN 2001           | Pendidikan Amali Sains I                      | 1   | 1 |
| 2005/2006     | 2 | SPN 2421           | Pendidikan Amali Sains li                     | 1   | 1 |
| 2005/2006     | 1 | SPN 2052           | Pengurusan Dan Keselamatan Makmal             | 2   | 1 |
| 2005/2006     | 1 | SPA2001            | Pengajaran Mikro                              | 1   | 1 |
| 2005/2006     | 1 | SPN 2421           | Pendidikan Amali Sains I                      | 1   | 1 |
| 2000/2001     | 1 | MPS 2193           | Model Pengajaran Dan Pembelajaran Kimia       | 3   | 1 |
| 2000/2001     | 1 | SPA 2001           | Pengajaran Mikro                              | 1   | 1 |
| Total credits |   |                    |   | 174 |   |

## SUPERVISION

| Summary  |    |
|--|----|
| Main Supervisor – PhD (Graduated)                    | 5  |
| Co-Supervisor – PhD (Graduated)                      | 3  |
| Main Supervisor – PhD (Ongoing)                      | 7  |
| Co-Supervisor – PhD (Ongoing)                        | 1  |
| Main Supervisor- Master by Research (Graduated)      | 5  |
| Main Supervisor- Master by Research (On-Going)       | 0  |
| Main Supervisor- Master by Taught Course (Graduated) | 8  |
| Main Supervisor- Master by Taught Course (On-Going)  | 0  |
| Main Supervisor- Master by Mixed-Mode (Graduated)    | 10 |
| Main Supervisor- Master by Mixed-Mode (On-Going)     | 1  |

**PhD Student**

| No  | Name  | Status (Graduated/ Ongoing) | Title  | Roles of Supervision | Date of Graduated                             |
|-----|---|-----------------------------|--|----------------------|---|
| 1.  | Nurdiana Binti Abdullah (Malaysia)              | Graduated                   | Kerangka Pemikiran Imajinasi Saintifik Pelajar Pada Aras Submikroskopik  | Main supervisor      | 9 Mac 2016                                    |
| 2.  | Heng Lee Ling (Malaysia)                        | Graduated                   | Strategi Penghujahan Saintifik Terhadap Perubahan Konseptual Konsep Asid Dan Bes   | Main supervisor      | 15 Feb 2016                                   |
| 3.  | Muzammila Akram (Pakistan)                      | Graduated                   | Constructivist Model To Encounter Language Misconceptions, Prior Knowledge Overgeneralizations And Visualization Errors In Electrochemistry        | Main supervisor      | 5 Okt 2016                                    |
| 4.  | Jenny Cheong Oi Lee (Malaysia)                  | Graduated                   | Student-Teacher Interactions In Traditional And Collaborative Guided Inquiry Chemistry Practical Work  | Main supervisor      | 19 sept 2019                                  |
| 5.  | Chuzairy Hanri (Malaysia)                       | Graduated                   | Pengamalan Penghujahan Saintifik Dalam Pembelajaran Kimia  | Main supervisor      | 30 Jan 2019                                   |
| 6.  | Wan Nurul Aini Binti Wan Nor Yuhaidi (Malaysia) | Ongoing                     | Kerangka Pemikiran Saintifik Berpaksikan Pengintegrasian Aspek Kognitif, Psikomotor Dan Afektif  | Main supervisor      |   |
| 7.  | Marlina Binti Ali (Malaysia)                    | Ongoing                     | Kerangka Penyelesaian Masalah Fizik Bukan Rutin Pelajar Prasiswazah Mengikut Perspektif Metakognitif   | Main supervisor      |   |
| 8.  | Usha Devi A/P Ramasundram (Malaysia)            | Ongoing                     | Enhancing EpiSTEMic Fluency In Chemistry Through Design Thinking   | Main supervisor      |   |
| 9.  | Nur Hamidah Syahirah Binti Ruhizat (Malaysia)   | Ongoing                     | Kefahaman Pelajar Sekolah Menengah Tentang Konsep Tindak Balas Pada Tiga Aras Pemikiran  | Main supervisor      |   |
| 10. | Wang Huarong (Malaysia)                         | Ongoing                     | Tahap Kefahaman Dan Pelaksanaan Pendidikan STEM Bersepadu Serta Cabaran Yang Dihadapi Oleh Guru Kimia Di Johor Bahru                               | Main supervisor      |   |
| 11. | Tan Yin Peen (Malaysia)                         | Ongoing                     | A Study Of The Facilitation And Learning Process In Malaysian Secondary School Chemistry Lessons Incorporating Problembased Learning Pbl Component | Main supervisor      | Menamatkan pengajian kerana masalah kesihatan |
| 12. | Suraiya Binti Haji Muhamad (Malaysia)           | Graduated                   | Effect Of Authentic Chemistry Problem Solving Competency In Solving Open - Ended Problems  | Co-supervisor        | 21 Mac 2019                                   |
| 13. | Siti Salbiah Binti Omar (Malaysia)              | Graduated                   | Model Kreativiti Terarah, Kemahiran Proses Sains Dan Soalan Terbuka Bagi Menggalakkan Kreativiti Dalam Pembelajaran Kimia                          | Co-supervisor        | 18 Dis 2019                                   |
| 14. | Salina Binti Abdullah Sangguro (Malaysia)       | Graduated                   | Skema Pemikiran Pelajar Sekolah Menengah Dalam Menyelesaikan Masalah Stoikiometri Kimia  | Co-supervisor        | 24 Feb 2022                                   |

|     |  |          |  |            |  |
|-----|--|----------|--|------------|--|
| 15. | Mahfoodha Mohamed Khamis Al-Nasseri (Oman) | On-going | Scientific Creativity In Chemistry Using STEM-Project Based Learning | Supervisor |  |
|-----|--|----------|--|------------|--|

### MSc. Student

| No | Name  | Status (Graduated /Ongoing) | Title  | Mode (Research / Taught-course/ Mixed Mode) | Roles of Supervision | Date of Graduated |
|----|---|-----------------------------|--|---|----------------------|-------------------|
| 1. | Suziana Binti Yusoff (Malaysia)                 | Graduated                   | Pengetahuan dan sikap pelajar terhadap masyarakat rendah karbon dalam kurikulum sains sekolah menengah                             | Research                                    | Main supervisor      | 10 Dis 2013       |
| 2. | Rafidatul Binti Suib (Malaysia)                 | Graduated                   | Keberkesanan pembelajaran menggunakan modul berasaskan model pembangunan pemikiran saintifik bagi mata pelajaran kimia tingkatan 4 | Research                                    | Main supervisor      | 7 Jan 2015        |
| 3. | Zainab Binti Jelani (Malaysia)                  | Graduated                   | Modul Pengajaran Bersepadu Tingkatan Dua Di Sekolah Menengah   | Research                                    | Main supervisor      | 5 Okt 2016        |
| 4. | Vicki Artika (Indonesia)                        | Graduated                   | Ruang pembelajaran bagi Menyokong Pelaksanaan Akademia Baru di UTM   | Research                                    | Co-supervisor        | 18/2/2015         |
| 5. | Noorshaqila Abd Karim (Malaysia)                | Graduated                   | Pembelajaran koperatif bagi tajuk Jirim dalam mata pelajaran Kimia   | Mixed Mode                                  | Main supervisor      | 21 Mei 2015       |
| 6  | Salina Binti Abdullah Sangguro (Malaysia)       | Graduated                   | Visualisasi Bagi Membantu Penguasaan Aras Mikroskopik  | Mixed Mode                                  | Main supervisor      | 4 Dis 2013        |
| 7  | Wan Nurul Aini Binti Wan Nor Yuhaidi (Malaysia) | Graduated                   | Keberkesanan Model Inkuiri-Penemuan Terbuka Pelbagai Aras Bagi Konsep Tindak Balas Kimia   | Mixed Mode                                  | Main supervisor      | 5 Dis 2012        |
| 8  | Vinogharry Muniandy (Malaysia)                  | Graduated                   | Strategi Pengutaraan Masalah Bagi Meningkatkan Kemahiran Berfikir Aras Tinggi Dalam Mata Pelajaran Kimia                           | Mixed Mode                                  | Main supervisor      | 3 Ogos 2016       |
| 9  | Norhaqikah Binti Mohamad Khalil (Malaysia)      | Graduated                   | Penjanaan Anologi Kendiri oleh Pelajar bagi Memahami Konsep Ikatan Kimia   | Mixed Mode                                  | Main supervisor      | 6/8/2014          |
| 10 | Fauziah (Indonesia)                             | Graduated                   | Modul Inkuiri Terbuka bagi Persamaan Kimia   | Mixed Mode                                  | Main supervisor      | 18/2/2015         |
| 11 | Kalairani A/P Ravinthiran (Malaysia)            | Graduated                   | Pembangunan dan Keberkesanan Modul Pengajaran Konstruktivisme-Koperatif bagi Konsep Jisim  | Mixed Mode                                  | Main supervisor      | 18/2/2015         |
| 12 | Rahayu Ezrainie Binti Shuhimi (Malaysia)        | Graduated                   | Inkuiri-Visual dalam Pembelajaran Amali Kimia  | Mixed Mode                                  | Main supervisor      | 27 Mei 2015       |
| 13 | Lavaniya A/P Chelvan (Malaysia)                 | Graduated                   | Development of scientific literacy competencies in Chemistry Education among students through Problem Based Learning               | Taught-course                               | Main supervisor      | 17 Okt 2018       |

|    |   |           |  |               |                 |             |
|----|---|-----------|--|---------------|-----------------|-------------|
| 14 | Rohaida Binti Ikramullah (Malaysia)                   | Graduated | Kerangka Alternatif Konsep Asid Dan Bes Dalam Kalangan Pelajar Tingkatan Empat                                       | Taught-course | Main supervisor | 31 Mac 2021 |
| 15 | Yasheni A/P Raman (Malaysia)                          | Graduated | Kemahiran Penyelesaian Masalah bagi Topik Asid dan Bes dalam Kalangan Pelajar Tingkatan Empat                        | Taught-course | Main supervisor | 25/7/2018   |
| 16 | Shanthy A/P Tamilselvam (Malaysia)                    | Graduated | Scenario Based Learning in Teaching Problem Solving Models   | Taught-course | Main supervisor | 14/2/2018   |
| 17 | Nurul Ain Binti Hamsari (Malaysia)                    | Graduated | Keberkesanan Pendekatan Pembelajaran Berasaskan Masalah Bagi Mengatasi Kerangka Alternatif Dalam Topik Elektrokimia  | Taught-course | Main supervisor | 23/7/2019   |
| 18 | Nik Mariam-Jamilah Binti Nik Lukmanulhakim (Malaysia) | Graduated | Miskonsepsi Pelajar Tingkatan Empat bagi Topik Formula dan Persamaan Kimia   | Taught-course | Main supervisor | 23/7/2019   |
| 19 | Tey Ming Yeow (Malaysia)                              | Graduated | Tahap Literasi Sainifik bagi Topik Jirim dalam Kalangan Pelajar Tingkatan Empat                                      | Taught-course | Main supervisor | 26/8/2020   |
| 20 | Aledrese Alaa Ameen Bin Muhammed Saeed (Malaysia)     | Graduated | Developing Module Of Science Process Skills In The Topic of Molarity Based on Open-Inquiry Based Learning Strategies | Taught-course | Main supervisor | 25/8/2021   |
| 21 | Sim Sing Jye (Malaysia)                               | Graduated | The level of scientific skill among chemistry students   | Taught-course | Main supervisor | 25/8/2021   |
| 22 | Pua Yoke Ching (Malaysia)                             | Graduated | Tahap Kefahaman, Pelaksanaan Dan Cabaran Yang Dihadapi Oleh Guru Kimia Dalam Pendidikan STEM Bersepadu               | Taught-course | Main supervisor | 21 Feb 2022 |
| 23 | Liang Yoon Chin (Malaysia)                            | On-Going  | Fostering Green Chemistry among Students using Problem Based Learning  | Taught-course | Main supervisor | 30/8/2023   |
| 24 | Ruhaida Ab Rahim                                      | Graduated | Amalan penerapan kemahiran insaniah berdasarkan inkuiri terbuka dalam kursus amali di UTM                            | Taught-course | Main supervisor | 18/9/2012   |
| 25 | Siti Fairuz Dalim                                     | Graduated | Algorithms and Conceptual and Open-Ended Problems Solving in Chemistry   | Taught-course | Main supervisor | 18/9/2012   |
| 26 | Shazwani Abu Bakar                                    | Graduated | Pembelajaran konsep sains menggunakan perisian berasaskan web dalam konteks sekolah bestari                          | Taught-course | Main supervisor | 13/3/2013   |
| 27 | Omelia Ormawi   | Graduated | Persepsi Mahasiswa Pendidikan Kimia Dalam Proses Pembelajaran Berasaskan Masalah                                     | Taught-course | Main supervisor | 3/8/2016    |
| 28 | Nurulsiqqin Ahmad Shah                                | Graduated | Kemahiran Penyelesaian Masalah bagi Topik Jirim dalam Kalangan Pelajar Tingkatan Empat                               | Taught-course | Main supervisor | 1/3/2017    |
| 29 | Hou Qing Zhong  | Graduated | Pembelajaran Masalah dalam kalangan pelajar  | Taught-course | Main supervisor | 2/8/2017    |

| Summary                     |    |
|-----------------------------|----|
| MSc. Internal Examiner      | 4  |
| PhD Internal Examiner       | 12 |
| Fast track student examiner | -  |
| Others Examiner             | -  |

### Msc Internal Examiner

| NO | ROLE                 | STUDENTS NAME                | TITLE  | YEAR         |
|----|----------------------|------------------------------|--|--------------|
| 1. | Internal Examiner    | Rosmainy bin Gulam           | Tinjauan Keberkesanan Peperiksaan Berpusat Amali Sains Dalam Mengukur Kemahiran Proses Sains Asas dan Kekangan-Kekangan dalam Melaksankannya | Oktober 2015 |
| 2. | Internal Examiner    | Safiah bin Abd Raub          | Pembangunan laman web dan pengaplikasian model Webquest bagi Pembelajaran Kimia  | Mac 2013     |
| 3. | Internal Chairperson | Mohd Fadhli bin Zakaria      | Keberkesanan Modul Nilai Kelestarian dalam Tajuk Kerja, Tenaga, Kuasa dan Kecekapan Alat Tingkatan 4   | March 2015   |
| 4. | Internal Chairperson | Khairul Asmadi bin Abu Bakar | Amalan Guru Sains Sekolah Rendah Terhadap Pengajaran Inkuiri   | April 2013   |

### PhD Internal Examiner

| NO | ROLE              | STUDENTS NAME                  | TITLE  | YEAR          |
|----|-------------------|--------------------------------|--|---------------|
| 1  | Internal Examiner | Anis Diyana Binti Halim        | Peranan Perwakilan Multimodal Dalam Perubahan Konsep Haba Bagi Pembelajaran Fizik  | May 2019      |
| 2  | Internal Examiner | Ilda Salwani Binti Ameer Hamza | Kesan Strategi Pembelajaran Berasaskan Kaedah Perbandingan Terhadap Kemahiran Membuat Anggaran Pengiraan Dan Kepekaan Nombor | Jun 2019      |
| 3  | Internal Examiner | Chandra A/P Sinniah            | Pembelajaran Berasaskan Masalah Bukan Rutin Berbantuan Geogebra Terhadap Kreativiti Matematik Dalam Penyelesaian Masalah     | Ogos 2019     |
| 4  | Internal Examiner | Lee Yeng Hong                  | The Effects of Elements of Argument and Chemistry Triplet on Scientific Argumentation among Secondary School Students        | May 2021      |
| 5  | Internal Examiner | Nor'Aida Khairuddin            | Development and Validation of STEM HOTS-TQA Inventory  | April 2020    |
| 6  | Internal Examiner | Erni Yullanti                  | The Roles of Design Thinking-STEM Learning Towards Student Scientific Creativity in Physics                                  | Februari 2022 |
| 7  | Internal Examiner | Siti Hamizah Binti Aspin       | Pembelajaran Berasaskan Masalah Bukan Rutin Berbantuan Geogebra Terhadap Kreativiti Matematik Dalam Penyelesaian Masalah     | Jun 2020      |

|    |                   |                         |   |               |
|----|-------------------|-------------------------|---|---------------|
| 8  | Internal Examiner | Lai Chin Siong          | The Use Of Concept Cartoons In Teaching Electricity Concepts And Promote Scientific Argumentation Skill Among Pre-Service Teachers                                    | Julai 2021    |
| 9  | Internal Examiner | Siti Hajar Binti Ramzan | Heuristic Inquiry On Teachers` Habit Of Mind Enacted In Inquiry   | Mac 2021      |
| 10 | Internal Examiner | Victor Kayode Ojomoh    | Effects Of Virtual Laboratory On The Conceptual Understanding Of Thermalphysics And Self-Efficacy Among Undergraduates  | November 2020 |
| 11 | Internal Examiner | Faruku Aliyu            | Visualization Based Guided Inquiry Learning And Students' Spatial Visualization Skills, Spatial Reasoning Skills And Achievement In Chemical Bonding                  | Jun 2020      |
| 12 | Internal Examiner | Usman Galadina          | Pedagogical Content Knowledge of Pre-Service Mathematical Teachers in an Integrated Science, Technology, Engineering, and Mathematics Course in Sokoto State, Nigeria | Jun 2020      |

#### EXTERNAL EXAMINATION/ VIVA

| Summary                |    |
|------------------------|----|
| MSc. External Examiner | -  |
| PhD External Examiner  | 24 |
| Others Examiner        | -  |

#### PhD External Examiner

| NO | ROLE              | STUDENTS NAME                    | TITLE  | YEAR |
|----|-------------------|----------------------------------|--|------|
| 1  | External Examiner | Faruhana Abdulla                 | Influences of Direct Nature Experiences on Biodiversity Knowledge, Attitudes and Conservation Willingness Among Maldivian Children   | 2022 |
| 2  | External Examiner | Samri Bin Chongo                 | Pembangunan Dan Keberkesanan Modul CT-CHEM Terhadap Pencapaian, Pemikiran Komputasional Dan Motivasi Dalam Topik Elektrokimia.   | 2021 |
| 3  | External Examiner | Yasseen Mohammad Ahmad Arababah  | Effects of Cognitive Conflict Instructional Strategy and Motivation on Conceptual Change in Algebra and Attitude Towards Algebra among Tenth Graders in the United Arab Emirates | 2021 |
| 4  | External Examiner | Abdul Halim Bin Roslan           | Pembangunan Modul Gravi-STEM Dan Kebolehgunaan Serta Kesannya Terhadap Konsep Alternatif, KBAT Dan Minat Murid Tingkatan 4 Dalam Topik Kegravitian                               | 2021 |
| 5  | External Examiner | Hidayatul Illah Binti Ahmad Saad | Pembangunan Modul Biod STEM Animalia Peringkat Pra Universiti  | 2021 |
| 6  | External Examiner | Ahmad Muslihin Bin Ahmad         | Kompetensi dan Kesiediaan Guru Sains Praperkhidmatan terhadap Pelaksanaan Pendidikan STEM  | 2021 |

|    |                   |                                |  |      |
|----|-------------------|--------------------------------|--|------|
| 7  | Moderator         | Mohamed Noor Rosli Bin Baharom | The Level of Business Acumen Skills Among Interns in Universiti Teknologi Petronas Student Industrial Internship Program   | 2021 |
| 8  | External Examiner | Ahmad Muslihin Bin Ahmad       | Kompetensi dan kesediaan Guru Sains Praperkhidmatan Terhadap Pelaksanaan Pendidikan STEM   | 2021 |
| 9  | External Examiner | Taufek Bin Muhammad            | Kepimpinan Instruksional Pengetua dan Pengaruh Terhadap Penglibatan Kerja dan Kompetensi Guru Sains dan Matematik  | 2021 |
| 10 | External Examiner | Mushi Saumu Athumani           | The Implementation Of Inquiry-Based Approach In Teaching Geography Among Secondary Schools In Tanzania: A Case Study   | 2020 |
| 11 | External Examiner | Dashe Nanchen Peter            | Comparing The Effect Of Concept Map And Mind Map On The Attitude, SySTEMs Thinking Skills, Creativity And Academic Achievement In The Ecology Of Senior Secondary Schools' Students In Nigeria   | 2020 |
| 12 | External Examiner | Fetty Shamy Lin Binti Yahaya   | Elemen Kemahiran Berfikir Kritis Menerusi Pembelajaran STEM Berasaskan Robot Dalam Kalangan Pelajar Sekolah Menengah Tuaran Sabah  | 2020 |
| 13 | External Examiner | Marlina Binti Abdullah         | Kesan Penggunaan Modul Pendekatan Muzikal berasaskan Model Regulasi Emosi Terhadap Pengetahuan, Sikap Dan Amalan Nutrisi Murid Tahun Lima  | 2020 |
| 14 | External Examiner | Mohd Shukri Bin Mohd Ali       | Pembinaan Modul Pembelajaran STEM Berasaskan Cabaran Reka Bentuk Kejuruteraan dan Kesannya Kepada Sikap Dan Pencapaian Pelajar   | 2020 |
| 15 | External Examiner | Munaratul Aini Binti yahya     | Pembangunan Dan Penilaian Keberkesanan Manual Elektrokimia (Dengan Asimilasi Kemahiran Penaakulan Sainifik) Bagi Meningkatkan Pemahaman Konsep Elektrokimia, Kemahiran Penaakulan Sainifik Serta Motivasi Belajar Dalam Kalangan Pelajar Tingkatan 4 | 2019 |
| 16 | External Examiner | Shatisha Goonasakaran          | Development And Evaluation Of An Integrated STEM Through Engineering Design Module Towards Students' Achievement, Critical Thinking And STEM Career Interest   | 2019 |
| 17 | External Examiner | Edy Hafizan Bin Mohd Shahali   | Model Sumbangan Faktor Peribadi dan Faktor Kontekstual terhadap Pelaksanaan Pengintegrasian STEM dalam Kalangan Guru Sains   | 2019 |
| 18 | External Examiner | Masala Binti Alias             | Pembinaan dan Keberkesanan Modul Pembelajaran Berasaskan Masalah Kelas Berbalik Terhadap Pembelajaran Kimia  | 2018 |
| 19 | External Examiner | Norazlilah binti Md. Nordin    | Pembinaan dan Penilaian Modul Kantamation PMSK dalam Pembelajaran Penyelesaian Masalah Subtopik Kanta Fizik  | 2018 |
| 20 | External Examiner | Punia binti Turiman            | Pembinaan dan Keberkesanan Modul Chemdatalog terhadap Pencapaian Kimia, Literasi Era Digital dan Sikap Sainifik  | 2018 |

|    |                   |                          |   |      |
|----|-------------------|--------------------------|---|------|
| 21 | External Examiner | Salbihana binti Samsudin | Keberkesanan Kerja Rumah Interaktif Sains dalam Membantu Murid Menguasai Kemahiran Proses Memerhati melalui Penglibatan Ibu Bapa di Sekolah Rendah                | 2018 |
| 22 | External Examiner | Murugan a/l Mini Ratnum  | Pembangunan dan Keberkesanan Makmal Maya Berbanding Makmal Fizikal Dalam Pembelajaran Topik Garam Kimia Tingkatan Empat   | 2017 |
| 23 | External Examiner | Shehu Danladi Zayum      | Effect Of Environmental Education PBL On Pre-Service Biology Teachers' Pck, Teaching Efficacy Belief, Intention And Extent Of Integrating Ee Into Biology Lessons | 2017 |
| 24 | External Examiner | Siti Zubaidah Binti Omar | Strategi Pembelajaran Kemahiran Pemodelan Kimia Melalui Pembelajaran Inkuiri  | 2018 |

## PUBLICATIONS

| Summary                             |    |
|-------------------------------------|----|
| ISI Article/Journal                 | 30 |
| Scopus Article/Journal              | 79 |
| Non-Indexed Article/Journal         | 12 |
| Indexed Conference Proceedings      | 2  |
| Non- Indexed Conference Proceedings | 75 |
| Book Chapter                        | 14 |
| Original Book                       | 1  |
| Classified/Technical /Expert Report | 0  |
| Policy Paper                        | 0  |

## ISI Article / Journal

| No. | Article Title  | Journal Title    | ISSN        | Vol. | Issues | Page        | Publication Year | If | Type Of Publication | Category Of Publication | Quartile Ranking |
|-----|--|------------------|-------------|------|--------|-------------|------------------|----|---------------------|-------------------------|------------------|
| 1   | New literacies: Multimodal and social orientation of 'new' in secondary science classrooms | Cogent Education | 2331 - 186X | 10   | 2      | 2245 - 982  | 2023             |    | Web Of Science      | Article                 | Q2               |
| 2   | The Effectiveness of a Technology-Based  | IEEE Access      | 2169 - 3536 | 11   |        | 4155 - 4172 | 2023             |    | Web Of Science      | Article                 | Q1               |

|   |  |  |             |    |    |                |      |  |                |            |    |
|---|--|--|-------------|----|----|----------------|------|--|----------------|------------|----|
|   | Isometrical Transformation Flipped Classroom Learning Strategy in Improving Students' Higher Order Thinking Skills |  |             |    |    |                |      |  |                |            |    |
| 3 | Does The Use Of Smart Board Increase Students' Higher Order Thinking Skills (Hots)?                                | IEEE Access  | 2169 - 3536 | 9  |    | 1833 - 1854    | 2022 |  | Web Of Science | Article    | Q1 |
| 4 | DOES Sketchup Make Improve Students' Visual-Spatial Skills?  | IEEE Access  | 2169 - 3536 | 10 |    | 1393 6- 1395 3 |      |  | Web Of Science | Article    | Q1 |
| 5 | The Use of Video Project Assignment (VPA) to Enhance Students' Achievement in Communicative English Subject        | International Journal Of Emerging Technologies In Learning   | 1863 - 0383 | 16 | 23 | 29- 42         |      |  | Web Of Science | Article    | Q2 |
| 5 | Effect Of STEM Competition On STEM Career Interest   | Proceedings of 2018 IEEE International Conference on Teaching, Assessment, and Learning for Engineering, TALE 2018 | 8615 161    |    |    | 855 - 860      | 2019 |  | Web of Science | Proceeding |    |
| 6 | The Effectiveness Of A Mentor-Mentee   | Proceedings Of 2018 IEEE International   | 8615 161    |    |    | 855 - 860      | 2019 |  | Web of Science | Proceeding |    |

|    |  |  |                                       |    |    |                   |      |  |                |            |    |
|----|--|--|---------------------------------------|----|----|-------------------|------|--|----------------|------------|----|
|    | Program On Malaysian School Students' Interest In STEM   | Conference On Teaching, Assessment, And Learning For Engineering, TALE 2018                  |                                       |    |    |                   |      |  |                |            |    |
| 7  | Addressing Chemical Reaction Misconceptions Using Five Phase Needham Model                                   | Processing of 2018 IEEE Global Engineering Education Conference, EDUCON 2018 April           | 8615<br>161                           |    |    | 825 -<br>834      | 2018 |  | Web of Science | Proceeding |    |
| 8  | Asking questions About Scientific Problem: An Analysis of Cognitive Level of Question among Science Students | Advanced Science Letter  | 193<br>6-<br>661<br>2                 | 24 | 6  | 4273<br>-<br>4275 | 2018 |  | Web of Science | Article    | Q2 |
| 9  | Critical Thinking From STEM Education and Al-Quran Perspectives  | Journal Of Engineering Science And Technology  | 182<br>3-<br>469<br>0                 | 13 |    | 35 -<br>41        | 2018 |  | Web of Science | Article    | Q3 |
| 10 | Effect Of STEM Competition On STEM Career Interest   | 2018 IEEE 10th International Conference On Engineering Education IEEE ICEED 2018 Proceedings | 978-<br>1-<br>538<br>6-<br>684<br>7-4 |    |    |                   | 2018 |  | Web of Science | Proceeding |    |
| 11 | The Pattern of physics Solving between More Successful and Less  | Advance Science Letters  | 193<br>6-<br>661<br>2                 | 24 | 11 | 8476<br>-<br>8479 | 2018 |  | Web of Science | Article    | Q2 |

|    |  |   |             |    |    |             |      |  |                |         |    |
|----|--|---|-------------|----|----|-------------|------|--|----------------|---------|----|
|    | Successful from Metacognitive Perspective  |   |             |    |    |             |      |  |                |         |    |
| 12 | Enhancing Students' HOTS in Laboratory educational Activity by using Concept map as an alternative Assessment Tool | Chemistry Education Research And Practice | 1109-4028   | 18 | 4  | 849 - 874   | 2017 |  | Web of Science | Article | Q2 |
| 13 | Integrating Authentic Learning Practice to Develop Problem Solving Competency in Learning Electrolysis             | Advanced Science Letters                  | 1936 - 7317 | 23 | 9  | 8325 - 8329 | 2017 |  | Web of Science | Article | Q2 |
| 14 | Investigating the Level of Scientific Creativity of Science Students   | Advanced Science Letters                  |             | 23 | 9  | 8247 - 8250 | 2017 |  | Web of Science | Article | Q2 |
| 15 | A Review of Literature in Mobile Learning: A New Paradigm in Teaching and Learning Pedagogy for Now and Then       | Advanced Science Letters                  | 1936 - 7317 | 23 | 8  | 7416 - 7419 | 2017 |  | Web of Science | Article | Q2 |
| 16 | Concept Map: Alternative Assessment Tool in Laboratory Learning of Electrolysis                                    | Advanced Science Letter                   | 1936 - 7317 | 22 | 12 | 4216 - 4220 | 2016 |  | Web of Science | Article | Q2 |

|    |   |  |                     |    |    |             |      |  |                |            |    |
|----|---|--|---------------------|----|----|-------------|------|--|----------------|------------|----|
| 17 | Designing Mobile Learning Communication Aid as an Android App   | Advanced Science Letter  | 1936 - 7317         | 22 | 12 | 4023 - 4027 | 2016 |  | Web of Science | Article    | Q2 |
| 18 | My Reflection Mobile App Promotes Critical Reflective Practice  | International Conference on Information and Communication Technology                   | 978-1-4673 - 9879-4 |    |    |             | 2016 |  | Web of Science | Proceeding |    |
| 19 | Factors Preventing Malaysian Teachers From Using Information and Communication Technology (ICT) In Teaching Mathematics | International Conference on Information and Communication Technology                   | 978-1-4673 - 9879-4 |    |    |             | 2016 |  | Web of Science | Proceeding |    |
| 20 | Mastery of Scientific Argumentation on The Concept of Neutralization in Chemistry: A Malaysian Perspective              | Malaysian Journal of Learning and Instruction  |                     | 12 |    | 85 - 100    | 2015 |  | Web of Science | Article    | Q1 |
| 21 | Web Pro-Mc Physics as A Support Tool For Improving Physics Problem Solving Skills                                       | Paper presented at Game Physics and Mechanics International Conference 2015 (GAMEPEEC) |                     |    |    | 1 - 5       | 2015 |  | Web of Science | Proceeding |    |
| 22 | Comparison of Pedagogical Content Knowledge between Expert and  | 5th International Conference On Learning And Teaching In                               | 978-1-4799 -        |    |    | 240-246     | 2014 |  | Web of Science | Proceeding |    |

|    |   |  |                   |     |  |           |      |  |                |            |
|----|---|--|-------------------|-----|--|-----------|------|--|----------------|------------|
|    | Novice Lecturers in Teaching and Learning Process   | Computing And Engineering (LATICE)   | 3591-8            |     |  |           |      |  |                |            |
| 23 | Problem Solving: Algorithms and Conceptual and Open-ended Problems in Chemistry                             | Social and Behavioral Sciences   | 1877-0428         | 116 |  | 4955-4963 | 2014 |  | Web of Science | Proceeding |
| 24 | "Typical" Teaching Method Applied in Chemistry Experiment   | Social and Behavioral Sciences   | 1877-0428         | 116 |  | 4946-4954 | 2014 |  | Web of Science | Proceeding |
| 25 | Physics problem solving strategies and metacognitive skills: force and motion topics                        | IEEE Conference on Engineering Education (ICEED)                                   | 978-1-4799-4595-5 |     |  | 133-138   |      |  | Web of Science | Proceeding |
| 26 | The Knowledge and Practice of "New Academia" Among Lecturers: A Case Study in Universiti Teknologi Malaysia | International Conference On Teaching, Assessment And Learning (TALE)               | 978-1-4799-7672-0 |     |  | 86-92     | 2014 |  | Web of Science | Proceeding |
| 27 | Particulate Nature of Matter in Chemistry: Malaysia Pre-Service Teachers' Conceptions and Understanding     | 2nd International Conference On Physical Education And Society Management (ICPESM) | 2251-3051         | 9   |  | 60-67     | 2013 |  | Web of Science | Proceeding |

|    |  |                                |             |    |  |           |      |  |                |            |  |
|----|--|--------------------------------|-------------|----|--|-----------|------|--|----------------|------------|--|
| 28 | Conceptual and Procedural Knowledge in Problem Solving   | Social and Behavioral Sciences | 1877 - 0428 | 56 |  | 416 - 425 | 2012 |  | Web of Science | Proceeding |  |
| 29 | Self Reflection Focusing on Pedagogical Content Knowledge  | Social and Behavioral Sciences | 1877 - 0428 | 56 |  | 474 - 482 | 2012 |  | Web of Science | Proceeding |  |
| 30 | The Newman Procedure for Analyzing Primary Four Pupils Errors on Written Mathematical Tasks: A Malaysian Perspective | Social and Behavioral Sciences | 1877 - 0428 | 8  |  | 264 - 271 | 2010 |  | Web of Science | Proceeding |  |

#### SCOPUS ARTICLE / JORNAL

| No | Article Title  | Journal Title                            | ISSN | Vol. | Issues | Page        | Publication Year | If | Type Of Publication | Category Of Publication | Quartile Ranking |
|----|--|--|------|------|--------|-------------|------------------|----|---------------------|-------------------------|------------------|
| 1  | The Effectiveness of a Technology-Based Isometrical Transformation Flipped Classroom Learning Strategy in Improving Students' Higher Order Thinking Skills | IEEE Access                              |      | 11   |        | 4155 - 4172 | 2023             |    | SCOPUS              | Article                 |                  |
| 2  | Drivers of Primary School Students' Achievement in Indonesia   | European Journal of Educational Research |      | 12   | 3      | 1393 - 1405 | 2023             |    | SCOPUS              | Article                 |                  |

|   |  |   |             |    |      |             |      |  |        |            |  |
|---|--|---|-------------|----|------|-------------|------|--|--------|------------|--|
|   | During Pandemic  |   |             |    |      |             |      |  |        |            |  |
| 3 | New literacies: Multimodal and social orientation of 'new' in secondary science classrooms           | Cogent Education  | 2331 - 186X | 10 | 2    | 2245 982    | 2023 |  | SCOPUS | Article    |  |
| 4 | Development of epistemic fluency in scientific context: A systematic literature review               | AIP Conference Proceedings                                    |             |    | 2673 | 1200 04     | 2023 |  | SCOPUS | Proceeding |  |
| 5 | The effectiveness of learning STEM out of the classroom on the interest & career options             | AIP Conference Proceedings                                    |             |    | 2673 | 1000 02     | 2023 |  | SCOPUS | Proceeding |  |
| 6 | Problem-based learning module of organic insecticide for the aborigine students in Malaysia          | International Journal of Evaluation and Research in Education |             | 12 | 2    | 818- 825    | 2023 |  | SCOPUS | Article    |  |
| 7 | Enhance The Understanding Of Periodic Table Of Element Using Crossword Puzzles Among Form 4 Students | Jurnal Pendidikan IPA Indonesia                               |             | 12 | 2    | 319- 328    | 2023 |  | SCOPUS | Article    |  |
| 8 | Chemistry private tutoring in Malaysia   | International Journal of Evaluation and Research in Education |             | 12 | 3    | 1618 - 1625 | 2023 |  | SCOPUS | Article    |  |

|    |  |   |             |      |      |               |      |  |        |            |  |
|----|--|---|-------------|------|------|---------------|------|--|--------|------------|--|
| 9  | Online Project-Based Learning with Integration of STEAM in Chemistry: Challenges and Opportunities to Create 21st Century Skills           | AIP Conference Proceedings  |             | 2022 |      | 2542, 0200 01 | 2022 |  | SCOPUS | Proceeding |  |
| 10 | Dub Chem Vid Module for Chemistry Topic Abstract Nature  | AIP Conference Proceedings  |             | 2542 |      | 0200 02       | 2022 |  | SCOPUS | Proceeding |  |
| 11 | Home fertilizer teaching module for Aborigine people   | International Journal of Evaluation and Research in Education   |             | 11   | 2    | 972-976       | 2022 |  | SCOPUS | Article    |  |
| 12 | Assessment the Effectiveness of Using Websites for Principal Skills Training in Facilitating Freedom to Learn                              | Proceedings - International Conference on Education and Technology, ICET  |             |      | 2022 | 304-308       | 2022 |  | SCOPUS | Proceeding |  |
| 13 | AREDAPPS: Mobile Augmented Reality Development and Learning Framework Based on Augmented Reality Technology for Engineering Drawing Course | Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST | 1867 - 8211 | 429  |      | 322 - 335     | 2022 |  | SCOPUS | Article    |  |
| 14 | DOES Sketchup Make Improve Students'   | IEEE Access   | 2169 - 3536 | 10   |      | 1393 6 -      | 2022 |  | SCOPUS | Article    |  |

|    |   |  |             |    |    |             |      |  |        |         |  |
|----|---|--|-------------|----|----|-------------|------|--|--------|---------|--|
|    | Visual-Spatial Skills?  |  |             |    |    | 1395<br>3   |      |  |        |         |  |
| 15 | AR Module for Learning Changes of Matter in Chemistry   | International Journal of Interactive Mobile Technologies   | 1865 - 7923 | 15 | 23 | 72 - 88     | 2021 |  | SCOPUS | Article |  |
| 16 | The Use of Video Project Assignment (VPA) to Enhance Students' Achievement in Communicative English Subject | International Journal of Emerging Technologies in Learning | 1868 - 8799 | 16 | 32 | 29 - 42     | 2021 |  | SCOPUS | Article |  |
| 17 | Online Module for Acid and Base Topic Based on 5E Model   | International Journal of Interactive Mobile Technologies   | 1865 - 7923 | 15 | 23 | 18 - 28     | 2021 |  | SCOPUS | Article |  |
| 18 | Dual Mode Module as New Innovation in Learning Chemistry: Project Based Learning Oriented                   | International Journal of Interactive Mobile Technologies   | 1865 - 7923 | 15 | 8  | 47          | 2021 |  | SCOPUS | Article |  |
| 19 | Does the Use of Smart Board Increase Students' Higher Order Thinking Skills (HOTS)?                         | IEEE Access  | 2169 - 3536 | 9  |    | 1833 - 1854 | 2021 |  | SCOPUS | Article |  |
| 20 | Current Teaching Practice of Physics Teachers and Implications for Integrated                               | Universal Journal of Educational Research                  | 2169 - 3536 | 8  | 5A | 18 - 28     | 2020 |  | SCOPUS | Article |  |

|    |  |  |             |    |   |             |      |  |        |            |  |
|----|--|--|-------------|----|---|-------------|------|--|--------|------------|--|
|    | STEM Education   |  |             |    |   |             |      |  |        |            |  |
| 21 | Problem based Learning on Creativity Domain in Problem Solving for Secondary School: A SySTEMatic Literature Review Analysis | European Journal of Molecular & Clinical Medicine          |             | 7  | 6 | 530 - 541   | 2020 |  | SCOPUS | Article    |  |
| 22 | Chem-A Module Based On STEM Approach In Chemical Bond  | International Journal Of Recent Technology And Engineering | 2277 - 3878 | 7  | 6 | 700 - 710   | 2019 |  | SCOPUS | Article    |  |
| 23 | Conceptual Knowledge In Stoichiometry's Problem Solving  | International Journal Of Recent Technology And Engineering | 2277 - 3878 | 8  | 2 | 405 - 411   | 2019 |  | SCOPUS | Article    |  |
| 24 | Improving spatial visualization skills in educational settings   | Indian Journal of Public Health Research and Development   | 0976 - 0245 | 10 | 9 | 1808 - 1812 | 2019 |  | SCOPUS | Article    |  |
| 25 | Difficulties To Master Scientific Literacy Competencies Among Secondary School Students                                      | International Journal Of Recent Technology And Engineering | 2277 - 3878 | 7  | 6 | 724 - 738   | 2019 |  | SCOPUS | Article    |  |
| 26 | Effect Of Inductive Teaching Method To Improve   | 2019 IEEE International Conference on Engineering,         |             |    |   | 1 - 5       | 2019 |  | SCOPUS | Proceeding |  |

|    |   |   |             |    |   |             |      |  |        |            |  |
|----|---|---|-------------|----|---|-------------|------|--|--------|------------|--|
|    | Science Process Skills In Electrochemistry  | Technology and Education (TALE)   |             |    |   |             |      |  |        |            |  |
| 27 | Effect Of Pro-Ico Module Towards Students' Achievements On Chemical Bonding               | International Journal Of Recent Technology And Engineering                                      | 2277 - 3878 | 8  |   | 748 - 756   | 2019 |  | SCOPUS | Article    |  |
| 28 | Improving Spatial Visualization Skills In Educational Settings                            | Indian Journal Of Public Health Research And Development  | 0976 - 0245 | 10 | 9 | 1808 - 1812 | 2019 |  | SCOPUS | Article    |  |
| 29 | Malaysian Science Stream Students Anxiety Towards Chemistry At The Secondary School Level | International Journal Of Recent Technology And Engineering                                      | 2277 - 3878 | 7  | 6 | 724 - 738   | 2019 |  | SCOPUS | Article    |  |
| 30 | Effect of STEM competition on STEM career interest  | Proceedings of the 2018 IEEE 10th International Conference on Engineering Education, ICEED 2018 |             |    |   | 111 - 116   | 2019 |  | SCOPUS | Proceeding |  |
| 31 | Concept cartoon in problem-based learning: A systematic literature review analysis        | Journal of Technology and Science Education   | 2014 - 5349 | 9  | 1 | 51 - 58     | 2019 |  | SCOPUS | Article    |  |

|    |  |   |             |     |                             |             |      |  |        |            |  |
|----|--|---|-------------|-----|-----------------------------|-------------|------|--|--------|------------|--|
| 32 | Critical thinking from stem education and Al-Quran perspectives  | Journal of Engineering Science and Technology                   | 1823 - 4690 | 13  | Special Issue on ICITE 2018 | 35 - 41     | 2018 |  | SCOPUS | Article    |  |
| 33 | Micro imagination: Imagination with an alternative framework in a chemistry class                            | MATEC Web of Conferences  | 2261 - 236X | 215 |                             |             | 2018 |  | SCOPUS | Proceeding |  |
| 34 | Addressing chemical reaction misconceptions using five phase Needham Model                                   | IEEE Global Engineering Education Conference, EDUCON 2018-April |             |     |                             | 825 - 834   | 2018 |  | SCOPUS | Proceeding |  |
| 35 | A Preliminary Study On Students' Perspective: Is Mobile Learning Is Better Than Electronic Learning?         | Man In India  | 0025 - 1569 | 97  | 12                          | 141 - 146   | 2017 |  | SCOPUS | Article    |  |
| 36 | A Review of Literature in Mobile Learning: A New Paradigm in Teaching And Learning Pedagogy For Now And Then | Advanced Science Letters  | 1936 - 6612 | 23  | 8                           | 7416 - 7419 | 2017 |  | SCOPUS | Article    |  |
| 37 | Analysis of student's conception on neutralisation: A qualitative study                                      | Advanced Science Letters  | 1936 - 6612 | 23  | 9                           | 8164 - 8169 | 2017 |  | SCOPUS | Article    |  |
| 38 | Developing a Scientific Creativity   | Man In India  | 0025 - 1569 | 97  | 17                          | 25 - 40     | 2017 |  | SCOPUS | Article    |  |

|    |   |                          |             |    |    |             |      |  |        |         |  |
|----|---|--------------------------|-------------|----|----|-------------|------|--|--------|---------|--|
|    | through The Story Telling Technique During The Learning Of Chemistry  |                          |             |    |    |             |      |  |        |         |  |
| 39 | Effects Of Concept Mapping In Laboratory Learning Activities To Generate Students' Higher Order Thinking Skills In Electrolysis | Advanced Science Letters | 1936 - 6612 | 23 | 4  | 2779 - 2782 | 2017 |  | SCOPUS | Article |  |
| 40 | Effects Of Technology Implementation On Students' Metacognition   | Man In India             |             | 97 | 7  | 95 - 103    | 2017 |  | SCOPUS | Article |  |
| 41 | Integrating Authentic Learning Practice to Develop Problem Solving Competency in Learning Electrolysis                          | Advance Science Letter   | 1936 - 6612 | 23 | 9  | 8325 - 8329 | 2017 |  | SCOPUS | Article |  |
| 42 | Investigating The Level Of Scientific Creativity Of Science Students  | Advance Science Letter   | 1936 - 6612 | 23 | 9  | 8247 - 8250 | 2017 |  | SCOPUS | Article |  |
| 43 | Overcoming The Problems Faced By Student's In Learning Engineering Drawing With The Implementation Of Augmented Reality         | Man In India             | 0025 - 1569 | 97 | 17 | 147 - 159   | 2017 |  | SCOPUS | Article |  |

|    |  |   |             |    |    |           |      |  |        |         |  |
|----|--|---|-------------|----|----|-----------|------|--|--------|---------|--|
|    | Learning Environment   |   |             |    |    |           |      |  |        |         |  |
| 44 | Scientific Problem Solving Competency Of Real Life Task In Learning Electrolysis                                   | Man In India                              | 0025 - 1569 | 97 | 13 | 275 - 283 | 2017 |  | SCOPUS | Article |  |
| 45 | Student Mastery Of Scientific Inquiry Skills: A Preliminary Study  | Man In India                              | 0025 - 1569 | 97 | 12 | 169 - 175 | 2017 |  | SCOPUS | Article |  |
| 46 | Teachers' Understanding Of Family Values: A Qualitative Survey   | Man In India                              | 0025 - 1569 | 93 | 13 | 343 - 350 | 2017 |  | SCOPUS | Article |  |
| 47 | Teachers' readiness in teaching stem education   | Man in India                              | 0025 - 1569 | 97 | 13 | 343 - 350 | 2017 |  | SCOPUS | Article |  |
| 48 | Enhancing students' HOTS in laboratory educational activity by using concept map as an alternative assessment tool | Chemistry Education Research and Practice | 1109 - 4028 | 18 | 4  | 849 - 874 | 2017 |  | SCOPUS | Article |  |
| 49 | The Differences in Solutions to Context Rich Physics Problems between More and Less Successful Students            | Man In India                              | 0025 - 1569 | 97 | 17 | 121 - 132 | 2017 |  | SCOPUS | Article |  |

|    |   |              |             |    |    |           |      |  |        |         |  |
|----|---|--------------|-------------|----|----|-----------|------|--|--------|---------|--|
| 50 | The Effects of Cooperative Learning Activities In Blossoms Lesson Towards Students' Achievement In Learning Chemistry   | Man In India | 0025 - 1569 | 97 | 19 | 323 - 329 | 2017 |  | SCOPUS | Article |  |
| 51 | Secondary school students' alternative frameworks on the concept of condensation at the submicroscopic level            | Man in India | 0025 - 1569 | 97 | 12 | 343 - 350 | 2017 |  | SCOPUS | Article |  |
| 52 | The Relationship Between The Command Of Scientific Knowledge And Language With High Order Thinking Skills Among Student | Man In India | 0025 - 1569 | 97 | 13 | 93 - 104  | 2017 |  | SCOPUS | Article |  |
| 53 | Understanding Of STEM Education Among Chemistry Teachers In District Of Melaka Tengah                                   | Man In India | 0025 - 1569 | 97 | 12 | 169 - 175 | 2017 |  | SCOPUS | Article |  |
| 54 | Thinking blocks: Solving fraction problems involving higher order thinking skills                                       | Man in India | 0025 - 1569 | 97 | 17 | 121 - 132 | 2017 |  | SCOPUS | Article |  |

|    |  |                                       |             |    |    |             |      |  |        |            |  |
|----|--|---------------------------------------|-------------|----|----|-------------|------|--|--------|------------|--|
| 55 | Students' alternative framework of condensation concept at submicroscopic level via drawing: Malaysian secondary school perspectives | Man in India                          | 0025 - 1569 | 97 | 12 | 177 - 191   | 2017 |  | SCOPUS | Article    |  |
| 56 | Matter Concept: Submicroscopic Level of Development in Students of Various Age Groups  | Man In India                          | 0025 - 1569 | 96 |    | 1829 - 1835 | 2016 |  | SCOPUS | Article    |  |
| 57 | Scientific Argumentation and The Promotion of Conceptual Change  | Man In India                          | 0025 - 1569 | 96 |    | 1793 - 1800 | 2016 |  | SCOPUS | Article    |  |
| 58 | The Importance of Monitoring Skills in Physics Problem Solving   | European Journal of Education Studies | 2501 - 1111 | 1  | 3  | 1 - 10      | 2016 |  | SCOPUS | Article    |  |
| 59 | Concept map: Alternative assessment tool in laboratory learning of electrolysis  | Advanced Science Letters              | 1936 - 6612 | 22 | 12 | 4216 - 4220 | 2016 |  | SCOPUS | Article    |  |
| 60 | Designing mobile learning communication aid as an android app  | Advanced Science Letters              | 1936 - 6612 | 22 | 12 | 4023 - 4027 | 2016 |  | SCOPUS | Article    |  |
| 61 | Factors preventing Malaysian   | 2016 4th International Conference     |             |    |    |             | 2016 |  | SCOPUS | Proceeding |  |

|    |   |   |  |  |  |           |      |  |        |            |
|----|---|---|--|--|--|-----------|------|--|--------|------------|
|    | teachers from using Information and Communication Technology (ICT) in teaching mathematics                          | on Information and Communication Technology, ICoICT 2016  |  |  |  |           |      |  |        |            |
| 62 | My reflection mobile app promotes critical reflective practice  | 2016 4th International Conference on Information and Communication Technology, ICoICT 2016  |  |  |  |           | 2016 |  | SCOPUS | Proceeding |
| 63 | Enhancing students' geometrical thinking levels through Van Hiele's phase-based Geometer's Sketchpad-aided learning | 2015 IEEE 7th International Conference on Engineering Education, ICEED 2015   |  |  |  |           | 2016 |  | SCOPUS | Proceeding |
| 64 | Cyclic Improvement in The Implementation of Reflective Practice   | Proceedings of IEEE International Conference on Teaching, Assessment and Learning for Engineering: Learning For The Future Now, TALE 2014 |  |  |  | 192 - 197 | 2015 |  | SCOPUS | Proceeding |
| 65 | Web Pro-Mc Physics as a support tool for improving physics problem solving skills                                   | 2015 Game Physics and Mechanics International Conference, GAMEPEC 2015 - Proceeding   |  |  |  | 26 - 30   | 2015 |  | SCOPUS | Proceeding |

|    |   |   |  |  |  |           |      |  |        |            |  |
|----|---|---|--|--|--|-----------|------|--|--------|------------|--|
| 66 | Non-Routine Mathematical Problems among In-Service and Pre-Service Mathematics Teacher                      | Proceedings of IEEE International Conference on Teaching, Assessment and Learning for Engineering: Learning For The Future Now, TALE 2014 |  |  |  | 16 - 24   | 2015 |  | SCOPUS | Proceeding |  |
| 67 | Physics Problem Solving Strategies and Metacognitive Skills: Force and Motion Topics                        | Proceedings of IEEE 6th International Conference on Engineering Education (ICEED 2014)  |  |  |  | 133 - 138 | 2015 |  | SCOPUS | Proceeding |  |
| 68 | Physics Problem Solving: Selecting More Successful and Less Successful Problem Solvers                      | Proceedings of IEEE International Conference on Teaching, Assessment and Learning for Engineering: Learning For The Future Now, TALE 2014 |  |  |  | 86 - 92   | 2015 |  | SCOPUS | Proceeding |  |
| 69 | The Knowledge and Practice of "New Academia" Among Lecturers: A Case Study In Universiti Teknologi Malaysia | Proceedings of IEEE International Conference on Teaching, Assessment and Learning for Engineering: Learning For the Future Now, TALE 2014 |  |  |  | 86 - 92   | 2015 |  | SCOPUS | Proceeding |  |
| 70 | UM Chemistry Module Based   | Proceedings of IEEE 6th   |  |  |  | 117 - 122 | 2015 |  | SCOPUS | Proceeding |  |

|    |  |  |             |    |   |           |      |  |        |            |  |
|----|--|--|-------------|----|---|-----------|------|--|--------|------------|--|
|    | on Pedagogical Content Knowledge In Chemical Bonding Topic   | International Conference on Engineering Education (ICEED 2014)   |             |    |   |           |      |  |        |            |  |
| 71 | Malaysian Students' Scientific Argumentation : Do groups perform better than individuals?                        | International Journal of Science Education   | 0950 - 0693 | 37 | 3 | 505 - 528 | 2015 |  | SCOPUS | Article    |  |
| 72 | Mastery of scientific argumentation on the concept of neutralization in chemistry: A Malaysian perspective       | Malaysian Journal of Learning and Instruction  | 1675 - 8110 | 12 | 1 | 85 - 101  | 2015 |  | SCOPUS | Article    |  |
| 73 | Comparison of Pedagogical Content Knowledge between Expert and Novice Lecturers in Teaching and Learning Process | Proceedings - 2014 International Conference on Teaching and Learning in Computing and Engineering, LATICE 2014 |             |    |   | 240 - 246 | 2014 |  | SCOPUS | Proceeding |  |
| 74 | Individual versus Group Argumentation : Student's Performance in a Malaysian Context                             | International Education Studies  |             | 7  | 7 | 109 - 124 | 2014 |  | SCOPUS | Article    |  |
| 75 | 'The Beauty of I-Bonding' Website Development Based on Needham 5 Phase   | Proceedings - 2014 International Conference on Teaching and Learning in  |             |    |   | 283 - 288 | 2014 |  | SCOPUS | Proceeding |  |

|    |   |  |             |    |    |           |      |  |        |            |  |
|----|---|--|-------------|----|----|-----------|------|--|--------|------------|--|
|    | Constructivism Model  | Computing and Engineering, LATICE 2014   |             |    |    |           |      |  |        |            |  |
| 76 | Conceptual difficulties of secondary school students in electrochemistry  | Asian Social Science   | 1911 - 2017 | 10 | 19 | 276 - 281 | 2014 |  | SCOPUS | Article    |  |
| 77 | The Development of MyGSP: An Online Resource for Teaching Mathematics Based on Geometer's Sketchpad (GSP)             | Asian Social Science   | 1911 - 2017 | 10 | 22 | 227 - 240 | 2014 |  | SCOPUS | Article    |  |
| 78 | The Effects of Van Hiele's Phase-Based Learning on Students' Geometric Achievement and Attitude Towards Geometry      | Proceedings - 2014 International Conference on Teaching and Learning in Computing and Engineering, LATICE 2014 |             |    |    | 317 - 324 | 2014 |  | SCOPUS | Proceeding |  |
| 79 | The Story of Malaysian 'Serikandi': Exploring the Experiences of Female Phd Students in Engineering at One University | Research in Engineering Education Symposium (REES 2013)  |             |    |    | 409 - 416 | 2013 |  | SCOPUS | Proceeding |  |

#### Non-Indexed Article/Journal

| NO | ARTICLE TITLE | JOURNAL TITLE | ISSN | VOL. | Issues | Page | Publication year | IF | Type of Publication | Category of Publication | Quartile Ranking |
|----|---------------|---------------|------|------|--------|------|------------------|----|---------------------|-------------------------|------------------|
|----|---------------|---------------|------|------|--------|------|------------------|----|---------------------|-------------------------|------------------|

|   |  |  |  |  |  |  |      |  |                                   |  |  |
|---|--|--|--|--|--|--|------|--|-----------------------------------|--|--|
| 1 | Community Engagement In The New Norm   | UTM NEXUS  |  |  |  |  | 2020 |  | Academic And Profesional Magazine |  |  |
| 2 | Frugal Innovation In The Era Of Covid 19   | UTM NEXUS  |  |  |  |  | 2020 |  | Academic And Profesional Magazine |  |  |
| 3 | Effect Of Inductive Teaching Method To Improve Science Process Skills In Electrochemistry    | Buletin Persatuan Pendidikan Sains Dan Matematik Johor |  |  |  |  | 2020 |  |                                   |  |  |
| 4 | SySTEMatic Literature Review On Higher Order Thinking In Chemistry                           | Buletin Persatuan Pendidikan Sains Dan Matematik Johor |  |  |  |  | 2020 |  |                                   |  |  |
| 5 | Penerapan Aspek Afektif Dalam Pemikiran Saintifik Pelajar: Isu Dan Cabaran                   | Jurnal Pendidikan Malaysia                             |  |  |  |  | 2017 |  |                                   |  |  |
| 6 | Penilaian Modul Berasaskan Web Pro-Mc Physics Dari Aspek Kefungsian                          | Buletin Persatuan Pendidikan Sains Dan Matematik Johor |  |  |  |  | 2017 |  |                                   |  |  |
| 7 | Process and Potential Factors to Develop Problem Solving Competency in Learning Electrolysis | Sains Humanika   |  |  |  |  | 2017 |  |                                   |  |  |

|     |  |  |             |    |   |         |      |  |  |  |  |
|-----|--|--|-------------|----|---|---------|------|--|--|--|--|
| 8   | Keberkesanan Laman Web "The Beauty of I-Bonding" Berdasarkan Model Konstruktivisme Lima Fasa Needham Meningkatkan Kefahaman Konsep Sains Pelajar | Buletin Persatuan Pendidikan Sains Dan Matematik Johor | 0128 - 4290 | 25 | 1 | 21 - 37 | 2015 |  |  |  |  |
| 9   | Refleksi Terhadap Permasalahan Pedagogi Pengajaran   | Buletin Persatuan Pendidikan Sains Dan Matematik Johor | 0128 - 4290 | 25 | 1 | 63 - 69 | 2015 |  |  |  |  |
| 10. | Aplikasi Descrepant Event Dalam Proses Pengajaran Dan Pembelajaran Sains   | Buletin Persatuan Pendidikan Sains Dan Matematik Johor | 0128 - 4290 | 24 | 1 | 6 - 13  | 2014 |  |  |  |  |
| 11. | Penerapan Strategi Pengutaraan Masalah Untuk Meningkatkan Kemahiran Berfikir Aras Tinggi   | Buletin Persatuan Pendidikan Sains Dan Matematik Johor | 0128 - 4290 | 24 | 1 | 44 - 51 | 2014 |  |  |  |  |
| 12. | Penghujahan Saintifik Dalam Kalangan Guru Pelatih PISMP Opsyen Sains Semester 2, 6 dan 8   | Buletin Persatuan Pendidikan Sains Dan Matematik Johor | 0128 - 4290 | 24 | 1 | 28 - 43 | 2014 |  |  |  |  |

| NO | TYPE<br>a) INDEXED<br>PROCEEDINGS/CONFERENCE | TITLE | YEAR | AUTHOR |
|----|--|-------|------|--------|
|----|--|-------|------|--------|

|    |  |  |      |   |
|----|--|--|------|---|
|    | <b>b) NON- INDEXED PROCEEDINGS/CONFERENCE</b><br><b>c) SEMINARS/WORKSHOPS</b><br><b>d) THESIS</b><br><b>e) ORIGINAL BOOK</b><br><b>f) EDITED BOOK</b><br><b>g) BOOK CHAPTER</b><br><b>h) CLASSIFIED/TECHNICAL/ EXPERT REPORT</b><br><b>i) POLICY PAPER</b> |  |      |   |
| 1  | Indexed Conference Paper   | Aredapps: Mobile Augmented Reality Development And Learning Framework Based On Augmented Reality Technology For Engineering Drawing Course | 2022 | Dayana Farzeeha Ali, Marlissa Omar, Mohd Shahrizal Sunar, Norasyikin Mohd Zaid, Nor Hasniza Ibrahim, Johari Surif |
| 2  | Publication In Academic And Profesional Magazine   | Kim Kim Sustainability   | 2021 | Muhammad Farid Azizul Azizui, Johari Surif  |
| 3  | Non- Indexed Proceedings / Conference  | Pengkonsepnan Aras Makroskopik Pelajar Dalam Menyelesaikan Masalah Stoikiometri Kimia  | 2021 | Nor Hasniza Ibrahim, Johari Surif   |
| 4  | Book Chapter   | Memperkasakan Pendidikan Stem Melalui Pembelajaran Servis  | 2021 | Johari Surif  |
| 5  | Book Chapter   | Pemeriksaan Libat Sama Komuniti Dan Pembangunan Masyarakat   | 2021 | Johari Surif  |
| 6  | Non- Indexed Proceedings / Conference  | The Effectiveness Of Learning Stem Out Of The Classroom On The Interest & Career Options   | 2021 | Marlina Ali, Johari Surif   |
| 7  | Article In Mass Media  | Jadikan STEM Lebih Kreatif Seronok   | 2021 | Nor Hasniza Ibrahim, Johari Surif   |
| 8  | Non- Indexed Proceedings / Conference  | Program Pendidikan Kimia: Pembelajaran Abad Ke 21 Dan Revolusi Perindustrian Keempat   | 2020 | Corrienna Abdul Talib, Chuzairy Hanri, Johari Surif, Megat Aman   |
| 9  | Publication In Academic And Profesional Magazine   | Frugal Innovation In The Era Of Covid 19   | 2020 | Johari Surif  |
| 10 | Publication In Academic And Profesional Magazine   | Community Engagement (CE) In The New Norm  | 2020 | Johari Surif  |
| 12 | Indexed Conference Paper   | Effect Of Inductive Teaching Method To Improve Science Process Skills In Electrochemistry  | 2019 | Johari Surif, Nor Hasniza Ibrahim, Adibah Mohd Alwi, Parimalah Loganathan, Nur Sahrizan Serman                    |
| 13 | Non-Indexed Proceedings / Conference   | Hubungan Antara Kecerdasan Emosi Dan Motivasi Pelajar Dalam Menyelesaikan Masalah Matematik Bukan Rutin                                    | 2019 | Mohd Salleh Abu, Abdul Halim Abdullah, Nor Hasniza Ibrahim, Johari Surif, Sharifah Osman                          |
| 14 | Non-Indexed Proceedings / Conference   | Metacognitive Skills In Physics Problem Solving  | 2019 | Marlina Ali, Nor Hasniza Ibrahim, Abdul Halim Abdullah, Johari Surif, Nurshamela Saim                             |
| 15 | Non- Indexed Proceedings / Conference  | Effectiveness Of Johor Young Innovators Challenge Program On Students' Interest Attitude And Career Towards Stem                           | 2018 | Marlina Ali, Johari Surif   |
| 16 | Book Chapter   | Enhancing Thinking Skills Via Discrepant Events  | 2018 | Marlina Ali, Johari Surif   |

|    |                                       |  |      |                                   |
|----|---------------------------------------|--|------|-----------------------------------|
| 17 | Non- Indexed Proceedings / Conference | Stem Outreach Program: An Evaluation On Students Perspective Towards Stem Engagement   | 2018 | Marlina Ali, Johari Surif         |
| 18 | Non- Indexed Proceedings / Conference | Micro Imagination : Imagination With An Alternative Framework In A Chemistry Class   | 2018 | Johari Surif                      |
| 19 | Non- Indexed Proceedings / Conference | Concept Cartoon In Problem-Based Learning: A Systematic Literature Review Analysis   | 2018 | Nor Hasniza Ibrahim, Johari Surif |
| 20 | Article In Mass Media                 | Tanjung Pinang: Dunia Melayu Yang Tersembunyi  | 2017 | Johari Surif                      |
| 21 | Non- Indexed Proceedings / Conference | The Pattern Of Physics Problem Solving Between More Successful And Less Successful From Metacognitive Perspective  | 2017 | Marlina Ali, Johari Surif         |
| 22 | Non- Indexed Proceedings / Conference | Characters Of Mentors That Can Inspire And Generate School Students Interest Towards Stem  | 2017 | Marlina Ali, Johari Surif         |
| 23 | Non- Indexed Proceedings / Conference | Meningkatkan Kefahaman Pelajar Fizik Tingkatan Empat Tentang Gambarajah Sinar Dengan Menggunakan Stimulus Tayangan Video, Aplikasi Simbucket Dan Pemetaan Di Atas Kertas Graf            | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 24 | Non- Indexed Proceedings / Conference | Penggunaan The Transformer Meningkatkan Penguasaan Kemahiran Menukar Unit Panjang Melibatkan Perpuluhan Bagi Murid Tahun 4   | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 25 | Non- Indexed Proceedings / Conference | Keberkesanan Pendidikan Stem Dalam Meningkatkan Pemahaman Sel Kimia Kepada Pelajar Kimia Tingkatan 4   | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 26 | Non- Indexed Proceedings / Conference | Menguji Kerangka Alternatif Pelajar Terhadap Gerhana Bulan Dan Gerhana Matahari Dalam Mata Pelajaran Sains Tahun 6   | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 27 | Non- Indexed Proceedings / Conference | Kaedah Jari Dan Kata Kunci Dalam Konsep Mitosis Bagi Topik Variasi Dan Keturutan Untuk Mata Pelajaran Sains Tingkatan Empat  | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 28 | Non- Indexed Proceedings / Conference | Menyelesaikan Masalah Stem Bagi Tajuk Haba Tingkatan Empat Fizik Menggunakan Pendekatan Pembelajaran Aktif   | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 29 | Non- Indexed Proceedings / Conference | Meningkatkan Kefahaman Pelajar Dalam Aplikasi Transistor Bertindak Sebagai Suis Automatik Pada Waktu Siang Dan Malam Dengan Menggunakan Kaedah Analogi Penceritaan Tikus Dan Bunyi Tong. | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 30 | Non- Indexed Proceedings / Conference | Mengintegrasikan Stem Di Dalam Pengajaran Dan Pembelajaran Fizik Bagi Tajuk Prinsip Pascal Tingkatan 4   | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 31 | Non- Indexed Proceedings / Conference | Pendidikan Stem Dalam Pemudahcaraan Dan Pembelajaran Mata Pelajaran Kimia Fill Up The Balloon  | 2017 | Nor Hasniza Ibrahim, Johari Surif |
| 32 | Non- Indexed Proceedings / Conference | Menyeimbangkan Persamaan Kimia Melalui Kaedah Persimbolan (Fun Figure)   | 2017 | Nor Hasniza Ibrahim, Johari Surif |

|    |                                       |  |      |   |
|----|---------------------------------------|--|------|---|
| 33 | Non- Indexed Proceedings / Conference | Modul Chem-A Berasaskan Pendidikan Stem Dalam Topik Ikatan Kimia Tingkatan Empat   | 2017 | Nor Hasniza Ibrahim, Johari Surif   |
| 34 | Book Chapter                          | Pembangunan Modul Pengajaran Kreativiti Saintifik Bagi Topik Kimia   | 2017 | Johari Surif  |
| 35 | Book Chapter                          | Pembangunan Modul Pengajaran Kreativiti Saintifik Bagi Topik Kimia   | 2017 | Noor Dayana Abd Halim, Johari Surif   |
| 36 | Non- Indexed Proceedings / Conference | Enhancing 21st Century Science, Technology, Arts, Engineering And Mathematics (Steam) Education Through Green And Microscale Chemistry Experimentation | 2016 | Corienna Abd. Talib, Abdul Halim Abdullah, Nor Hasniza Ibrahim, Johari Surif, Zaleha Ismail, Marlina Ali, Muhammad Abdul Hadi Bunyamin. |
| 37 | Book Chapter                          | Problem Solving In Oxidation A Reductionnd   | 2016 | Nor Hasniza Ibrahim, Johari Surif   |
| 38 | Non- Indexed Proceedings / Conference | Pemerkasaan Penghayatan Al-Quran Menerusi Pendidikan Stem  | 2016 | Nor Hasniza Ibrahim, Johari Surif   |
| 39 | Book Chapter                          | Stem Education In Malaysia: Curriculum Design And Learning Content   | 2016 | Nor Hasniza Ibrahim, Johari Surif   |
| 40 | Non- Indexed Proceedings / Conference | The Differences Between More Successful And Less Successful Students Solve Context Rich Problem In Physics   | 2016 | Marlina Ali, Johari Surif   |
| 41 | Book Chapter                          | The Practice Of Reflection On The Issues Of Teaching And Learning Process Among Stem Educators In Utm  | 2016 | Nor Hasniza Ibrahim, Johari Surif   |
| 42 | Non- Indexed Proceedings / Conference | A Pilot Study On Chemistry Creativity Test For Malaysian Science Students  | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 43 | Non- Indexed Proceedings / Conference | Chemistry Authentic Learning: Problem Solving In Electrolysis  | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 44 | Book Chapter                          | Chemistry Problem-Solving Competency Of Open Ended Problems In Electrolysis: Authentic Learning Practice   | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 45 | Non- Indexed Proceedings / Conference | A Pilot Study On Chemistry Achievement Test  | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 46 | Non- Indexed Proceedings / Conference | A Conceptual Framework For Enhancing Scientific Creativity Among Students.   | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 47 | Non- Indexed Proceedings / Conference | A Study On Malaysian Science Students Conception Of Acids And Bases  | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 48 | Non- Indexed Proceedings / Conference | Problem Solving Competency For Open-Ended Problem In Learning Electrolysis: A Case Study Of Malaysian Secondary School Chemistry Students              | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 49 | Non- Indexed Proceedings / Conference | Authentic Chemistry Problem Solving Competency For Open-Ended Problems In Learning Electrolysis: Preliminary Study                                     | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 50 | Non- Indexed Proceedings / Conference | M-Learning In Construction Technology  | 2016 | Dayana Farzeeha Binti Ali, Johari Surif   |
| 51 | Non- Indexed Proceedings / Conference | Application Of Mathematical Competencies Among Engineering   | 2016 | Abdul Halim Abdullah, Johari Surif  |

|    |                                       |   |      |   |
|----|---------------------------------------|---|------|---|
|    |                                       | Students Through Service Learning Program   |      |   |
| 52 | Book Chapter                          | Modul Pembelajaran Berasaskan Inkuiri Bagi Topik Ikatan Kimia   | 2016 | Johari Surif  |
| 53 | Non- Indexed Proceedings / Conference | Chemmol4: Pengembaraan Bersama Haigal   | 2016 | Noor Dayana Abd Halim, Johari Surif   |
| 54 | Non- Indexed Proceedings / Conference | Eproject: Educational Research Study Management System  | 2016 | Norasykin Mohd Zaid, Johari Surif   |
| 55 | Non- Indexed Proceedings / Conference | The Prospect Of Establishing The Stem Education Community In Malaysia: Recent Development In Stem And The Way Forward | 2016 | Corrienna Abdul Talib, Johari Surif   |
| 56 | Book Chapter                          | Scenario Based Learning   | 2016 | Johari Surif  |
| 57 | Book Chapter                          | Service Learning  | 2016 | Johari Surif  |
| 58 | Book Chapter                          | Pedagogical Content Knowledge Practices Among Lecturer In Universiti Teknologi Malaysia                               | 2016 | Johari Surif  |
| 59 | Edited Book                           | Science & Mathematics Education: Issues And Practices   | 2016 | Johari Surif, Nor Hasniza Ibrahim   |
| 60 | Original Book                         | Kemahiran Berfikir Aras Tinggi Dalam Pengajaran Dan Pembelajaran, Penerbit Fakulti Pendidikan Utm, Malaysia           | 2016 | Johari Surif, Nor Hasniza Ibrahim, Abdul Halim Abdullah Dan Yusof Boon                        |
| 61 | Non- Indexed Proceedings / Conference | Creativity In Science Education: Definition And Constraints   | 2015 | Siti Salbiah Omar, Noor Dayana Abd Halim, Johari Surif, & Jamalludin Harun.                   |
| 62 | Non- Indexed Proceedings / Conference | Model Amalan Refleksi : Satu Kajian Perbandingan  | 2015 | Nor Hasniza Binti Ibrahim, Johari Surif   |
| 63 | Non- Indexed Proceedings / Conference | Kreativiti Dalam Pengajaran Dan Pembelajaran Sains  | 2015 | Siti Salbiah Omar, Noor Dayana Abd Halim, Johari Surif, & Jamalludin Harun                    |
| 64 | Non- Indexed Proceedings / Conference | Conceptual Framework Of Authentic Chemistry Problem-Solving Competency Among School Students                          | 2015 | Suraiya Muhamad, Muhammad Umar Khan, Jamalludin Harun, Johari Surif, & Noor Dayana Abd Halim. |
| 65 | Non- Indexed Proceedings / Conference | Attribution Factors Of Chemistry Anxiety: What Are They?  | 2015 | Nor Hasniza Ibrahim, Johari Surif, & Nurfaraha Kamaruddin.                                    |
| 66 | Non- Indexed Proceedings / Conference | The Practice Of Reflection On The Issues Of Teaching And Learning Process Among Stem Educators In Utm                 | 2015 | Siti Anisha Samsudin, Nor Hasniza Ibrahim, Johari Surif, Abdul Halim Abdullah, & Marlina Ali. |
| 67 | Non- Indexed Proceedings / Conference | The Motivation Level Of Learning Chemistry Among Secondary School Students  | 2015 | Nor Hasniza Ibrahim, Johari Surif, & Farhanawati Zuraimi                                      |
| 68 | Non- Indexed Proceedings / Conference | Penerapan Pengutaraan Masalah Untuk Meningkatkan Kemahiran Berfikir Aras Tinggi                                       | 2015 | Vinogharri M., Johari Surif, & Nor Hasniza Ibrahim  |
| 69 | Non- Indexed Proceedings / Conference | Using Inquiry Based Module In Chemistry Laboratory Work To Enhance Manipulative Skills                                | 2015 | Rahayu Ezranie Shuhimi, Johari Surif, & Nor Hasniza Ibrahim                                   |
| 70 | Non- Indexed Proceedings / Conference | Pengajaran Stem Berteraskan Al Quran: Isu Dan Permasalahan  | 2015 | Nor Hasniza Binti Ibrahim, Johari Suirf   |
| 71 | Non- Indexed Proceedings / Conference | Model Amalan Refleksi: Satu Kajian Perbandingan   | 2015 | Nor Hasniza Ibrahim, Johari Surif, & Siti Anisha Samsudin                                     |

|    |                                       |  |      |   |
|----|---------------------------------------|--|------|---|
| 72 | Non- Indexed Proceedings / Conference | Chemmol 4: Pengembaraan Bersama Haiqal   | 2015 | Noor Dayana Binti Abd Halim, Johari Surif   |
| 73 | Non- Indexed Proceedings / Conference | Pengaplikasian I-Think Untuk Bakal Guru (Pre-Service) Dan Guru (In-Service)  | 2014 | Abdul Halim Abdullah, Zaleha Ismail, Johari Surif, Nor Hasniza Ibrahim, Marlina Ali, & Mohd. Hilmi Hamzah               |
| 74 | Non- Indexed Proceedings / Conference | Pembangunan Mygsp: Sumber Atas Talian Bahan Pengajaran Matematik Berbantuan Perisian Geometer's Sketchpad (Gsp)                            | 2014 | Abdul Halim Abdullah, Johari Surif, Nor Hasniza Ibrahim, & Marlina Ali.   |
| 75 | Non- Indexed Proceedings / Conference | Penghujahan Saintifik Pelajar Melalui Pembinaan Hujah Bertulis Dalam Pengajaran Dan Pembelajaran Berintegrasikan Penghujahan               | 2014 | Johari Surif, Heng Lee Ling, Seng, H. C., & Ket, L. K.  |
| 76 | Non- Indexed Proceedings / Conference | Perbandingan Kurikulum Sains Pada Masa Kini Dan Kurikulum Saintis Di Zaman Kegemilangan Tamadun Islam                                      | 2014 | Aini Aziziah Ramli, Nor Hasniza Ibrahim, Johari Surif, Marlina Ali  |
| 77 | Non- Indexed Proceedings / Conference | Pembangunan Modul Chemq Berdasarkan Ppk Bagi Konsep Persamaan Kimia  | 2014 | Nur Farahain Addin, Nor Hasniza Binti Ibrahim, Johari Surif   |
| 78 | Non- Indexed Proceedings / Conference | Pembinaan Modul Kimia 'Um' Untuk Meningkatkan Kefahaman Konsep Pelajar Bagi Topik Ikatan Kovalen   | 2014 | Nor Hasniza Ibrahim, Johari Surif, & Nur Farahain Addin   |
| 79 | Non- Indexed Proceedings / Conference | Pelaksanaan Pentaksiran Berasaskan Sekolah (Pbs) Menerusi Pandangan Guru   | 2014 | Nor Hasniza Ibrahim, Johari Surif, Abdul Halim Abdullah, & Siti Anisha Samsudin   |
| 80 | Non- Indexed Proceedings / Conference | Modul Pengajaran Q-Redoks Berasaskan Model 5e Bagi Topik Pengaratan Dalam Unsur Redoks   | 2014 | Nor Hasniza Ibrahim, Johari Surif, Abdul Halim Abdullah, & Syafiqah Mohd Hairon   |
| 81 | Non- Indexed Proceedings / Conference | Tahap Kesedaran Pelajar Tahun 4 Fakulti Pendidikan Universiti Teknologi Malaysia Terhadap Pelaksanaan Pentaksiran Berasaskan Sekolah (Pbs) | 2014 | Nor Hasniza Ibrahim, Johari Surif, Abdul Halim Abdullah, & Surya 'Ain Ahmed   |
| 82 | Non- Indexed Proceedings / Conference | 'Locus In Cartesian Plane': Menggunakan Pendekatan 'Hands On'dalam Meningkatkan Kefahaman Murid Dalam Konsep Locus Dalam Dua Dimensi       | 2014 | Nor Hasniza Ibrahim, Johari Surif, Minah Selamat, Ruziana Zainal, Ruhaya Mohamed, Sulizah Lakimon, & Zakaria Abd Jalil. |
| 83 | Non- Indexed Proceedings / Conference | Modul Pengajaran Quranic Penaakulan Matematik Berasaskan Kaedah Inkuiri  | 2014 | Nor Hasniza Ibrahim, Johari Surif, Abdul Halim Abdullah, & Najiha Mohd Saimi  |
| 84 | Non- Indexed Proceedings / Conference | Modul Pengajaran Cahaya Quran Berasaskan Kaedah Inkuiri Bagi Topik Pantulan Cahaya Tingkatan 4   | 2014 | Nor Hasniza Ibrahim, Johari Surif, Marlina Ali, Abdul Halim Abdullah, & Nurshamela Saim.                                |
| 85 | Non- Indexed Proceedings / Conference | Pisa 2012: Di Mana Kedudukan Malaysia Untuk Subjek Matematik?  | 2014 | Abdul Halim Abdullah, Johari Surif, & Nor Hasniza Ibrahim.  |
| 86 | Non- Indexed Proceedings / Conference | Teacher's Perception Towards The Effectiveness Of School Based Assessment  | 2014 | Johari Surif, Nor Hasniza Ibrahim, Abdul Halim Abdullah, & Krishnan, K.   |
| 87 | Non- Indexed Proceedings / Conference | Penyelesaian Masalah Rutin Dan Bukan Rutin Dalam Pendidikan Matematik  | 2014 | Johari Surif, Nor Hasniza Ibrahim, Abdul Halim  |

|     |                                       |  |      |  |
|-----|---------------------------------------|--|------|--|
|     |                                       |  |      | Abdullah, & Nur Hidayah Abd Ghafar.  |
| 88  | Non- Indexed Proceedings / Conference | Fostering Problem Solving In Chemistry: The Importance, Difficulties And The Needs Of Scientific Creativity                          | 2014 | Siti Salbiah Omar, Noor Dayana Abd Halim, Johari Surif & Jamalludin Harun  |
| 89  | Non- Indexed Proceedings / Conference | Chemical Problem-Solving Competency Of Open-Ended Problems Aiming To Improve Higher Order Thinking Skills (Hots): Authentic Practice | 2014 | Suraiya Muhamad, Jamalludin Harun, Johari Surif & Noor Dayana Abd Halim.   |
| 90  | Non- Indexed Proceedings / Conference | Menjana Kemahiran Berfikir Aras Tinggi (Kbat) Murid Melalui Sistem Mygsp   | 2014 | Abdul Halim Abdullah, Johari Surif, Nor Hasniza Ibrahim, & Marlina Ali.  |
| 91  | Non- Indexed Proceedings / Conference | Development Of Matter Concept On Submicroscopic Level Across Ages  | 2014 | Nurdiana Abdullah, Johari Surif & Syuhaida Ismail.   |
| 92  | Non- Indexed Proceedings / Conference | Penerapan Strategi Pengutaraan Masalah Untuk Meningkatkan Kemahiran Berfikir Aras Tinggi   | 2014 | Vinogharri M., & Johari Surif  |
| 93  | Non- Indexed Proceedings / Conference | Conceptual Changes In Scientific Argumentation Through Guided Group Settings   | 2014 | Heng Lee Ling, & Johari Surif.   |
| 94  | Non- Indexed Proceedings / Conference | Modul Pengajaran Sains Topik Nutrisi Berteraskan Model Konstruktivis Bersepadu   | 2014 | Zainab Jelani, Johari Surif, Sulaiman Shakib Mohd Noor.  |
| 95  | Non- Indexed Proceedings / Conference | Chemmol 4  | 2014 | Noor Dayana Binti Abd Halim, Johari Surif  |
| 96  | Non- Indexed Proceedings / Conference | Pembinaan Modul Kimia 'Um' Untuk Meningkatkan Kefahaman Konsep Pelajar Bagi Topik Ikatan Kovalen.                                    | 2014 | Nor Hasniza Ibrahim, Johari Surif, & Minah Selamat   |
| 97  | Non- Indexed Proceedings / Conference | Ciri-Ciri Kreativiti Bakal Guru Fizik Semasa Menjalankan Dua Aktiviti Pembelajaran Fizik Berasaskan Amali                            | 2013 | Lilia Ellany Mohtar, Fatin Aliah Phang Abdullah, Seth Sulaiman, Johari Surif, Nor Hasniza Ibrahim & Marlina Ali. |
| 98  | Non- Indexed Proceedings / Conference | Pembangunan Perisian "Chemmol4" Untuk Mengatasi Masalah Kerangka Alternatif Dalam Mendefinisikan Konsep Mol                          | 2013 | Johari Surif, Nur Fatin Atikah Kamarudin, Nor Hasniza Ibrahim, Seth Sulaiman, Zaleha Ismail                      |
| 99  | Thesis                                | Perbandingan Pemikiran Saintifik Pelajar Malaysia Dan United Kingdom   | 2010 | Johari Surif   |
| 100 | Thesis                                | Perbandingan Pemikiran Saintifik Pelajar Malaysia Dan United Kingdom   | 2009 | Johari Surif   |
| 101 | Book Chapter                          | Isu Pendidikan Sains Dan Matematik: Ke Arah Meningkatkan Kualiti Pengajaran Dan Pembelajaran   | 2008 | Johari Surif   |
| 102 | Thesis                                | Pembinaan Dan Keberkesaan Perisian Prototaip Berdasarkan Model Generatif-Metakognitif Bagi Konsep Asas Jirim Dalam Fenomena Fizikal  | 2004 | Johari Surif   |
| 103 | Thesis                                | Analisa Kulaiti Air Sungai Langat, Disertasi   | 1998 | Johari Surif   |

**PLENARY/CHAIRPERSON/ORAL POSTER PLENARY/KEYNOTE ADDRESS / INVITED GUEST SPEAKER**

## International

| No | Role                  | Title Of Programme  | Date            | Location                              |
|----|-----------------------|---|-----------------|---------------------------------------|
| 1  | Key Note              | 7th International Conference on Mathematics and Science Education   | 14-15 Ogos 2023 | Universitas Negeri Malang, Indonesia. |
| 2  | Key Note              | 2nd International Conference on Chemistry and Science Education (ICChSE) 2021   | 4-5 Ogos 2021   | Universitas Negeri Padang, Indonesia. |
| 3  | Plenary               | 2nd International Conference On Creative And Innovative Technology In Education (ICITE 2021)  | 26-27/08/2021   | Online Webex                          |
| 4  | Invited Participant   | International Education Colloquium FSSH RMUTT Thailand  | 09/12/2020      | Online Webex                          |
| 5  | Invited Participant   | How To Think In Inquiry Based Learning Seminar  | 25/11/2020      | Online Webex                          |
| 6  | Plenary               | A Conceptual Framework For Enhancing Problem-Based Learning On Creativity Domain  | 10/12/2020      | Online Webex                          |
| 7  | Plenary               | Development Of Module Creative PBL In STEM Education To Enhance Creativity Domain   | 10/12/2020      | Online Webex                          |
| 8  | Invited Participant   | FSSH-USSH International Education Colloquium  | 22/09/2020      | Online Webex                          |
| 9  | Key Note              | International Conference on Chemistry Education "Enhancing Chemistry Education Through STEM Approach"   | 07-08/10/2019   | Universiti Negeri Padang              |
| 10 | Plenary               | International Conference On Teaching And Learning For Engineering IEEE Tale 2019  | 13-14/12/2019   | Yogyakarta, Indonesia                 |
| 11 | Plenary               | International Conference On Creative, Innovative Technology In Education  | 25-26/08/2018   | Le Granduer, Kulai                    |
| 12 | Invited Guest Speaker | International Concefence on Creative, Innovative Technology and Education   | 25-26/07/2018   | Le Granduer, Kulai                    |
| 13 | Invited Guest Speaker | International Conference on UNESA   | 17/01/2018      | UTM                                   |
| 14 | Plenary               | 2nd International Conference On STEM Education  | 04-06/10/2018   | Kuala Lumpur                          |
| 15 | Plenary               | International Conference On Science, Technology, Engineering and Mathematics (STEM)   | 03-04/10/2018   | Kuala Lumpur                          |
| 16 | Plenary               | International Colloquium on Education bersama Kolej Pengajian Tinggi Dakwah Islam Batam dan Fakulti Pendidikan UTM  | 19/12/2017      | UTM                                   |
| 17 | Plenary               | International Colloquium on Education bersama Universiti Cokrominoto Palopo, Sekolah Tinggi Ilmu Ekonomi Muhammadiyah Palopo Indonesia dan Fakulti Pendidikan UTM | 30/07/2017      | UTM                                   |
| 18 | Plenary               | 4th IEPS 2017 (Perbandingan Tahap Penyoalan Tiga Aras Perwakilan Dengan Tahap Pemikiran Kritis Semasa Pengajaran Subjek Kimia Di Sekolah Menengah Negeri Sarawak) | 11-12/12/2017   | Le Granduer, Kulai                    |
| 19 | Plenary               | 4th IEPS 2017 (Developing Pro-Ico Chemical Bonding Module Via STEM-5e Learning Cycle)   | 11-12/12/2017   | Le Granduer, Kulai                    |
| 20 | Chairman              | Conference of Science and Mathematics Education (COSMED) 2017   | 17-19/11/2017   | Pulau Pinang                          |
| 21 | Plenary               | World Engineering Education Forum 2017  | 16-18/11/2017   | Kuala Lumpur                          |

|    |                       |   |               |              |
|----|-----------------------|---|---------------|--------------|
| 22 | Plenary               | Conference of Science and Mathematics Education (Cosmed) 2017   | 17-19/11/2017 | Pulau Pinang |
| 23 | Plenary               | International Conference On Counselling Psychology  | 08-09/02/2017 | UTM          |
| 24 | Key Note              | Seminar STEM Bersepadu Dan Kemahiran Berfikir Aras Tinggi, kerjasama dan jalinan UTM dan Universiti Makasar   | 20-21/12/2016 | UTM          |
| 25 | Plenary               | International Education Research Colloquium Between Fareast University and Faculty Of Education UTM   | 11/08/2016    | UTM          |
| 26 | Plenary               | International Conference On Education And Higher Order Thinking Skills 2016   | 13-15/04/2016 | UTM          |
| 27 | Plenary               | International Conference On Education And Higher Order Thinking Skills 2016 - Enhancing 21st Century Science, Technology, Art, Engineering And Mathematics (STEAM) Education Through Green And Microscale Chemistry Experimentation | 13-15/04/2016 | UTM          |
| 28 | Plenary               | International Conference On Education And Higher Order Thinking Skills 2016 - The Differences Between More Successful And Less Successful Students Solve Context Rich Problem In Physics  | 13-15/04/2016 | UTM          |
| 29 | Plenary               | International Conference On Education And Higher Order Thinking Skills 2016 - Algorithmic And Cnceptual Problems Of Chemistry Subject In Malaysia Secondary School Public Examination   | 13-15/04/2016 | UTM          |
| 30 | Oral Poster Plenary   | Innovative Practice In Education And Industry Exhibition (I-Peinx 2016)   | 14/03/2016    | UTM          |
| 31 | Plenary               | 2016 IEEE International Conference On Teaching And Learning In Education  | 02-05/03/2016 | Kuala Lumpur |
| 32 | Key-Note              | International Conference & Higher Order Thinking Skills 2016 In Conjunction With The 2nd International Seminar Of Science And Mathematics Education 2016  | 13-14/04/2016 | UTM          |
| 33 | Plenary               | The IEEE Conference On E-Learning, E-Management and E-Services (IC3E 2015)  | 26-27/08/2015 | Indonesia    |
| 34 | Plenary               | 2014 IEEE 6th International Conference on Engineering Education (ICEED)   | 10-11/12/2014 | Indonesia    |
| 35 | Plenary               | Tale 2014: Teaching, Assessment and Learning for Engineering Conference   | 20-23/12/2014 | New Zealand  |
| 36 | Key Note              | Konvensyen Antarabangsa Jiwa Pendidik 2014  | 13-14/08/2014 | UTM          |
| 37 | Plenary               | International Conference On Learning and Teaching in Computing and Engineering (LATICE) 2014  | 13-15/04/2014 | Sarawak      |
| 38 | Plenary               | World Conference on Educational Sciences  | 08-10/02/2014 | Itali        |
| 39 | Plenary               | 2nd International Seminar On Quality & Affordable Education 2013  | 10-12/10/2013 | UTM          |
| 40 | Plenary               | 5th. World Conference On Educational Sciences. Sapienza Universita Di Roma, 5-8 February 2013.  | 05-08/02/2013 | Itali        |
| 41 | Invited Guest Speaker | Seminar Antarabangsa Pendidikan Kimia: Strategi Pengajaran Berkesan di Institusi Pengajian Tinggi, Universitas Maritim Raja Ali Haji, Indonesia   | 7/07/2013     | Indonesia    |

## National

| NO | ROLE                | TITLE OF PROGRAMME  | DATE                 | LOCATION  |
|----|---------------------|---|----------------------|---|
| 1  | Speaker             | KEMENTERIAN PENGAJIAN TINGGI: Bengkel Semakan dan Penyelarasan Pelan Strategik U4S Zon Selatan 2022   | 30 – 31 Januari 2022 | USIM  |
| 2  | Speaker             | NAHRIM: Bengkel Kesedaran Bahaya Endocrine Disrupting System (EDC) dalam Kalangan Masyarakat Awan Negeri Johor  | 12 Februari 2022     | Perpustakaan Raja Zarith Sofiah   |
| 3  | Invited Participant | KEM. PEMB. LUAR BANDAR: Program Dana Pembangunan Bumiputera TERAJU  | 19 Februari 2022     | Far East Planet Exotic Agrofarm, Lot 1218 & 1219, Jalan Tuhanal, Kg Air Merah, 86800 Mersing, Johor |
| 4  | Invited Participant | IPT: Projek kerjasama Komuniti – USM  | 9 Mac 2022           | USM Penang  |
| 5  | Speaker             | IPT: Projek Komuniti – RMC & CNC UiTM Shah Alam   | 14 Mac 2022          | UTM Johor Bahru   |
| 6  | Assessor            | JOHOR: Program Kraftangan Jahitan 'UPCYCLE' serta penghasilan lilin dari minyak masak terpakai bersama keluarga ibu tunggal Yayasan Pembangunan Keluarga Darul Ta'zim (YPKDT)                                       | 19 Mac 2022          | Centre of Suri Johor, Jalan Petri, Johor Bahru  |
| 7  | Invited Participant | Bengkel Quranic STEM  | 17 Mac 2022          | Sunway Hotel Big Box  |
| 8  | Assessor            | KEMENTERIAN PENGAJIAN TINGGI: Pemantauan Projek University for Society (U4S) Zon Selatan  | 27 Mac 2022          | Pejabat Pendidikan Daerah, Pasir Gudang   |
| 9  | Invited Participant | JAKOA: Projek Pemasangan Tenaga Elektrik Solar  | 29 Mac 2022          | Perkampungan Orang Asli Tewowoh, Kluang, Mersing  |
| 10 | Speaker             | JOHOR: Program "Jom baca bersama untuk 10 minit" tahun 2022   | 21 April 2022        | Perbadanan Perpustakaan Awam Johor  |
| 11 | Speaker             | KEMENTERIAN PEMBANGUNAN LUAR BANDAR: "Pengeluaran Produk Nenas Bernilai Tinggi Melalui Kaedah Mesra Alam" di bawah Dana Pembangunan Usahawan Bumiputera (DPUB) 2020 tajaan Unit Peneraju Agenda Bumiputera (TERAJU) | 22 – 23 April 2022   | Barokah village Parit Karjo, Batu Pahat   |
| 12 | Speaker             | KEMENTERIAN PENGAJIAN TINGGI: Strategik Pelaksanaan U4S Zon Selatan 2021-2023   | 4 April 2021         | Imperial Heritage Hotel, Melaka.  |
| 13 | Invited Participant | JOHOR: Bengkel Sektorial bagi Penyelarasan Penyediaan Belanjawan Johor 2022 dan Pelaksanaan Pelan Pembangunan mampan Johor 2030   | 19 – 20 April 2021   | Dewan Banquet, Kota Iskandar Puteri, BPEN.  |
| 14 | Speaker             | KEMENTERIAN PENGAJIAN TINGGI: Bengkel Strategik Pelaksanaan U4S Zon Selatan 2021-2023 UTM dengan kerjasama UTHM, UteM dan USIM  | 4 & 5 Januari 2021   | Imperial Haritage Hotel Melaka  |
| 15 | Speaker             | IPT: Projek Kerjasama Komuniti (RMC UiTM)   | 6 Januari 2021       | Aplikasi Google Meet  |

|    |                       |   |                               |   |
|----|-----------------------|---|-------------------------------|---|
| 16 | Speaker               | KEMENTERIAN PENGAJIAN TINGGI: Bengkel Penambahbaikan Pelaksanaan CEO Faculty Programme 2.0 Tahun 2021 (BKIM)  | 22 – 23 April 2021            | The Zenith Hotel, Putrajaya                                 |
| 17 | Speaker               | JOHOR: Bengkel Penyelarasan Sime Darby Plantation Berhad, Southern Region Office, Simpang Renggam   | 26 April 2021                 | Sime Darby Plantation Berhad, Simpang Renggam               |
| 18 | Speaker               | JOHOR: Program Pemulihan Sungai Kim Kim Bil. 2/2021 (JPS)   | 29 April 2021                 | Aplikasi Google Meet  |
| 19 | Invited Participant   | JOHOR: Sustainable Education Program bersama DYMM Raja Zarith Sofiah binti Almarhum Sultan Idris Shah, Tuanku Permaisuri Johor                            | 1 Julai 2021                  | Aplikasi webex  |
| 20 | Moderator/ Speaker    | KEMENTERIAN PENGAJIAN TINGGI: Program Webinar U4S Selatan 2021 : Kelestarian Sungai Kim Kim dan Masyarakat  | 29 Julai 2021                 | Facebook Rasmi Kementerian Pengajian Tinggi @ MOHE official |
| 21 | Assessor              | KEMENTERIAN PENGAJIAN TINGGI: Anugerah Keusahawanan Kementerian Pengajian Tinggi (Award – MEA) 2021   | 1 Ogos 2021                   | Aplikasi Zoom Meeting                                       |
| 22 | Invited Participant   | AKEPT: Program Leadership in Academic-Society Experiential Relationship (Laser) Siri 1 AKEPT  | 22 – 23 September 2021        | Aplikasi webex  |
| 23 | Invited Participant   | KEMENTERIAN PENGAJIAN TINGGI: Pelancaran University for Society (U4S)   | 27 September 2021             | Aplikasi Zoom Meeting                                       |
| 24 | Invited Participant   | KEMENTERIAN PENGAJIAN TINGGI: Pelancaran kerangka experiential learning and competency based landscape  | 15 Oktober 2021               | Facebook Rasmi Kementerian Pengajian Tinggi @ MOHE official |
| 25 | Assessor              | KEMENTERIAN PENGAJIAN TINGGI: Projek University For Society (U4S) Zon Utara   | 28 November – 1 Disember 2021 | Pulau Tuba Langkawi   |
| 26 | Invited Guest Speaker | IPT Kursus Pensyarah: Pemantapan Pengendalian Pengajaran dan Pembelajaran Pensyarah (PdP)   | 6 Januari 2020                | Kolej Yayasan Pelajaran Johor Sdn. Bhd                      |
| 27 | Speaker               | IPT Bengkel Pensyarah: Training of Trainers (TOT) bagi Program Penarafan Bintang Komuniti dan Industri  | 10 November 2020              | Universiti Malaysia Terengganu                              |
| 28 | Key Note              | Seminar Kebangsaan Pembelajaran Abad Ke-21  | 21-22/07/2018                 | Kota Tinggi, Johor  |
| 29 | Oral Poster Plenary   | Innovative Practice In Education And Industry Exhibition (I-Peinx 2016)   | 14/03/2016                    | UTM   |
| 30 | Invited Guest Speaker | IPT Program Pensyarah: Transformation Of Teaching Through Reflection To Generate Higher Order Thinking Skills Workshop                                    | 13/04/2016                    | Seremban  |
| 31 | Invited Speaker       | SEKOLAH - Program Motivasi: Program Gerak Gemilang with MRSM JOHOR  | 09/08/2016                    | MRSM Johor  |
| 32 | Invited Guest Speaker | Seminar UTM-MIT Blossoms Training Workshop 2015   | 5-7 Oktober 2015              | Ancasa Hotel & Spa Kuala Lumpur, Jalan Tun Tan Chen Lock    |
| 33 | Invited Guest Speaker | SEKOLAH - Bengkel Guru: Kemahiran Berfikir Aras Tinggi (KBAT) dan Pedagogi Pembelajaran Abad Ke 21 Mata Pelajaran Perdagangan Daerah Kulaijaya Tahun 2015 | 23 April 2015                 | SMK Kulai Besar Kulaijaya Johor                             |

|    |                       |   |                    |   |
|----|-----------------------|---|--------------------|---|
| 34 | Invited Guest Speaker | SEKOLAH - Bengkel Guru: Pembelajaran Koperatif Dalam Matematik bagi Guru-Guru Matematik Daerah Kulai  | 14 Februari 2015   | Bilik Seminar Pejabat Pendidikan Daerah Kulajaya                    |
| 35 | Invited Guest Speaker | SEKOLAH - Bengkel Guru: Kemahiran Berfikir Aras Tinggi (KBAT) dan Pembelajaran Abad Ke-21 Daerah Pontian  | 28 Febuari 2015    | Bilik Khawarizmi Matematik, SMK Dato' Penggawa Barat Pontian, Johor |
| 36 | Invited Guest Speaker | SEKOLAH - Kursus Guru: Peningkatan Profesionalisme Guru SMK Dato' Penggawa Barat  | 27 – 28 March 2015 | Hotel Selesa Johor Bahru  |
| 37 | Invited Guest Speaker | SEKOLAH - Program Guru: Kemahiran Pengajian Mikro, Dewan Besar Sekolah Pengurusan & Sains Sosial  | 4 April 2015       | Kolej Yayasan Pelajaran Johor                                       |
| 38 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Perkampungan Ilmu SPM anjuran SMK Kangkar Pulai   | 2-3 Oktober 2015   | Hotel Good Hope, Johor Bahru  |
| 39 | Invited Guest Speaker | SEKOLAH - Bengkel Guru: Pembelajaran Inkuiri Dalam Matematik Daerah Kulai   | 5 September 2015   | Bilik Mesyuarat SMK Bandar Putra, Kulajaya                          |
| 40 | Invited Guest Speaker | SEKOLAH - Bengkel Guru: Pembelajaran Koperatif dan Geogebra STEM Exploration anjuran Persatuan Pendidikan Sains dan Matematik Johor   | 27 Mac 2015        | Bilik Seminar Fakulti Pendidikan, UTM                               |
| 41 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Cemerlang Akademik dan Sahsiah Terpuji (ProCAST 2) Zon Selatan 2015 anjuran Pertubuhan Himpunan Lepasn Institusi- Institusi Pendidikan Malaysia | 21 November 2015   | Tanjung Piai Resort, Serkat, Pontian, Johor                         |
| 42 | Invited Guest Speaker | SEKOLAH - Program Motivasi untuk Pelajar Muslim   | 5 November 2015    | Sek Men Islam Hidayah   |
| 43 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Program Pesona: Personaliti Remaja Puteri "Remaja Harapan Bangsa, Pemuda Aset Negara" – Anjuran SMK Dato' Penggawa Barat Pontian, Johor         | 17 April 2015      | Tanjung Piai Resort   |
| 44 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Majlis Ikrar Janji dan Penetapan Target SPM dan PT3 SMK Kangkar Pulai Tahun 2015  | 29 March 2015      | Dataran AIB, SMK Kangkar Pulai, Johor Bahru                         |
| 45 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Cemerlang Akademik dan Sahsiah Terpuji (ProCAST 2) Zon Selatan 2014 anjuran Pertubuhan Himpunan Lepasn Institusi- Institusi Pendidikan Malaysia | 23 November 2014   | Kompleks Pendidikan Haluan Johor, Simpang Renggam                   |
| 46 | Invited Guest Speaker | SEKOLAH - Program Guru: Hari Inovasi MRSM Tun Dr. ismail, Tajuk: Transformasi Hati, Inovasi Minda   | 11 November 2014   | Bilik Monarki, MRSM Tun Dr. Ismail                                  |
| 47 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Program Menggapai Bintang PT3 & SPM   | 11 Oktober 2014    | Dewan Sri Bestari SMK Felda Ulu Tebrau                              |
| 48 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Ilmu & Pengalaman Dicari, Peluang ku Rebuti & Hargai, Kemanisan akan Dikecapi   | 2 Oktober 2014     | Wadah Informasi SMK Dato' Penggawa Barat Pontian                    |

|    |                       |   |                      |  |
|----|-----------------------|---|----------------------|--|
| 49 | Invited Guest Speaker | SEKOLAH - Kursus Guru: Pedagogi Matematik Sekolah Menengah Daerah Kuala Pilah Tahun 2014  | 25-27 September 2014 | Hotel Sentral Melaka                               |
| 50 | Invited Participant   | IPT - Bengkel Pensyarah: Penghasilan Dokumen dan Pemurnian Dokumen MIT Blossoms   | 9-11 September 2014  | Pearl International Hotel Kuala Lumpur             |
| 51 | Invited Guest Speaker | SEKOLAH - Kursus Guru: Kemahiran Berfikir Aras Tinggi   | 6 September 2014     | SMK Saujana Utama, Selangor                        |
| 52 | Invited Guest Speaker | SEKOLAH - Bengkel Guru: Kemahiran Berfikir Aras Tinggi (KBAT) dalam P&P Matematik   | 11 Januari 2014      | Bilik Khawarizmi SMK Dato' Penggawa Barat Pontian  |
| 53 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Pelajar SPM 2013, Title: Aku Sebutir Bintang  | 1 November 2013      | Makmal Bahasa SMK Permas Jaya 3                    |
| 54 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Permata Siri 3  | 5 September 2013     | Dewan Kuliah 1 Sekolah Pengurusan dan Sains Sosial |
| 55 | Invited Guest Speaker | SEKOLAH - Program Guru: Profesionalisme Guru dan Staf MRSM Johor Bahru, Title: Mengubah Cara Berfikir Kepada Minda Berfikir dan Mengubah Cara Bekerja kepada Cara Kerja | 22 April 2013        | Pusat Sumber MRSM Johor Bahru                      |
| 56 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Permata Siri 2  | 12 Februari 2013     | Dewan Besar SPSS, Kolej Yayasan Pelajaran Johor    |
| 57 | Invited Guest Speaker | IPT - Program Pensyarah: Khidmat Nasihat Teknik Pedagogi bagi "Projek Knowledge Transfer Program (KTP)"   | 26 Oktober 2013      | Dewan Sekolah Rendah Ibnu Abbas, Kuantan, Pahang   |
| 58 | Invited Guest Speaker | SEKOLAH - Program Motivasi: Kecemerlangan untuk calon-calon SPM 2013, Tajuk Motivasi: Mencapai Kecemerlangan  | 16 September 2013    | Dewan SMKA Maahad Muar                             |
| 59 | Facilitator           | IPT - Program Pensyarah: "Transfer Knowledge Programme" siri 1  | 3 Januari 2013       | Bilik Monarki, MRSM Pontian                        |
| 60 | Invited Guest Speaker | SEKOLAH - Kursus Guru: Modul Bimbingan Praktikum (Sek. Menengah) di Bawah Piagam Baharu Guru GTP 2.0 Bil. 1 Tahun 2013  | 21-24 Oktober 2013   | Hotel Suria City                                   |
| 61 | Key Note Speaker      | AKEPT Competency & Enhancement Programme (ACEP): Coaching and Mentoring for Director of Centre of Excellence  | 30 Jun 2022          | EDC Hotel and Resort, UUM                          |

#### University

| No | Role      | Title Of Programme                           | Date               | Location   |
|----|-----------|--|--------------------|--|
| 1  | Speaker   | Bengkel Blueprint@Envision 2022 UTM CCIN     | 2 Januari 2022     | Bilik Seminar 1, TTC                             |
| 2  | Presenter | Bengkel Blueprint@Envision 2025 Jabatan TNCP | 3 – 4 Januari 2022 | Dewan Bankuet, Bangunan Canseleri Sultan Ibrahim |
| 3  | Speaker   | AIMS4STAR kepada TNCP                        | 5 Januari 2022     | Aplikasi webex                                   |

|    |                     |  |                        |   |
|----|---------------------|--|------------------------|---|
| 4  | Participant         | Jaringan industri UTM - Petronas, Pengerang  | 10 Januari 2022        | Petronas Pengerang  |
| 5  | Participant         | Bengkel Modul Latihan (Akademik) 2022  | 20 – 22 Januari 2022   | UTM Hotel & Residence UTMKL   |
| 6  | Participant         | Bengkel Perancangan Strategik FSSH 2022 : ENVISION UTM 2025  | 28 – 29 Januari 2022   | Dewan Sapphire 1, Aras 1, Amerald Resort Hotel, Pengerang, Johor              |
| 7  | Moderator           | Bengkel Strategik Planning CCIN 2022   | 10 – 11 Februari 2022  | Savanna Hill Resort, Ulu Tiram, Johor Bahru                                   |
| 8  | Speaker             | Wacana Ilmiah : Buku libatsama komuniti – UTMPress   | 1 Mac 2022             | Bilik Pengarah, CCIN, UTM   |
| 9  | Moderator           | “Memperkasa Masyarakat Menerusi Inovasi”, AIMS4STAR Symposium  | 22 Mac 2022            | Webinar Aims4star Symposium, CCIN UTM Johor Bahru                             |
| 10 | Presenter           | Pembentangan Finalis AKM (Projek): Citra Karisma 2022- Pemilihan Pemenang                              | 26 April 2022          | Bilik Mesyuarat 1, Research Management Centre (RMC)                           |
| 11 | Participant         | Bengkel QS Top 100 (Program KTP)   | 18 – 19 Mei 2022       | Impiana Hotel Senai   |
| 12 | Assessor            | Panel Penilai Temuduga Calon Anugerah Gemilang Mahasiswa (GEMA) 2020                                   | 3 & 4 Januari 2021     | Jabatan Perkhidmatan Digital (UTMDigital) dan secara atas talian di UTM Johor |
| 13 | Speaker             | Bengkel Permurnian Action Plan RDCI – Entiti Perkhidmatan (Sesi Pembentangan)                          | 3 Mac 2021             | Aplikasi webex  |
| 14 | Speaker             | Bengkel Penyelarasan Projek Komuniti Bangsa Johor Bahagia  | 5 Mac 2021             | Aplikasi Google Meet  |
| 15 | Invited Participant | Bengkel Penyelarasan HUB penyelidikan UTM Pagoh  | 6 Mei 2021             | Pusat Penyelidikan UTM Pagoh  |
| 16 | Speaker             | Bengkel Pemurnian Garis Panduan KTP RIG 2022   | 10 Jun 2021            | Aplikasi webex  |
| 17 | Invited Participant | Bengkel Pembangunan Kompetensi Siri 8/2021 (Fungsian Akademik)   | 13 – 14 Jun 2021       | Aplikasi Zoom Meeting   |
| 18 | Invited Participant | Bengkel Pemantapan Ranking UTM Bil 2/2021  | 21 Julai 2021          | Aplikasi Zoom Meeting   |
| 19 | Speaker             | Program Bulan Penyelidikan – Fakulti Sains Sosial dan Kemanusiaan (FSSH) “Impactful Community Project” | 18 Ogos 2021           | Aplikasi webex  |
| 20 | Invited Speaker     | Bengkel Pembangunan Korporat Strategik, Pembangunan Pelan Strategik Jabatan, Pelan Tindakan 2022       | 29 Ogos 2021           | Aplikasi webex  |
| 21 | Speaker             | Bengkel Pembangunan Indeks Penilaian Impak Program Pelajar   | 30 Ogos 2021           | Aplikasi Google Meet  |
| 22 | Participant         | Bengkel Fasa Pemurnian Envision UTM 2025   | 14 – 15 September 2021 | Aplikasi webex  |
| 23 | Presenter           | Pembentang Program Town Hall : Envision UTM 2025   | 3 – 4 Oktober 2021     | Aplikasi webex  |
| 24 | Participant         | Bengkel Management Retreat UTM 2021  | 22 – 23 Oktober 2021   | Holiday Inn, Melaka   |

|    |                       |  |                       |  |
|----|-----------------------|--|-----------------------|--|
| 25 | Presenter             | Bengkel Pembangunan Kompetensi Staf UTM siri 20/2021 (Fungsian Akademik)                                       | 11 – 13 November 2021 | Hatten Hotel Malacca   |
| 26 | Participant           | Bengkel Program Retreat Lembaga Pengarah UTM 2021  | 26 – 28 November 2021 | Residensi UTM KL   |
| 27 | Speaker               | Karnival Maya Institusi Felo (KAMIF21) – Community Engagement Project and CE Rating Stars                      | 4 Disember 2021       | Aplikasi webex   |
| 28 | Invited Guest Speaker | Perasmian Projek Pemasangan Tenaga Elektrik Solar  | 28 Disember 2021      | Perkampungan Rumah Rakit Tanjung Surat, Johor  |
| 29 | Assessor              | Anugerah Gemilang Mahasiswa (GEMA) 2020  | 27 Januari 2021       | JTNCHPEP   |
| 30 | Participant           | Bengkel Kriteria Anugerah Inovasi Naib Canselor (AINC 2021)  | 11 - 18 Februari 2021 | Aplikasi webex   |
| 31 | Invited Guest Speaker | Kursus Baseline Competencies for Differentiated Career Pathway (BC4DCP) 2020 – Kumpulan 1                      | 26 Ogos 2020.         | UTM  |
| 32 | Invited Guest Speaker | Kursus Baseline Competencies for Differentiated Career Pathway (BC4DCP) 2020 – Kumpulan 2                      | 23 September 2020     | UTM  |
| 33 | Invited Guest Speaker | Taklimat Khusus Fe Gold 3 – Trek Geran Komuniti Fakulti Kejuruteraan   | 16 Jun 2020           | UTM  |
| 34 | Invited Guest Speaker | Kursus Baseline Competencies For Differentiated Career Pathway (BC4DCP) 2020 – Kumpulan 1, UTMLead             | 26 Ogos 2020          | UTM  |
| 35 | Invited Guest Speaker | Kursus Baseline Competencies For Differentiated Career Pathway (BC4DCP) 2020 – Kumpulan 2, UTMLead             | 23 September 2020     | UTM  |
| 36 | Invited Guest Speaker | Projek Pencegahan dan Kawalan Denggi di Taman Pulai Indah, Fasa lily (Jalan Pi 9/9 – 12/9)                     | 19 September 2020     | Sekolah Kejuruteraan Bioperubatan dan Sains kesihatan, Fakulti Kejuruteraan, Mediacal Devices and Technology Centre. |
| 37 | Invited Guest Speaker | Klinik Projek KTP dan Star Rating iHumEn 2020  | 30 September 2020     | Institute of Human Centered Engineering, UTM Johor Bharu   |
| 38 | Invited Guest Speaker | Program K-Sharing “Libatsama Komuniti & Industri Berimpak” sempena UTM Library Research Week                   | 20 September 2020     | UTM Library  |
| 39 | Invited Guest Speaker | Bengkel STEM Sempena I-Cite  | 25/07/2018            | Le Granduer, Kulai   |
| 40 | Plenary               | NALI Symposium 2018  | 28/05/2018            | UTM  |
| 41 | Invited Guest Speaker | Reflective Practice Workshop   | 22/04/2016            | Johor  |
| 42 | Invited Guest Speaker | Postgraduate Student Society Colloquium, Faculty of Education. Title: Penulisan Kajian Literatur yang Berkesan | 24 April 2015         | Seminar Room, Faculty of Education, UTM  |

|    |                       |  |                 |                                       |
|----|-----------------------|--|-----------------|---------------------------------------|
| 43 | Invited Participant   | Bengkel Penghasilan Dokumen dan Pemurnian Dokumen MIT Blossoms   | 11-13 May 2014  | Empress Hotel Sepang                  |
| 44 | Invited Guest Speaker | Program Bicara Ilmu bagi Pelajar dan Penyelia Program PhD Synergy, Title: Falsafah Kemahiran Berfikir Aras Tinggi (KBAT) | 11 Febuari 2014 | Bilik Seminar Fakulti Pendidikan, UTM |
| 45 | Invited Guest Speaker | Bengkel Scenario Based Learning  | 10-12 May 2013  | A Famosa Resort, Melaka               |

### Faculty

| No  | Role                  | Title Of Programme   | Date                 | Location                                     |
|-----|-----------------------|--|----------------------|--|
| 1   | Invited Guest Speaker | Research Week@FS 2021  | 14/03/2021           | UTM  |
| 2   | Invited Guest Speaker | Seminar Akademik: Dokumen Rancangan Pengajaran Harian (RPH) Bagi Kursus Pedagogi, Kaedah Mengajar, Pengajaran Mikro Dan Latihan Mengajar | 14/10/2021           | Sekolah Pendidikan                           |
| 3   | Invited Guest Speaker | Bengkel Pemantapan Pengajaran Dan Pembelajaran Guru-Guru Matematik Dan Sains MRSM Johor Bahru  | 04/01/2017           | UTM  |
| 4   | Invited Guest Speaker | Academic Colloquium Series 2016  | 25/04/2016           | UTM  |
| 5   | Invited Guest Speaker | Science And Mathematics Education (SME) Research Group Colloquium  | 05/10/2015           | UTM  |
| 6   | Invited Guest Speaker | Postgraduate Student Society (PGSS) Research Colloquium  | 09/04/2015           | UTM  |
| 7.  | Invited Guest Speaker | Postgraduate Student Society, Faculty of Education. Title: Penerapan Kemahiran Berfikir Aras Tinggi (KBAT)                               | 31 Januari 2015      | IPT, Faculty of Education                    |
| 8.  | Invited Guest Speaker | Science and Mathematics Education (SME) Research Group Colloquium, Chemistry Lab   | 16 November 2015     | Faculty of Education, UTM                    |
| 9.  | Invited Guest Speaker | Postgraduate Student Society, Faculty of Education. Title: Penulisan Kajian Literatur yang Berkesan                                      | 10 Januari 2015      | Seminar Room, Faculty of Education, UTM      |
| 10. | Invited Guest Speaker | 2021 FSSH Research and Innovation Strategic Planning (ResISP) Workshop   | 13 Januari 2021      | Bilik Seminar 1, D05, Aras , FSSH, UTM Johor |
| 11. | Invited Participant   | Bengkel Penyuntingan Tesis kepada karya asli dan buku penyelidikan   | 6 – 7 September 2021 | Aplikasi webex                               |
| 12  | Facilitator           | Research Methodology Short Course (MPU0020 & PPU 0020) Semester II sesi 2013/2014  | 6 April 2014         | Bilik Seminar Fakulti Pendidikan, UTM        |
| 13  | Invited Guest Speaker | Program Bicara Ilmu bagi penyelia kepada pelajar PhD (Program Sinergi), Title: Kemahiran Berfikir Aras Tinggi (KBAT),                    | 7 Januari 2014       | CTL Hall Block F54, UTM                      |

**PROFESSIONAL SERVICES****Penilai Kurikulum Luar**

| <b>NO</b> | <b>ROLE</b>  | <b>TITLE OF PROGRAMME</b>  | <b>DATE</b>                              | <b>LOCATION</b>  | <b>TOTAL INCOME GENERATED (RM)</b> |
|-----------|--------------|--|--|--|------------------------------------|
| 1.        | Penilai Luar | Pembangunan dan Semakan Kurikulum serta Penilai Program Bidang Kimia Program Pendidikan Guru | 1 Januari 2020 sehingga 31 Disember 2022 | Institut Pendidikan Guru Kampus Pulau Pinang           | RM 800.00                          |
| 2         | Penilai Luar | Pembangunan dan Semakan Kurikulum serta Penilai Program Bidang Kimia Program Pendidikan Guru | 1 Januari 2020 sehingga 31 Disember 2019 | Institut Pendidikan Guru Kampus Sabah                  | RM 800.00                          |
| 3         | Penilai Luar | Pembangunan dan Semakan Kurikulum serta Penilai Program Bidang Kimia Program Pendidikan Guru | 1 Januari 2020 sehingga 31 Disember 2018 | Institut Pendidikan Guru Kampus Nilai                  | RM 800.00                          |
| 4         | Penilai Luar | Pembangunan dan Semakan Kurikulum serta Penilai Program Bidang Kimia Program Pendidikan Guru | 1 Januari 2020 sehingga 31 Disember 2017 | Institut Pendidikan Guru Kampus Johor Bahru            | RM 800.00                          |
| 5         | Penilai Luar | Pembangunan dan Semakan Kurikulum serta Penilai Program Bidang Kimia Program Pendidikan Guru | 1 Januari 2020 sehingga 31 Disember 2018 | Universiti Pendidikan Sultan Idris                     | RM 1500.00                         |
| 6         | Penilai Luar | Pembangunan dan Semakan Kurikulum serta Penilai Program Bidang Kimia Program Pendidikan Guru | 1 Januari 2020 sehingga 31 Disember 2022 | Universiti Pendidikan Sultan Idris                     | RM 1500.00                         |
| 7         | Penilai Luar | Pembangunan dan Semakan Kurikulum serta Penilai Program Bidang Kimia Program Pendidikan Guru | 1 Januari 2020 sehingga 31 Disember 2022 | Universiti Kebangsaan Malaysia                         | RM 1 500.00                        |
| 8         | Penilai Luar | Assessor for GCE A Level Chemistry, Physics, Science and Mathematics Curriculum              | 1 – 4 January 2022                       | Crescendo International College, Johor Bahru, Malaysia | RM 600.00                          |

**Penilai Geran Antarabangsa**

| NO | ROLE          | GRANT   | TITLE OF PROPOSAL GRANT   | DATE       |
|----|---------------|---|---|------------|
| 1  | Penilai Geran | Geran Padanan UTM-UNAIR (Universitas Airlangga) | Indigenous adsorptive mixed matrix membrane haemodialyzer from blood purification | 19/02/2023 |

### Penilai Geran Kebangsaan

| NO | ROLE          | GRANT       | UNIVERSITY | VERSION | TITLE OF PROPOSAL GRANT  |
|----|---------------|-------------|------------|---------|--|
| 1  | Penilai Geran | FRGS 2022-1 | UTM        | 2       | Kerangka Pembelajaran Rendah Karbon berteraskan Pendidikan STEM Bersepadu dalam menangani Tindakan Iklim   |
| 2  | Penilai Geran | FRGS 2022-1 | UTM        | 1       | Development of a framework for problem solving embedded with visual programming language in improving problem solving skill in teaching and learning science |
| 3  | Penilai Geran | FRGS 2021-1 | UTM        | 2       | Model Pengajaran Hybrid Kreativiti Sintesis Dalam Pendidikan Sains, Teknologi, Kejuruteraan Dan Matematik (STEM) Bagi Pelajar Menengah Atas                  |
| 4  | Penilai Geran | FRGS 2021-1 | UTM        | 2       | Kerangka Penghujahan Sainifik dalam Pembelajaran Sains Berdasarkan Interaksi Verbal  |
| 5  | Penilai Geran | FRGS 2021-1 | UTM        | 2       | Kerangka Epistemologi Sainifik Dalam Pembelajaran Amali Sains Menengah   |
| 6  | Penilai Geran | FRGS 2021-1 | UTM        | 2       | A Framework of Online Peeragogy Flipped Based Learning for Enhancing Student Collaborative Problem-Solving Skills  |
| 7  | Penilai Geran | FRGS 2021-1 | UTM        | 2       | Kerangka Pembelajaran Peta Konsep Berintegrasikan Pengajaran Rakan Sebaya dalam Menerapkan Kemahiran Penyelesaian Masalah Kolaboratif Sains                  |
| 8  | Penilai Geran | FRGS 2020-1 | IPGM       | 2       | Model Pendidikan Konservasi Alam Sekitar: Mengeksplorasi STEM Bersepadu dengan Persekitaran Alami Sekolah Pesisir Pantai                                     |
| 9  | Penilai Geran | FRGS 2020-1 | IPGM       | 1       | Model pengetahuan teknologikal pedagogi isi kandungan (tpack-pesisir) guru-guru sekolah rendah pesisir pantai di malaysia                                    |
| 10 | Penilai Geran | FRGS 2020-1 | UTM        | 1       | A Conceptual Framework for Implementing 21C-STEM Education in Malaysia   |
| 11 | Penilai Geran | FRGS 2020-1 | UTM        | 1       | framework for scenario-based learning in statistics and probability to ignite students' interest in STEM careers   |
| 12 | Penilai Geran | FRGS 2020-1 | UTM        | 1       | A Framework of Design Thinking Curriculum that to Enhance Student's Metacognition in STEM Education  |
| 13 | Penilai Geran | PRGS 2019-2 | UTM        | 3       | GamBot: Educational Game Mobile Robot for promoting hypothetico-creative reasoning among students  |

|    |               |             |     |   |  |
|----|---------------|-------------|-----|---|--|
| 14 | Penilai Geran | FRGS 2019-1 | UTM | 2 | Integrated Values-Based Environmental Education with Technology-Enhanced Learning Framework  |
| 15 | Penilai Geran | FRGS 2019-1 | UTM | 2 | Mentoring model for secondary students in STEM mentor mentee program   |
| 16 | Penilai Geran | FRGS 2019-1 | UTM | 2 | Model Pembangunan Ekonomi Lestari Dalam Mempromosi Eko Pelancongan Maritim Kearah Pembasmian Kemiskinan di kalangan Nelayan Tradisi                                      |
| 17 | Penilai Geran | FRGS 2019-1 | UTM | 2 | Framework of Metacognition in Mathematics Problem Solving when using Augmented Reality   |
| 18 | Penilai Geran | PRGS 2019-1 | UTM | 2 | "Ecolife Challenge" for Low Carbon Society   |
| 19 | Penilai Geran | PRGS 2019-1 | UTM | 2 | Pembangunan modul STEM Kelab Suka Belajar berpandukan kepada model inkuiri 5E untuk meningkatkan minat pelajar terhadap jurusan Sains.                                   |
| 20 | Penilai Geran | PRGS 2019-1 | UTM | 2 | Development of Green Educational Mobile Robot: GEMBotA   |
| 21 | Penilai Geran | PRGS 2019-1 | UTM | 2 | Edu-Muallaf untuk pendidikan muallaf secara atas talian  |
| 22 | Penilai Geran | FRGS 2018-1 | UTM | 2 | Kerangka Inklusif Pembangunan Profesional Guru STEM Untuk Keperluan Era Revolusi Industri 4.0  |
| 23 | Penilai Geran | FRGS 2018-1 | UTM | 2 | Teachers-students' scientific epistemology model through critical theory as social innovation mechanism in STEM education  |
| 24 | Penilai Geran | FRGS 2018-1 | UTM | 1 | Emerging Mathematical Critical Thinking Theory in Mathematical Problem Solving For 21st Century STEM Education   |
| 25 | Penilai Geran | PRGS 2018-1 | UTM | 2 | High performance computing on mobile application of nanoscience and nanotechnology for secondary school to empower the collaborative learning on 21st Century Education. |
| 26 | Penilai Geran | PRGS 2018-1 | UTM | 2 | Development of Mobile Augmented Reality (Mar) For Education 4.0 To Enhance Visualization Skill Among Students In Stem Education  |
| 27 | Penilai Geran | PRGS 2018-1 | UTM | 1 | "Ecolife Challenge" for Low Carbon Awareness among School Students, Teachers and Parents   |
| 28 | Penilai Geran | FRGS 2017-1 | UTM | 2 | Fundamental Approach of Malaysian Marital Quality and Well-Being among university students   |
| 29 | Penilai Geran | FRGS 2017-1 | UTM | 2 | Rangsangan Teknologi Komunikasi Media Sosial Ke Atas Pembangunan Karakter Sejangat Pelajar Di Malaysia.  |

**Penilai Geran Universiti Teknologi Malaysia**

| NO | ROLE | TITLE OF PROPOSAL GRANT | TYPE OF GRANT |
|----|------|-------------------------|---------------|
|----|------|-------------------------|---------------|

|    |               |   |        |
|----|---------------|---|--------|
| 1  | Penilai Geran | A Stem Fact-Based Paremiology Model For The Integration And Preservation Of Endangered Indigenous Proverbs In Malaysia      | UTMFR  |
| 2  | Penilai Geran | Twenty-First-Century-Stem Education Framework For Secondary School In Malaysia  | UTMFR  |
| 3  | Penilai Geran | Hubungan Konsep Kendiri Kimia Pelajar Dengan Kemahiran Menghujah Secara Saintifik Pelajar                                   | UTMER  |
| 4  | Penilai Geran | Developing The Pirate Of Word King Mobile Application To Improve Reading, Spelling And Writing Among Children With Dyslexia | Tier 1 |
| 5  | Penilai Geran | Analisis Keperluan Program Pembangunan Profesional Pedagogi Stem Secara Dalam Talian  | Tier 2 |
| 6  | Penilai Geran | Keberkesanan Permainan Interaktif Matematik Bagi Murid Pemulihan (Linus Matematik)  | Tier 2 |
| 7  | Penilai Geran | Ardusat Project-Based Learning For Stem Motivation And Enhanced Understanding   | Tier 1 |
| 8  | Penilai Geran | Problem-Based Learning In Stem Education To Develop 21st Century Skills And Low Carbon Awareness                            | Tier 1 |
| 9  | Penilai Geran | Mathematical Thinking Among Pre-Service Teachers: Using Dynamic Mathematics Software Versus Paper And Pencil                | Tier 1 |
| 10 | Penilai Geran | Characterizing Nature Of Physics In Integrated Stem Education (Nopistem): A Qualitative Inquiry                             | UTMFR  |

#### **Penilai Luar Kenaikan Pangkat Profesor Madya**

| NO | ROLE         | UNIVERSITI                           | NAMA CALON         | TARIKH      |
|----|--------------|--------------------------------------|--------------------|-------------|
| 1  | Penilai Luar | Universiti Kebangsaan Malaysia (UKM) | Dr. Zanaton Ikhsan | 11 Jun 2021 |

#### **Community Project**

| NO | ROLE              | TITLE OF PROGRAMME   | DATE                              | LEVEL      | COST      | LOCATION        |
|----|-------------------|--|-----------------------------------|------------|-----------|-----------------|
| 1. | Ketua Zon Selatan | Pembangunan Kelestarian Sungai Kim Kim (University for Society)    | 7 November 2020 – 6 November 2021 | Kebangsaan | 150,000   | Johor           |
| 2. | Sekretariat       | Program Lembah Invoasi Johor (JIVe)                                | Januari – Disember 2020           | Negeri     | 300,000   | Johor           |
| 3. | Ketua Program     | Pengeluaran Produk Nenas bernilai tinggi melalui kaedah mesra alam | 17 Jun 2020 – 21 Februari 2023    | Kebangsaan | 1,243,845 | Johor           |
| 4. | Ketua Program     | Penternakan Pintar Udang Kara Air Tawar                            | 17 Jun 2020 – 21 Februari 2023    | Kebangsaan | 1,996,416 | Johor dan Perak |
| 5. | Sekretariat       | Bangsa Johor Bahagia   | 2018 - 2021                       | Negeri     | 256,000   | Johor           |

#### **Community and University Services**

| NO | ROLE                                | NAME OF PROJECT   | DATE          | TOTAL VALUE OF PROJECT (RM) |
|----|-------------------------------------|---|---------------|-----------------------------|
| 1  | Pengarah Program UTM Shield         | Penyerahan sumbangan peralatan PPE kepada Pihak Hospital Sultan Aminah, Johor Bahru         | 8 Ogos 2021   | RM 2000.00                  |
| 2  | Pengarah Program UTM Shield         | Penyerahan sumbangan peralatan PPE kepada Pihak Hospital Kulai, Johor                       | 10 Ogos 2021  | RM 2000.00                  |
| 3  | Pengarah Program UTM Shield         | Penyerahan sumbangan peralatan PPE kepada barisan hadapan (Polis) Kulai                     | 15 Ogos 2021  | RM 2000.00                  |
| 4  | Pengarah Program UTM Shield         | Penyerahan sumbangan peralatan PPE kepada barisan hadapan (Klinik UTM)                      | 15 Ogos 2021  | RM 2000.00                  |
| 5  | Pengarah Program Ihya Ramadhan 2022 | Sumbangan makanan, pakaian dan duit raya kepada asnaf (anak yatim, orang tua, fakir miskin) | 15 April 2022 | RM 5000.00                  |
| 6  | Pengarah Program Ihya Ramadhan 2021 | Sumbangan makanan, pakaian dan duit raya kepada asnaf (anak yatim, orang tua, fakir miskin) | 10 Mei 2021   | RM 3000.00                  |
| 7  | Pengarah Program Ihya Ramadhan 2020 | Sumbangan makanan, pakaian dan duit raya kepada asnaf (anak yatim, orang tua, fakir miskin) | 20 Mei 2020   | RM 2000.00                  |
| 8  | Pengarah Program Ihya Ramadhan 2019 | Sumbangan makanan, pakaian dan duit raya kepada asnaf (anak yatim, orang tua, fakir miskin) | 21 Mei 2019   | RM 2000.00                  |
| 9  | Pengarah Program Ihya Ramadhan 2018 | Sumbangan makanan, pakaian dan duit raya kepada asnaf (anak yatim, orang tua, fakir miskin) | 15 Mei 2018   | RM 2000.00                  |
| 10 | AJK Program Kemboja 2019            | Sumbangan korban, berkhatan dan pembinaan telaga Kemboja                                    | 11 Ogos 2019  | RM 10000.00                 |
| 11 | AJK Program Kemboja 2018            | Sumbangan korban, berkhatan dan pembinaan telaga Kemboja                                    | 21 Ogos 2019  | RM 10000.00                 |

#### **Endowment and Wakaf to University**

| NO | NAME OF ENDOWMENT AND WAKAF | TOTAL CONTRIBUTION (RM) |
|----|-----------------------------|-------------------------|
| 1. | UTM Care Charity Shop (CCS) | 3,725.25                |

#### **Grant based on innovation and University Commercialisation Product**

| No | Name Of Grant  | Role | Category Of Grant (Utm/Others) | Type Of Grant | Amount (Rm) | Starting Date | Ending Date  | Vote No                      |
|----|--|------|--------------------------------|---------------|-------------|---------------|--------------|------------------------------|
| 1  | Q STEM<br>Virtualreality/Augmented Reality Self Learning Module For Appreciation Of Al Quran And Critical Thinking | Head | MOHE                           | PRGS          | 84600       | 1/12/2019     | 31/8/2022    | R.J1300<br>00.7853<br>.4L711 |
| 2  | Smart STEM   | Head | UTM                            | PRGS<br>ICC   | 20000       | 1/4/2020      | 31/3<br>2022 | R.J1300<br>00.7753<br>.4J461 |

### Copyright

| NO  | NAME OF COPYRIGHT                                       | STATUS OF COPYRIGHT | YEAR |
|-----|---|---------------------|------|
| 1.  | Introduction to the learning theories                   | Approved            | 2014 |
| 2.  | Behavioral learning theories                            | Approved            | 2014 |
| 3.  | Piagetian theory of cognitive development               | Approved            | 2014 |
| 4.  | Cognitive learning theory – Robert Gagne                | Approved            | 2014 |
| 5.  | Cognitive learning theory – Jerome Bruner               | Approved            | 2014 |
| 6.  | Cognitive learning theory - Ausubel                     | Approved            | 2014 |
| 7.  | Alternative framework                                   | Approved            | 2014 |
| 8.  | Social constructivism approach                          | Approved            | 2014 |
| 9.  | Multiple intelligence Gardner                           | Approved            | 2014 |
| 10. | Modul Pengurusan Trauma Bagi Mangsa Banjir              | Approved            | 2016 |
| 11. | Modul Pendidikan Bagi Mangsa Banjir                     | Approved            | 2016 |
| 12. | Modul Pembangunan Kemahiran Insaniah Bagi Mangsa Banjir | Approved            | 2016 |
| 13. | MOLECOMAID:Mobile Learning Communication Aid            | Approved            | 2016 |
| 14. | Kursus Kemahiran Belajar Murid Tahun 6                  | Approved            | 2019 |