PERSONAL DETAILS

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Expertise : Mathematics Education, STEM Education, Models in Teaching and Learning Mathematics
Academic Qualification: Bsc. Hons in Education (Mathematics) UTM
Master of Education (Mathematics) UTM
Phd in Education (Mathematics) UCL IOE

RESEARCH PROJECTS

Project Leader:

1. Mathematics Education Postgraduates of Teaching and Learning Mathematics in School (Research University Grant, PAS, RM20,000.00, Vot QJ130000.2731.02K68, Duration: 1/11/2016 – 31/10/2016 – 1 year)
2. Malaysian Teachers' Selection of Heuristics in Teaching Mathematics (Research University Grant, TIER 2, RM10,000.00, Vot GJ130000. 2631.14J12, Duration: 01/07/2017-30/06/2018-1 year)
3. Exploring Teachers, Peers and Parents Behaviour and Speech which Intensify And Minimize Mathematics Anxiety Among Malaysian Students Through Photovoice Approach (Research University Grant, TIER2, RM 15,000.00, Q.J130000.2653.17J01, Duration: 01/08/2019-31/07-2021)
4. FRAMEWORK FOR SUPPORTING SECONDARY SCHOOL STUDENTS' METACOGNITION IN MATHEMATICS PROBLEM SOLVING WITH AUGMENTED REALITY (Research University Grant, UTMFR, RM96,500.00, Q.J130000.2553.20H89, Duration: 01/01/2020-30/06/2023)
5. A framework for scenario-based learning in statistics and probability to ignite form four students' interest in STEM careers (National grant, Fundemental Research Grant Scheme, RM100300.00, R.J130000.7853.5F414, Duration: 1.11.2020-30.4.2024)
6. Dynamic mathematics learning module with Augmented Reality to enhance problem solving and metacognitive skills for secondary school students (National grant, Prototype Research Grant Scheme, RM100,000.00, R.J130000.7853.5L009, Duration: 01/08/2024-31/07/2026)
7. Pembangunan dan Penilaian Modul Pembelajaran dan Pembacaan Bahasa Inggeris bagi Murid Sekolah Rendah (PLAN) (Contract grant, PETRONAS, RM102125.5, R.J130000.7653.4C868, Duration: 01/01/2024-31/12/2026)

Co-researcher:

1. Education Trainer Kits For Electric Circuit Course As A Catalyst to Boost the Technical Skills for Students (Research University Grant, TIER 2, RM20,000.00, Vot QJ130000.2731.02K31, Duration: 1/04/2016 – 31/3/2017 – 1 year)
2. Tingkahlaku Metakognitif Pelajar Semasa Menyelesaikan Masalah Matematik Pentaksiran Tingkatan Tiga (PT3) (Research University Grant, TIER 1, RM 49,000.00, Vot Q.J130000.2531.16H62, Duration: 01/07/2017-31/08/2018-1 year 2 months
3. Data Driven Curriculum Innovation in STEM (HIR, RM 36,000.00, Q.J130000.2409.04G91, Duration: 01/04/2018-31/03/2021-3 years)
4. Keberkesanan Program Pelajar Minat STEM (PPMSTEM) dalam meningkatkan prestasi pelajar dalam matapelajaran sains dan matematik (NG, RM10,000.00, VOT S.J130000.053.4X369, Duration: 01/01/2018-31/12/2018-1 year)
5. Kemahiran Penyelesaian Masalah Berkonsepkan Pendidikan STEM Bersepadu Dalam Kalangan Pelajar Sekolah Menengah (FRGS, RM58,512.00, R.J130000.7831.4F942, Duration: 15/08/2017-14/08/2019
6. KTP-NMG 2019: PEMINDAHAN ILMU KEMAHIRAN PEMIKIRAN KOMPUTASIONAL KEPADA MURID DARIPADA KELUARGA BERPENDAPATAN RENDAH (KTP-NMG 2019,RM 5000, S.J130000.0853.4Y174. Duration: 01/02/2019-31/07/2019)
7. Teachers-Students' Scientific Epistemology Model Through Critical Theory As Social Innovation Mechanism In Stem Education, (FRGS, RM64,140.00, R.J130000.7853.5f067, Duration:01/01/2019-31/12/2020).
8. FRAMEWORK OF CRITICAL AND CREATIVE THINKING IN COMPLEX ENGINEERING PROBLEM-SOLVING (UTMFR, RM 84,922.25, Q.J130000.2553.20H86. Duration: 01/01/2020-30/06/2023)
9. Pengetahuan dan Amalan Pensyarah dalam Mengukur Masa Pembelajaran Pelajar (Student Learning Time), (DPP, RM12,000, R.J130000.7753.4J418, Duration: 15/11/2019-14/11/2021)
10. KAJIAN KE ATAS KEMAHIRAN PENYELESAIAN MASALAH STEM (SAINS, TEKNOLOGI, KEJURUTERAAN DAN MATEMATIK) DALAM KALANGAN PELAJAR TAHUN 6 SEKOLAH RENDAH ISLAM HIDAYAH (CR DTD, RM2000.00, R.J130000.7653.4C312, DURATION: 01/09/2019-30/09/2020)
11. Meningkatkan Kemahiran Berfikir Aras Tinggi (KBAT) dan Motivasi Pelajar Melalui Strategi Penaakulan Induktif Matematik Berbantukan Geogebra, (UTMShine, RM40,000.00, Q.J130000.2413.09G34, DURATION: 01/01/2020- 31/08/2022)

Pembelajaran Berasaskan Masalah Kreatif dalam Pendidikan STEM terhadap Domain Kreativiti Pelajar (UTMShine, RM40,000.00, Q.J130000.2453.09G35, Duration: RM40,000.00)

PUBLICATIONS

Indexed Publication

1. Abidin, M., Ismail, N., Jumaat, N.F., Suleiman, K., Ibrahim, N.H.(2017), Marine environment as a real life situation for mathematics problem-solving, Man In India, Volume 97, Issue 12, 2017, Pages 333-347.
2. Noni, N.S., Abdullah, A.H., Ismail, N. (2017), Satisfaction in blended learning among blended learning, Man in India, 97(13), pp. 217-226.
3. Md Sullah, R., Ismail, N.H., Abdullah, A.H.(2017), A comparison between virtual and physical manipulatives in geometry learning for standard 2 mathematics, Man in India, Volume 97, Issue 17, 2017, Pages 235-24.
4. Piah, M.A.M., Jambari, H., Azli, N.A., Ismail, N., Ahmad, J. (2017), Pulsed electric field by Cascaded H-bridge multilevel inverter for liquid food sterilization, PECON 2016 - 2016 IEEE 6th International Conference on Power and Energy, Conference Proceeding 7951607, pp. 467-472
5. Merging of metacognitive regulation strategies and activity based learning through best seller mathematical learning activities to enhance student's mastery of mathematics
6. Sharifah Osman, Mohd Salleh Abu, Norulhuda Ismail, INDUCTIVE, DEDUCTIVE AND ABDUCTIVE APPROACHES IN GENERATING NEW IDEAS: A MODIFIED GROUNDED THEORY STUDY (2018), web of science,vol 4, 2378-2381.
7. Bakar, M.A.A., Ismail, N.,(2019) Merging of metacognitive regulation strategies and activity based learning through best seller mathematical learning activities to enhance student's mastery of mathematics, Universal Journal of Educational Research, Volume 7, Issue 9A, 2019, Pages 155-161.
8. Abidin M, Ismail Z, Ismail N (2019) Geometrical Thinking with Technology: A Systematic Literature Review, Proceedings of the 2018 IEEE 10th International Conference on Engineering Education, ICEED 2018, 25 January 2019, Article number 8626949, Pages 230-235.
9. Galadima, U.Ismail, Z.,Ismail, N, (2019) A need analysis for developing integrated stem course training module for pre-service mathematics teachers, International Journal of Engineering and Advanced Technology, Volume 8, Issue 5, May 2019, Pages 47-52.
10. Garba, A., Ismail, N., Osman, S., Mohd Rameli, M.R. (2020), Exploring peer effect on mathematics anxiety among secondary school students of Sokoto State, Nigeria through photovoice approach, Eurasia Journal of Mathematics, Science and Technology Education, Volume 16, Issue 2, 2020, Article number 112622.
11. Bakar M. A. A. and Ismail N (2020) Testing the validity and reliability of metaseller tutoring module for the purpose of mathematics learning intervention, Universal Journal of Educational Research,Volume 8, Issue 3 A, 2020, Pages 35-41.
12. Bakar M. A. A. and Ismail N (2020) Exploring metacognitive regulation and students' interaction in mathematics learning: An analysis of needs to enhance students' mastery, Humanities and Social Sciences Reviews, Volume 8, Issue 2 Special issue, 2020, Pages 67-74.
13. Bakar M. A. A. and Ismail N (2020) Metacognitive online discussion for online teaching: A conceptual and impact on students engagement and mastery during coronavirus outbreaks, Journal of Critical Review, Volume 7, Issue 16, 2020, Pages 771-779
14. Bakar M. A. A. and Ismail N. (2020), Implementation of enterpreneurship, buying and selling activities in mathematics learning to promote students interaction and metacognitive regulation skills, Journal of Sustainability Science and Management, Volume 15, Issue 5, 2020, Pages 151-164.
15. Bakar M. A. A. and Ismail N. (2020) Mathematical instructional: A conceptual of redesign of active learning with metacognitive regulation strategy, International Journal of Instruction, Volume 13, Issue 3, 1 July 2020, Pages 633-648
16. He Xueting , Norulhuda Binti Ismail, He Mengyao (2025) The Effect Of Problem-Based Learning, Cooperative Learning, And Discovery Learning On Mathematical Problem-Solving Skill: A Meta-Analysis And Systematic Review, Pertanika Journal Of Social Science And Humanities, vol 33 (3), 1037-1058.
17. Mohamad Ikram Bin Zakaria, Norulhuda Binti Ismail, Mohd Fadzil Bin Abdul Hanid (2025) Self-Directed Learning In Mathematics Education: A Bibliometric Analysis, International Journal Of Instruction, Vol 13 (3), 568-583

Non Indexed publication

1. Norulhuda Ismail, Suza Hamira Suhaimin, Mohini Mohamed, Technology Instruction For Children With Learning Disabilities In Mathematics: Teachers' Views, Sains Humanika (2017), Issue 1-3, 43-48
2. Norulhuda Ismail And Zaleha Ismail, Introducing Stem Education To Postgraduate Mathematics Education Students In Universiti Teknologi Malaysia, Malaysian Journal Of Higher Order Thinking Skills (2016), 145-162.
3. Norulhuda Ismail, Fatin Hanani Md Sadakah, Hanifah Jambari, Jamilah Ahmad, Sharifah Osman,Proses Penyelesaian Masalah Pelajar Tahun 5 Dalam Kemahiran Berfikir Aras Tinggi (Kbat) Topik Isipadu Cecair Melalui Interaksi, Malaysian Journal of Higher Order Thinking Skills (2017), Vol 3, 1-22

4. Norulhuda Ismail, Rohaniza Sullah, Abdul Halim Abdullah, A Comparison Between Virtual And Physical Manipulatives In Geometry Learning For Standard 2 Mathematics (2017), Man In India, 235-247
5. Sharifah Osman, Norulhuda Ismail, Mohd Salleh Abu, Hanifah Jambari, Che Azeana Che Yang, Jaya Amantha Kuar, Enhancing Students' Mathematical Problem-Solving Skills Through Bar Model Visualisation Technique, International Electronic Journal Of Mathematics Education (2018),vol 13, 273-279.
6. Norulhuda Ismail, Siti Safura Fadil, Abdul Halim Abdullah, Mahyuddin Arsat, Marlina Ali, Pola Penyelesaian Masalah Matematik Kemahiran Berfikir Aras Tinggi (KBAT) Dalam Pentaksiran Tingkatan Tiga (Pt3) (2016), Malaysian Journal of Higher Order Thinking Skills, Vol.1, 1-41.

CONFERENCES

1. Muhammad Abd Hadi Bunyamin, Fren Finley, Corrienna Abdul Talib and Norulhuda Ismail. Physics and Mathematics Teaching from STEM perspectives. Paper presented at the 24th National Symposium of Science and Mathematics (27-29 September 2016).
2. Norulhuda Ismail, Law Siao Siu, Ong Chee Tiong, Enhancing Lower Achievers' in Learning Differentiation By Invoking Higher Order Thinking Skills with POLMIND Method. Paper presented at 1st International Teacher Education Conference on Teaching Practice 2016 (ITECTP 2016) (8-10 October 2016)
3. Norulhuda Ismail, Nurul Farhana Jumaat, Mardhiyana Abidin, Kahirunisak Suleiman, Marine Environment As A Real Life Situation For Problem-Solving, 3rd International Education Postgraduate Seminar (IEPS 2016) (18-19 December 2016).
4. Norulhuda Ismail, Sahrifah Osman, Hanifah Jambari, Abdul Halim Abdullah, Nor Hasniza Ibrahim, Jamilah Ahmad, Malaysian Teachers' Selection Of Heuristics In Teaching Mathematics, 2017 International Conference On Art, Business, Education,And Social Sciences, 15-17/8/2017
5. Norulhuda Ismail, Nurfatin Zahid, Factors That Iinfluence Poor Interest In Mathematics Of Low Mathematics Achievers Among Form Four Students, International Conference On Technology Education, 24-25/7/2018.
6. Mardhiyana Abidin, Zaleha Ismail, Norulhuda Ismail, Geometrical Thinking with Technology: A Systematic Literature Review, Proceedings of the 2018 IEEE 10th International Conference on Engineering Education, ICEED 2018, 25 January 2019, Article number 8626949, Pages 230-235.
7. Aliyu Garba, Norulhuda Ismail, Sharifah Osman, Mohd Rustam Mohd Rameli, 5th International Conference on Management, Engineering, Science, Social Science, and Humanities, 14-15 August 2020.

AWARDS

1. Anugerah Perkhidmatan Cemerlang 2024
2. Anugerah Penyelidik FSSH 2020
3. Anugerah Perkhidmatan Cemerlang, 2017
4. SILVER: Norulhuda Ismail, Zaleha Ismail, Mohd Fazdli Mohd Nor, Marlia Md Isa, Dunia Matematik: An Online Web Magazine for the Malaysian Community, National Competition for Innovations in Education, 2008
5. SILVER:Norulhuda Ismail, Mohd Hafizi Harris Fadzillah, Sharifah Osman, A Learning Aid for Mastering Skills for Unit of Length, NALI 2018 Exhibition and Competition.
6. SILVER:Norulhuda Ismail, Marlina Ali, Corrienna Abd Talib, Nornazira Suhairom, Dayana Farzeeha Ali, Nurul Farhana Jumaat, STEM Interest Ignition Program By School of Education UTM and Sultan Ismail Library, Kampung Melayu, NALI 2018 Exhibition and Competition
7. BRONZE: Norulhuda Ismail, Nurul Farhana Jumaat, Mardhiyana Abidin, Khairunisak Suleiman, Marine Mathematics: Raising marine ecological awareness to secondary school students through mathematics in an interactive problem solving environment. Innovative Practices in Education And Industry Exhibition (IPEINX) 2016 14 March 2016.