



The National University of Malaysia
Universiti Kebangsaan Malaysia
Guardian of The Nation (*Pendaulat Amanah Negara*)
 CENTRE OF STEM ENCULTURATION
 (*Pusat Pembudayaan STEM*)
 FACULTY OF EDUCATION, UKM (*Fakulti Pendidikan, UKM*)

NAME (<i>Nama</i>)	Tuan Mastura Tuan Soh								
CURRENT POSITION (<i>Jawatan Sekarang</i>)	Pensyarah DS45								
OFFICE ADDRESS (<i>Alamat Pejabat</i>)	FACULTY OF EDUCATION/ FAKULTI PENDIDIKAN								
TELEPHONE NUMBER (<i>Nombor Telefon</i>)	013-7000337								
EMAIL/WEBSITE (<i>E-Mel/ Laman Web</i>)	tuanmastura@ukm.edu.my Akademia (https://ukm.academia.edu/TuanMasturaTuanSoh) ResearchGate (https://www.researchgate.net/profile/Tuan_Mastura_Tuan_Soh/stats) Google Scholar https://scholar.google.co.uk/citations?user=drbj_H0AAAAJ&hl=en								
ACADEMIC QUALIFICATION (<i>Kelayakan Akademik</i>)	<ul style="list-style-type: none"> • Doctor of Philosophy (PhD) – [under examination status] ; The University of York, United Kingdom; • Master of Science Education (MEd) – Universiti Kebangsaan Malaysia (UKM); • Bachelor in Chemical Engineering (BEng Hons) - Universiti Teknologi Malaysia (UTM) 								
AREA OF SPECIALIZATIONS (<i>Bidang Kepakaran</i>)	Science Education, STEM Education, Chemical Engineering								
RESEARCH INTEREST (<i>Bidang Penyelidikan</i>)	Science education, STEM education, informal and non-formal learning, computational thinking, STEM careers								
WORK EXPERIENCES (<i>Pengalaman Kerja (Di Ukm & Luar)</i>)	<ul style="list-style-type: none"> • Universiti Kebangsaan Malaysia; Lecturer; 2012-present • Universiti Kebangsaan Malaysia; Graduate research assistant (GRA); 2008-2011 • Averex Technology Sdn. Bhd; Production Executive; 2006-2018 • Department of Environment, Negeri Kelantan; Industrial training; 2005 								
SUPERVISION OF STUDENTS: (<i>Penyeliaan (Tempoh 5 Tahun/ Tamat Pengajian)</i>)									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Level</th> <th style="width: 25%;">Finish</th> <th style="width: 25%;">In Progress</th> <th style="width: 25%;">Total</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Level	Finish	In Progress	Total				
Level	Finish	In Progress	Total						

Ph. D	-	1	1
Master	9	8	17

No.	Title of Thesis (Tajuk Tesis)	Name of Students (Nama Pelajar)	Years (Tahun Lulus)	Stage of Supervision (Peringkat Penyeliaan)
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Doctor of Philosophy

1	Pembudayaan Pendidikan STEM dalam Pengajaran dan Pemudahcaraan (Pdpc) oleh Guru-Guru Sains Sekolah Menengah di Sarawak	Khairulnisa Binti Mohamed Zuki	2	Draf proposal kajian
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Master

1	Keberkesanan Kaedah Pementoran Teradun terhadap pencapaian dan motivasi pelajar tingkatan dua dalam topik Nutrisi	Nur Athirah Binti Nor Adam	2019	LULUS
2	Keberkesanan set induksi dalam meningkatkan kemahiran berfikir aras tinggi murid	Nurul Athirah Izzati Binti Awal	2019	LULUS
3	Tahap pemikiran sains keusahawanan dalam kalangan guru-guru sains	Siti Sarah Bt. Mat Nawi	2019	LULUS
4	Tahap Pengetahuan, Kemahiran dan Pelaksanaan Guru Sains terhadap Kemahiran Berfikir Aras Tinggi (KBAT)	Nur Anis Binti Zarime	2019	LULUS
5	Keberkesanan Modul Hebat untuk meningkatkan penguasaan KBAT murid dalam tajuk Haba	Iryani Binti Johari	2019	LULUS
6	Tinjauan Terhadap Pengetahuan, Kefahaman dan Kesediaan Guru Sains Hadapi Tranformasi Pendidikan Era Revolusi Perindustrian 4.0	Nor Azizah Binti Junid	2019	LULUS
7	Pengintegrasian program E-Mentor dalam meningkatkan pencapaian dan mendorong minat murid dalam tema sains hayat Tahun 5	Subashini Kumari A/P Ratnakum	2019	LULUS
8	Keberkesanan Model Pembelajaran 5E dengan Pendekatan Kontekstual terhadap pencapaian dalam topik Elektrik dan Motivasi pelajar dalam pendidikan sains	Kasthuri A/P Vengadaslam	2019	LULUS
9	Kesan Kaedah Pembelajaran Berasaskan Projek ke atas Kemahiran Berfikir Kritis Murid Tingkatan Empat Topik Ekosistem Dinamik "Vektor!Oh!Vektor!"	Nur Hidayah Binti Alawi	2019	LULUS

No.	Latest Awards & Achievements (Anugerah Dan Pencapaian (2010 – Kini))	Year (Tahun)
1	Sijil Perak untuk Poster Presentation "Mentoring models of STEM Learning towards a STEM learning ecosystem framework". Presented at The 18 th International Expo on Inventions and Innovations, Malaysia Technology Expo (MTE 2019) in Collaboration with National STEM Movement and Malaysian Association of Creativity & Innovation (macri) at the STEM Mentor Mentee 2019 at Putra World Trade Centre (PWTC) on 21-23 th February 2019.	2019

2	Sijil Gangsa untuk Poster Presentation “ExxonMobil-UKM STEM Mentoring Program @ Terengganu”. Presented at <i>The 18th International Expo on Inventions and Innovations, Malaysia Technology Expo (MTE 2019)</i> in Collaboration with National STEM Movement and Malaysian Association of Creativity & Innovation (macri) at the STEM Mentor Mentee 2019 at Putra World Trade Centre (PWTC) on 21-23 th February 2019.	2019
3	Sijil Gangsa untuk Poster Presentation “Futuristic Multidiscipline STEM Mentoring Program”. Presented at <i>The 17th International Expo on Inventions and Innovations, Malaysia Technology Expo (MTE 2018)</i> in Collaboration with National STEM Movement and Malaysian Association of Creativity & Innovation (macri) at the STEM Mentor Mentee 2018 at Putra World Trade Centre (PWTC) on 22-24 th February 2018.	2018
4	Sijil Gangsa untuk pertandingan poster <i>Penilaian metakognitif menggunakan “Pemikiran Sistem” dalam aktiviti STEM</i> . K-Inovasi Pengajaran dan Pembelajaran: Pendidikan 4.0: Graduan Kalis Masa Depan bertempat di Universiti Kebangsaan Malaysia pada 17-18 Januari 2018.	2018
5	Sijil Gangsa untuk Poster Presentation “Improving overall performance for science student program” pada <i>Kongres Pengajaran dan Pembelajaran 2012 (Teaching and Learning Congress di Awana Genting Highlands pada 15-18 2012)</i> .	2012
No.	Penerbitan (Jurnal, Buku, & Bab Dalam Buku) (2010 – Kini: 10 terbaik) (Latest Publications, Journal, Book & Chapter in Book –The best of 10)	
	Type	Jumlah
	Journal/Article in Procedia/ERA/SCOPUS indexed	17
	Book	1
	Chapter in a book	2
Journal		
1	Lilia Halim, Tuan Mastura Tuan Soh & Nurazidawati Mohamad Arsad. 2018. The effectiveness of STEM mentoring program in promoting interest towards STEM. <i>J. Phys.: Conf. Ser.</i> 1088 012001. http://iopscience.iop.org/article/10.1088/1742-6596/1088/1/012001	2018
2	Nur Ehsan Mohd Said, Mohd Azim Saidon, Tuan Mastura Tuan Soh , Hazrati Husnin, Mohd Jasmy Abd Rahman. 2018. English language attitude: a case study of science stream and social science stream ESL learners. <i>Jour of Adv Research in Dynamical & Control Systems</i> , 10 (04-Special Issue): 1600-1606. http://www.jardcs.org/abstract.php?archiveid=5117	2018
3	Rahman, N. A., Halim, L., Ahmad, A. R., & Soh, T. M. T. 2018. Teachers’ Views on Integrating Environmental Education for Aboriginal Students. <i>International Journal of Academic Research in Progressive Education and Development</i> , 7(2), 16–29.	2018
4	Rahman, N. A., Halim, L., Ahmad, A. R., & Soh, T. M. T. 2018. Challenges of Environmental Education: Inculcating Behavioural Changes among Indigenous Students. <i>Creative Education</i> , 9, 43-55. https://doi.org/10.4236/ce.2018.91004	2018
5	Nurazidawati Mohamad Arsad, Rian Vabrianto, Alaniyah Syafaren, Tuan Mastura Tuan Soh . 2017. Peranan Bapa dalam Mewujudkan Keadilan Gender dalam Rumah Tangga: Islam dan Sains. Marwah: Jurnal Perempuan, Agama dan Jender . 16 (2): 169-185. http://ejournal.uin-suska.ac.id/index.php/marwah/article/view/4138	2017
6	Tuan Mastura Tuan Soh & Tamby Subahan Mohd Meerah. 2013. Outdoor Education: An Alternative Approach in Teaching and Learning Science. <i>Asian Social</i>	2013

	Science; Vol. 9, No. 16; 2013. http://www.ccsenet.org/journal/index.php/ass/article/view/32371 DOI: 10.5539/ass.v9n16p1	
7	Nur Suhaidah Sukor, Kamisah Osman & Tuan Mastura Tuan Soh . 2013. Chemistry Test Items Development: Assessing Conceptual Understanding among Malaysian Students. <i>Asian Social Science</i> ; Vol. 9, No. 16; 2013. http://www.ccsenet.org/journal/index.php/ass/article/view/32390 DOI: 10.5539/ass.v9n16p126	2013
8	Tuan Mastura Tuan Soh , Kamisah Osman, Nurazidawati Mohamad Arsad. 2012. M-21CSI: A Validated 21st Century Skills Instrument for Secondary Science Students. <i>Asian Social Science</i> ; 8 (16): 38 – 44, (ISSN: 1911-2017) (E-ISSN: 1911-2025), Published by Canadian Center of Science and Education, http://ccsenet.org/journal/index.php/ass/article/view/22682	2012
9	Kamisah Osman, Riza Atiq Abdullah O.K. Rahmat & Tuan Mastura Tuan Soh . 2012. Catalysing Scholarship of Assessment using Programme Assessment Plan. <i>Procedia - Social and Behavioral Sciences Journal on Science Direct</i> . 59 (2012) 212-220. Volume I. UKM Teaching and Learning Congress 2011. http://www.sciencedirect.com/science/article/pii/S1877042812037159#	2012
10	Sanariah Sahak, Tuan Mastura Tuan Soh & Kamisah Osman. 2012. Comparison of Level of Inventive Thinking among Science and Arts Students. <i>Procedia - Social and Behavioral Sciences Journal on Science Direct</i> . 59 (2012) 475-483. Volume I. UKM Teaching and Learning Congress 2011. http://www.sciencedirect.com/science/article/pii/S1877042812037512	2012
11	Nurazidawati Mohamad Arsad, Kamisah Osman, Tuan Mastura Tuan Soh , and Nursuhaidah Sukor. 2012. Cultivation The Digital Age Literacy Skills In The Process Of Teaching And Learning Biology Among Science Students. <i>International Journal of Sustainable Development</i> . 3(11):35-42. (ISSN: 1923:6662). http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2047797	2012
12	Family income and home environment on children's chemistry achievement. Nur Suhaidah Sukor, Kamisah Osman, Tuan Mastura Tuan Soh . (2012). <i>OIDA International Journal of Sustainable Development</i> , Vol. 4, No. 7, pp. 27-32, 2012. Available at SSRN: http://ssrn.com/abstract=2131756	2012
13	T. Subahan Mohd Meerah, Kamisah Osman, Denise Koh Choon Lian, Effandi Zakaria, Zanaton Haji Iksan & Tuan Mastura Tuan Soh . 2011. Measuring Life-Long Learning in the Malaysian Institute of Higher Learning Context. <i>Kongres Pengajaran & Pembelajaran UKM</i> , 13-15 Disember 2010. Everly Hotel, Melaka. <i>Procedia - Social and Behavioral Sciences Journal on ScienceDirect</i> . 18 (2011) 560-564. (ISSN: 1877-0428). http://www.sciencedirect.com/science/article/pii/S1877042811011955	2013
14	Nurazidawati Mohamad Arsad, Tuan Mastura Tuan Soh and Kamisah Osman. 2011. Instrument development for 21st century skills in Biology. <i>3rd World Conference on Educational Sciences (WCES 2011)</i> . Bahcesehir University Istanbul, Turkey, February 03-07, 2011. <i>Procedia - Social and Behavioral Sciences Journal on Science Direct</i> . 15 (2011) 1470–1474 (ISSN: 1877-0428). http://www.sciencedirect.com/science/article/pii/S1877042811004915	2011
15	Tuan Mastura Tuan Soh , Nurazidawati Mohamad Arsad and Kamisah Osman.	2010

	2010. Penguasaan Kemahiran Abad Ke-21 Dalam Kalangan Pelajar Yang Mengambil Mata Pelajaran Fizik. <i>Journal of Applied Research in Education</i> . Special Issue: Challenging Models, Challenging Minds: Initiating Effective Educational Reform and Development, (ICE 2010). Brunei Darussalam. (ISSN 1996-9945). Volume 14, No.2, 2010. pg: 228-247. (Hard copy materials)	
16	Tuan Mastura Tuan Soh , Nurazidawati Mohamad Arsad and Kamisah Osman. 2010. The Relationship between 21 st Century Skills on Students' Attitudes and Perceptions Towards Physics. <i>International Conference on Learner Diversity (ICELD 2010)</i> . Bangi. <i>Social and Behavioral Sciences</i> 7 (2010): 546 – 554. (ISSN: 1877-0428). http://www.sciencedirect.com/science/article/pii/S187704281002077X	2010
17	Kamisah Osman, Tuan Mastura Tuan Soh and Nurazidawati Mohamad Arsad. 2010. Development and Validation of the Malaysian 21 st Century Skills Instrument (M-21CSI) for Science Students. <i>World Conference on Learning, Teaching and Administration (WC-LT&A 2010)</i> . Egypt. <i>Social and Behavioral Science</i> 9 (2010) 599 – 603. (ISSN: 1877-0428). http://www.sciencedirect.com/science/article/pii/S1877042810023098	2010
Book		
1	Mohd Effendi @ Ewan Mohd Matore, Mohamad Sattar Rasul, Tuan Mastura Tuan Soh , Bity Salwana Alias, Siti Nur Diyana Mahmud, Melor Md Yunus. 2018. <i>Rampai Penyelidik Siri 6: STEM untuk Komuniti</i> . Penerbitan bersama: Fakulti Pendidikan, Cabaran Perdana Pengukuhan STEM, Pusat IDEA UKM. Universiti Kebangsaan Malaysia. Bangi. ISBN 978-967-2224-01-3	2018
Chapter in Book		
1	Tuan Mastura Tuan Soh , Nurazidawati Mohamad Arsad & Kamisah Osman. 2013. Peranan lokasi sekolah dan jantina murid dalam mempengaruhi kemahiran abad ke-21 pelajar. (Bab 28; pg: 355-370). Dlm <i>Himpunan Penyelidikan Pendidikan Serantau</i> . Editor: Zamri Mahamod, Mohd Izham Mohd Hamzah, Abdul Razaq Ahmad & Mahdum. 2013. Bangi: Fakulti Pendidikan, Universiti Kebangsaan Malaysia. (ISBN: 978-983-2267-53-9). (Hard copy materials). https://smk.ukm.my/epenerbitan/fail2.cfm?idpnbtn=TGG2013389	2013
2	Nurazidawati Mohamad Arsad, Tuan Mastura Tuan Soh & Kamisah Osman. 2011. Pengalaman pembelajaran melalui khidmat komuniti pelajar sains (Bab 30; pg: 463-492). Dlm <i>Transformasi dan Inovasi Dalam Pendidikan</i> . Editor: Zamri Mahamod, Jamalul Lail Abdul Wahab & Mohammed Sani Ibrahim. 2011. Bangi: Fakulti Pendidikan, Universiti Kebangsaan Malaysia. (ISBN 978-983-2267-30-0).	2011

<p>List of Current Research (Senarai Penyelidikan Terkini– Tempoh 5 Tahun)</p> <table border="1" style="margin: auto;"> <thead> <tr> <th>Position</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Project Leader</td> <td>0</td> </tr> <tr> <td>Researchers</td> <td>8</td> </tr> </tbody> </table>					Position	Total	Project Leader	0	Researchers	8
Position	Total									
Project Leader	0									
Researchers	8									
Grants Category	Code	Title of Project	Position	Project period/Status						

				(Tempoh Projek/Status)
Berkat Minda Resources,	GG-2017-015	Program Kelab TaHa-STEM Exploration Journey 2017, RM45600.00,	Penyelidik Bersama	01/10/2017 - 30/03/2019
ExxonMobil Sdn. Bhd	GG-2019-002	EXXONMOBIL-UKM STEM CLUB@SABAH, RM60000.00,	Penyelidik Bersama	01/01/2019 - 31/12/2020
ExxonMobil Sdn. Bhd	GG-2018-005	ExxonMobil-UKM STEM Club@Terengganu 2018, RM100000.00	Penyelidik Bersama	01/05/2018 - 30/04/2020
Program STEM dan Minda	GG-2017-020	Pemupukan kemahiran Sainifik dalam program STEM EXXONMOBIL dalam kalangan pelajar dan strategi guru sebagai fasilitator, RM26000.00	Penyelidik Bersama	01/10/2017 - 30/09/2019
Program STEM dan Minda	GG-2017-017	Bitara STEM: Science of Smart Communities (UKM STEM Club), RM170000.00,	Penyelidik Bersama	01/10/2017 - 30/09/2019
Program STEM dan Minda	GG-2017-016	STEM Mentoring Program, RM225000.00,	Penyelidik Bersama	01/09/2017 - 30/09/2019
Sumitomo Foundation	GG-2019-004	Integrated Studies in Japan: A model for culturally relevant science teaching and learning for Malaysia and Indonesia. RM35681.00,	Penyelidik Bersama	01/04/2018 - 31/12/2019
Tabung Kokurikulum PTJ	GG-2018-014	Pelaksanaan Strategi untuk Membangunkan Kapasiti Penyelidikan dalam kalangan ahli Pusat Pembudayaan STEM, Fakulti Pendidikan, UKM, RM20000.00,	Penyelidik Bersama	01/10/2018 - 30/09/2019

No.	(Community Service / Network) <i>Khidmat Masyarakat / Jaringan</i>	Year (Tahun)
1	Hakim pertandingan akhir dan majlis perasmian TExMIC, di Pusat Inovasi dan Kreativiti, Terengganu	23-10-2018 - 23-10-2018
2	Penceramah/Mentor Program ExxonMobil-UKM STEM Training of Trainers (TOT) Guru Terengganu (science, Technology, Engineering, Mathematics)	21-07-2018 - 24-07-2018
3	Member of the <i>International Society for Development & Sustainability (ISDS)</i> [Membership ID: M008541]	April 2018-present
4	Member of 'Persatuan Sains dan Matematik Malaysia (PERSAMA)' (<i>Science and Mathematics Association of Malaysia</i>) - TB2018-1	March 2018 - present
5	Committee member for 'Program Teras 1 (Kampus Digital Bersepadu) Pelan Strategik ICT UKM 2016-2020	Jan 15, 2018 - present
6	Member for Centre for Advancement of Informal Science Education (CAISE) http://informalscience.org/	Dec, 2013-present
7	Facilitator for Learning for Change Workshop: Education for	3-7 December 2012,

	Sustainable Development in Malaysia, organized by Institute for Environment and Development (LESTARI), UKM in collaboration with the Swedish International Centre of Education for Sustainable Development (SWEDESD), Global Action Plan (GAP) International Sweden, UNESCO-IHP Malaysia with the support of the Ministry of Higher Education Learning (KPT).	Danau Golf Club UKM & Palm Garden Hotel, Putrajaya
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