



COLLABORATION ON SHBIE-UEA RESEARCH PROJECT NOW UNDERWAY



Top: Kitchen chemistry at UBD, Seria Energy Lab and SHBIE. Bottom: UEA visitors with SHBIE Dean AP Dr Noor Azam Haji-Othman, MoU signing with AVCR Dr Joyce Teo Siew Yean, VC Dr Hazri bin Haji Kifle, HE John Virgoe, Prof Ashworth and Dr Roslinawati Roslan, and with staff at SHBIE

As reported previously in *SHBIE Research News*, two SHBIE faculty members, **Dr Roslinawati binti Mohd Roslan** and **AP Dr Masitah binti Shahrill**, have won a prestigious research award to support collaboration with one of the UK's highest ranking universities, the University of East Anglia. The award, administered by the British Council and funded by the UK's Foreign, Commonwealth and Development Office, is for a project entitled *Empowering primary teachers to deliver STEM in the classroom*. The grant aims to support the development of a transnational education (TNE) programme to enhance the teaching of science, technology, engineering and mathematics (STEM) in primary school classrooms in Brunei.

Major landmarks in the project have already been achieved, beginning last October with eight online UEA-UBD weekly workshops. The workshops were attended by teachers from primary and secondary schools, officers from Seria Energy Lab (SEL), and several SHBIE teacher candidates and enabled participants to design and develop their own classroom science experiments.

An important next step was the visit to UBD and SHBIE, from 17-27 January 2023, by AP Susan Matthews, and Prof Stephen Ashworth the Faculty of Science at the University of East Anglia. A major item on the agenda was the signing of the Memorandum of Understanding, between UBD and the UEA, to promote co-operation and positive academic relations between the two

universities, hopefully leading to the exchange of students and staff, and collaboration on future research projects. The MoU was signed by Prof Ashworth for the UEA and by AVCR Dr Joyce Teo Siew Yean for UBD, in the presence of UBD Vice-Chancellor Dr Hazri bin Haji Kifle and British High Commissioner HE John Virgoe.

The UEA ten-day visit was also marked by several workshops held for teacher educators, teachers and students at SHBIE and at the Brunei Darussalam Leadership and Teacher Academy (BDLTA). A highlight was a series of 'kitchen chemistry' science shows offered by Prof Ashworth at the Pro-Chancellor Arts Centre, UBD, and at the Seria Energy Lab (SEL). Prof Ashworth, in addition to being Professor of Chemical Physics and Science Communication, UEA, is an award-winning science communicator, with many years' experience of engaging audiences both in the UK and internationally. Prof Ashworth's spectacular 'kitchen chemistry' shows demonstrate how basic scientific principles can be found in the use of common household products, without elaborate or sophisticated laboratory equipment.

The project continues with a reciprocal visit to the University of East Anglia by SHBIE members Dr Roslinawati binti Mohd Roslan and AP Dr Masitah binti Shahrill, during February 2023.

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Sustainability in education research

Dr HjH Hardimah binti Hj Md Said joined panel speakers from Malaysia and Singapore in a webinar organised by Institut Pendidikan Guru Kampus Dato' Razali Ismail, Terengganu, Malaysia, on 31 January 2023. The theme of the seminar was *Menerajui kelestarian penyelidikan Pendidikan: isu dan cabaran* [Leading the sustainability of education research: issues and challenges]. Dr Hardimah shared the perspective and experiences of SHBIE research in relation to the topic. This was the second event in the series, which began in September 2021. The previous seminar discussed research and innovation during the new normal of the pandemic COVID19. The January 2023 webinar can be viewed at

https://www.youtube.com/watch?v=g8L6T_f3Cd0



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Editor's Choice of the Month

The editor of the *International Review of Education – Journal of Lifelong Learning* (IRE) recently selected a paper by Dr Adeline Goh as 'Editor's Choice of the Month', as it exemplified "the best qualities of the journal: genuinely international scholarship on the theory and practice of lifelong learning, supporting and promoting the development of sustainable learning societies". Dr Adeline's paper is entitled 'Learning journey: Conceptualising "change over time" as a dimension of workplace learning' and proposes the concept of "learning journey" to explore how individuals learn at different workplace settings across their working lives. (For further details, see the section 'Selected recent SHBIE papers' below).

Founded in 1931, IRE is the longest-running international and comparative education journal in the world. Since 1955, it has been under the aegis of UNESCO, with the editorial team located in the UNESCO Institute for Lifelong Learning. IRE is aligned

with the mandate of UNESCO to promote international collaboration and peace.

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Industrial Revolution 4.0

Dr Adeline Goh has been invited and appointed by SEAMEO-VOC TECH as a researcher to represent UBD in the regional research project on 'Readiness of TVET institutions for Industrial Revolution 4.0 in Southeast Asia'. The objectives of the research project are to assess the readiness of TVET institutions for IR4.0 and to gather feedback and recommendations from TVET institutions and industry leaders on the future adoption and development of IR 4.0 among Southeast Asian countries.



Dr Adeline (far right) at a recent SEAMEO-VOC TECH training event

With other SEAMEO countries representatives, Dr Adeline has been engaged in a series of workshops (online and onsite) over the past few months to plan and develop data collection instruments for the research project.

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Consultant to Malay language standards project

Dr Aliamat Omar Ali has been appointed as a consultant to the Curriculum Development Department at the Ministry of Education to lead and carry out a project entitled Projek Piawaian Literasi Bahasa Melayu (Malay Language Literacy Standards Project). The project, which began in November 2022, aims to elaborate the target standards for Malay language in the schools and through six distinct phases. The project is currently in Phase 3, in which Dr Aliamat is engaged in collecting views and other data from teachers at various levels in the Basic Education system. The target data for completion of the project is October 2023.

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SHBIE BEGINS NEW SEMINAR SERIES



SHBIE began a new series of faculty seminars in October 2022, scheduled on a weekly basis throughout the academic year. The aim of the seminar series is to present the broad range of curriculum-related specialisms with which SHBIE staff are engaged. The series opened with a seminar led by **AP Dr Andrew Littlejohn** on shared classroom decision-making and its roots in the notion of an emancipatory pedagogy, the psychology of motivation, and the goals of a futures curriculum. Subsequent seminars have been led by **Dr Roslinawati Roslan**, who reported on a research project into school children's online learning during covid19 in Brunei and parents' beliefs and attitudes, **Dr Marlizayati binti Johari**, who talked about secondary science teachers' perceptions and experiences before, during and after conducting a science show, and **AP Dr Dr Masitah Shahrill** who presented research on mathematics shadow education from a two-country perspective, Brunei and Indonesia. **Dr Salwa Mahalle** led a hands-on seminar in art therapy and the process of knowing yourself through the medium of art, followed by **Dr Rozaiman bin Makmun** who presented in Malay on the topic of values in education and the role of the Malay language and literature in this. **Pg Dr Norhazlin binti Pg Hj Muhammad** spoke about the history and development of the Brunei education system.

The second semester opened in January with a seminar led by **Dr Nordiana Zakir** who talked about early childhood education and care in Brunei, the issues it faces and anticipated developments. **Dr Hjh Juraidah Hj Musa** and **Hjh Zuriyatini Hj Zainal** then continued with a seminar on the use of digital story books in early childhood education, in the context of blended learning. **Dr Hjh Nor Zaiham Midawati Binti Hj Abdullah** presented a hands-on topic of relevance to all our lives – stress and how to manage it through practical techniques. The series continues with presentations throughout the semester, until the summer break.

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Ethnomathematics in Brunei textiles

Kain tenunan Brunei (Brunei woven fabrics) are cultural products which are still widely used in Bruneian traditional and ceremonial events. The motifs found in the fabrics were examined in a paper entitled 'Brunei ethnomathematics: exploring geometrical concepts in Brunei woven textiles', presented by **AP Dr Masitah Shahrill** and **Mar Aswandi Mahadi** from SHBIE, with Irma Risdiyanti and Prof Rully Charitas Indra Prahmana from Universitas Ahmad Dahlan, Indonesia, at the virtual 7th

International Conference on Ethnomathematics (ICEm-7). The conference was hosted jointly by institutions in the Philippines, Indonesia, Nepal and Papua New Guinea, from December 7–10, 2022. The presenters spoke about the many mathematical concepts that can be found in the textiles and how they relate to historical, philosophical and Islamic values identified within the country's national philosophy known as Malay Islamic Monarchy. The motifs found in the fabrics can be used as a basis for teaching and learning geometrical concepts, they argued.

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SHBIE speakers at conference on Equitable Education

AP Dr Masitah Shahrill, **Dr Aliamat Omar Ali** and **Dr Nor Azura Abdullah** from SHBIE, together with Dr Syazana Ebi from the Office of the Permanent Secretary and Deputy Permanent Secretary (Higher Education) at the Ministry of Education, were invited as joint keynote speakers for the online *5th Sriwijaya University Learning and Education International Conference* (5th SULE-IC 2022). The conference, which took place from 5th to 6th October, had the theme 'Reimagining learning toward equitable education'. The speakers outlined developments in the Brunei's primary and secondary school education system from its establishment in 1914 to the present day.

SHBIE staff also presented further papers at the conference. **AP Dr Masitah Shahrill** and **Mar Aswandi Mahadi** presented 'Exploring mathematics concepts in the architectural mosque designs: a study of Brunei ethnomathematics' together with Irma Risdiyanti and Prof Dr Rully Charitas Indra Prahmana from Universitas Ahmad Dahlan, Indonesia. **AP Dr Masitah Shahrill** and **Dr Siti Norhedayah Abdul Latif** presented 'Does the sequence of items influence secondary school students' performance in mathematics and science?' with John Baffoe, Daniel Asamoah, Dr Kenneth Asamoah-Gyimah and Dr Eric Anane. Together with Nurul Hafizah Alias, **AP Dr Masitah Shahrill** presented 'A review of virtual mathematics manipulatives in the development of students' conceptual understanding of algebra'.

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Shifting power and control

Drawing on his long-established work in the area of negotiated syllabus design, **Dr Andrew Littlejohn** presented a paper entitled 'Shifting power and control in secondary schools' at the virtual *International CLaSiC'22 conference*, hosted by the Centre for Language Studies, National University of Singapore, 1st – 3rd December 2022. Dr Andrew reviewed the literature on negotiated syllabuses and outlined some in-school research projects recently undertaken by SHBIE MTeach candidates in Brunei. These have occurred at various levels of decisions, from the 'here and now' of how a particular task may be implemented to the long range planning of a sequence of lessons within a scheme of work.

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TEACHERS' DAY CONFERENCE



Putting it into practice
— Five strategies
— Twenty-five practical techniques



Professor Dylan Wiliam addresses the audience at the TDC 2022

SHBIE hosted the 32nd Teachers' Day Conference for some 500 teachers over a three-day period from 29 September to 1 October, 2022. The event featured numerous presentations by teachers, senior teachers, education officers and other education professionals under the theme 'Building a resilient education ecosystem', and was co-organised by SHBIE, Kolej Universiti Perguruan Ugama Seri Begawan (KUPU SB) and Brunei Darussalam Leadership and Teacher Academy (BDLTA). The keynote address, entitled "Why formative assessment should be a priority for every teacher and every school", was provided by Professor Dylan Wiliam, Emeritus Professor of Educational Assessment at University College London, a well-known expert on assessment.



Dialogue on lifelong learning

Dr Adeline Goh and AP Jose Santos, Director of the Centre for Lifelong Learning (C3L) at UBD, were recently invited to attend the *ASEM Education and Research Hub for Lifelong Learning* (ASEM LLL Hub) Networking Meeting held on 14th December 2022 at the Lifelong Learning Centre (L3C) at the Ministry of Education. ASEM LLL is an official network of Asian and European higher education institutions, working and learning together to achieve excellence in comparative

research on lifelong learning. Dr Adeline and AP Jose Santos

had the privilege to meet Professor Séamus Ó Tuama, from University College Cork, Ireland, who is the chair of the ASEM Education and Research Hub for Lifelong Learning. They were able to dialogue on current themes relating to lifelong learning that broadly align with Dr Adeline's expertise and research interest.

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Prof Séamus Ó Tuama and Dr Adeline at L3C

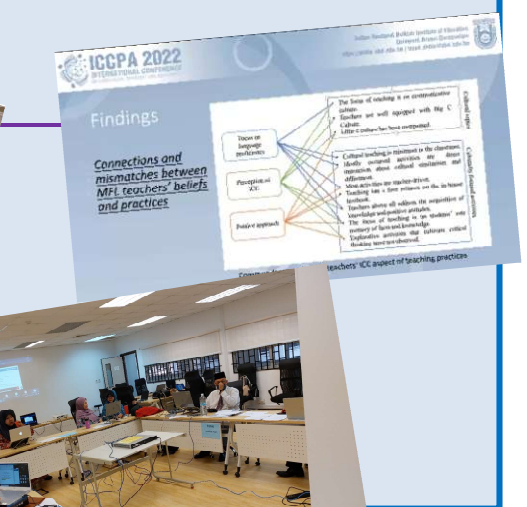
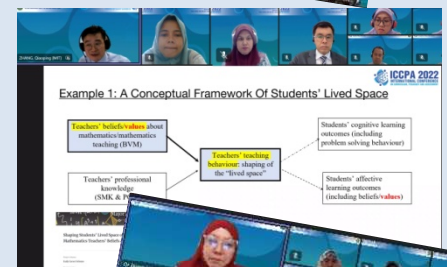
SHBIE INAUGURATES NEW INTERNATIONAL CONFERENCE ON CURRICULUM, PEDAGOGY AND ASSESSMENT

SHBIE recently organised the first event of its recently inaugurated *International Conference on Curriculum, Pedagogy and Assessment*, held virtually over two days, from 26th to 27th October, 2022. With an overwhelming response to the Call for Papers, the ICCPA review team selected 31 speakers, originating from across the S E Asia region, to present at the conference on a wide range of topics related to curriculum development, pedagogical approaches and assessment methodologies. Keynote speakers were Professor Tajudin Ninggal, Open University Malaysia, and Dr Ong Yann Shiou, Nanyang Technological University, Singapore, with additional featured presentations by Prof Rully Charitas Indra, Universitas Ahmad Dahlan, Indonesia, and Dr Zhang Qiaoping, Education University of Hong Kong.

The overall conference theme was “Thriving in an Endemic World: Reimagining the Future”, which took up issues beyond the recent experiences of Covid16, to consider how education may and should develop into the future, and how we may make use of the many lessons we have learned from the challenges that the pandemic created for all of us. Papers discussed a wide range of topics, including the role of different language varieties, the perceptions of teachers and learners about ‘value’ in learning, how educational professionals might conceptualise the role of theory in their own work, how games and story telling can be incorporated into education, the role of the practicum in teacher education and many more. For a full list of presentations, see page X.

The 2nd International Conference on Curriculum, Pedagogy and Assessment will be held late in 2023.

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Behind the scenes during the conference, as SHBIE staff manage the online registration, session introductions, moderation and transitions.



- Welcoming note **AP Dr Noor Azam OKMB Hj-Othman**
- Psychological wellbeing of educators and learners in the new academia of online learning: challenges and opportunities *Prof Datuk Dr Mohd Tajudin Ninggal*
- Exploring alternative solutions to learning in remote areas using the community radio-based blended learning model. *Prof Dr Rully Charitas Indra Prahman*
- How values make a difference in the mathematics classroom: a series of studies about values and valuing in mathematics education *Dr Zhang Qiaoping*
- Undergraduate geriatrics medical education in the post-pandemic era. *Min Banyar Han*
- Education using advanced technologies to enhance students learning skills in the post pandemic era: a brief discussion *Basiradatul Ahmad & Dr Hjh Syamimi Mohd Hj Mohd Arif Lim*
- Improving foreign languages distance learning and teaching by analyzing learners' perceptions and emotions towards interpersonal relations in a pandemic emergency remote teaching *Dr Omar Colombo*
- Beliefs and practices of mandarin as a foreign language (mfl) teachers on the intercultural communicative competence (ICC) in Brunei *Min Shen*
- The role of learning theories in facilitating collaborative professional development *Dr Vincent Andrew & Hjh Rosinah Hj Sabli*
- Parents' experiences of emergency remote learning in a Brunei primary school during covid-19 pandemic *Witrie Annisa Buys & Associate Professor Dr Hj Gamal Abdul Nasir Hj Zakaria*
- The philosophies of teaching and learning of school leaders and teachers in Brunei **Dr Rosmawijah Jawawi, Dr Roslinawati Mohd Roslan, Dr Jainatul Halida Jaidin, & Dr Sheikh Lukman Sheikh Abdul Hamid**
- Preservice teachers' insights and perceived practices of formative assessment *Daniel Asamoah, Dr Siti Norhedayah Abdul Latif & AP Dr Masitah Shahril*
- Using Islamic integrated science comic in teaching the topic 'reuse and recycle' amongst year 3 students in Brunei Darussalam. *Alisa Asli*
- Justice in an English language classroom: an English as a lingua franca perspective *Irham Irha*
- The effects of the application of tree maps (Thinking Maps®) on students' motivation and academic achievement towards science learning *Mayang Sari Indah Yusof*
- A preliminary insight into an Islamic neuroeducation *Rahmat Ryadhush Shalihin*
- The transition from traditional to online learning: what are the new approaches and challenges for higher education? *Dr Nik Ani Afiqah Tuah*
- Integration of virtual exchange in MyDispense® simulation among Brunei and Philippine pharmacy students: an exploratory study *Dr Long Chiau Ming, Dr Hui Poh Goh, Professor Erwin Martinez Faller, Prof Fatima Mae Tesoro & Dk Dr Nurolaini Kifli Pg Hj Muhammad Kifli*
- A systematic literature review of preservice teacher technology integration during teaching practice: trends, frameworks, and recommendations for research *Kaspul Anwar, Dr Juraidah Musa & Dr Sallimah Hj Mohd Salleh*
- The comparison learning model with the quality and effectiveness of curriculum *Sintia Aulia Rahma*
- Implementation of TPACK designed chemistry lessons: aligning curriculum, pedagogy and assessment *Dr Yvonne Yong CC & Dr Hjh Sallimah Hj Mohd Salleh*
- Teacher candidates' teaching experiences: professional practice at schools **Dk Yusimah Pg Hj Amjah**
- Using Islamic storytelling to promote students' vocabulary and conceptual learning of the topic water cycle among the year 4 students *Siti Nur Wardah Hj Suhaili & Roslinawati Mohd Roslan*
- The Mother Tongue-based Multilingual Education (MTBMLE) at the Crossroads: The Ideological Tug-of-war of Language Policies in the Philippines *Karizza Piedad Bravo Sotelo*
- Pengajaran dan pembelajaran bersandarkan stem dalam mata pelajaran Bahasa Melayu: kajian awal terhadap pandangan calon guru **Dr Aliamat Omar Ali**
- Developing an integrated stem classroom observation protocol *Dr Ong Yann Shiou*
- Closing remark **AP Dr Andrew Littlejohn**



SHBIE lecturers speak at Philippines conference

Dr Nor Azura Abdullah, Dr Roslinawati Roslan and Dr Hj Juraidah Hj Musa presented a reaction paper entitled 'Best practices of primary teacher education in Brunei' at the *First Southeast Asian Conference of Teachers and Teacher Educators* held in person in Manila, Philippines, December 7-8, 2022. Their paper described and reflected on SHBIE's MTeach programme and how it enables teacher candidates to explore linking theory in education with their practice in the classroom context through action research in the Research Exercise module. The conference was organized by the Professional Regulation Commission (PRC), through the Professional Regulatory Board (PRB) for Professional Teachers of the Philippines government, and, in addition to Philippines representatives, the conference was attended by delegates from Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Thailand, and Vietnam.



(l-r) Dr Juraidah, Dr Brenda Corpuz (moderator), Dr Roslinawati and Dr Nor Azura at the Philippines conference.

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Special issue on mathematical problem solving

Dr Nor Azura Abdullah served as one of the guest editors for a special issue of the *Hiroshima Journal of Mathematics Education* (volume 15/1). Together with a small team, Dr Azura was responsible for organizing the introduction, selection and editing of papers for a special issue on the theme 'Mathematical problem solving and problem posing'. The special issue derived from papers that were presented during sessions of the Topical Study Group (TSG) at the *14th International Congress of Mathematics Education (ICME)* held in Shanghai in 2021. Full details of the special issue are Toh, T. L., Santos-Trigo, M., Chua, P. H., Abdullah, N. A., & Zhang, D. (2022). Special Issue (1): Mathematical problem solving and problem posing. *Hiroshima Journal of Mathematics Education* 15(1). <https://www.jasme.jp/hjme/>

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SELECTED RECENT SHBIE PAPERS

A fuller list of SHBIE recent publications is now available online. Please visit

<https://shbie.ubd.edu.bn/research/>

Wood, K., Abdul Latif, S.N., Said, H. (2022). Preparing teachers for a changing world: developments and challenges in Brunei Darussalam. In Khine, M.S., Liu, Y. (eds) *Handbook of Research on Teacher Education*. Springer. DOI: 10.1007/978-981-16-9785-2_39

- *Details developments in teacher education and education research in Brunei from 2007 onwards, with the introduction of a new national curriculum. Major landmarks include the shift to a Masters level teacher preparation programme, development of action research models, and a four-year SHBIE/Ministry of Education research-practice partnership focussed on twenty-first century teaching and learning with major funding from the Brunei Research Council.*

Sheikh Khalid, S.M.I., **Abdul Latif, S.N., & Zailani, F.F.** (2022). An eye-opening experience with visual impairment students' environment in Brunei Darussalam. *International Journal of Social Learning* 3(1), 115-130. <https://doi.org/10.47134/ijsl.v3i1.184>

- *Explores the experiences of four students with visual impairment (VI) within their built school environment. The study found that the students face anxiety caused by physical, auditory and lighting barriers, and that the school environment was intimidating for them to move within. The study has implications for expanding the field of study into Universal Design within Brunei Darussalam and hopes to bring insight into the types of barriers the built environment can have for students with VI, and the significance of this for National Vision Plan 2035.*

Azman, A. N., & Johari, M. (2022). Investigating the effectiveness of videos designed using cognitive load theory on biology students' academic achievement. *Jurnal Pendidikan IPA Indonesia*, 11(3). <https://doi.org/10.15294/jpii.v11i3.37324>

- *Investigates the effect of videos designed in accordance with cognitive load theory on students' academic performance. Twelve cycles of lessons on 12 different biology topics were conducted. For each cycle, a pre-test was administered before students watched the videos (self-learning), followed by a post-test. This study found a significant increase in test scores after students had watched the videos for all of the cycles.*

Aziz, A.A., Johari, M. (2023). The effect of argumentation about socio-scientific issues on secondary students' reasoning patterns and quality. *Research in Science Education*, 1-19. <https://doi.org/10.1007/s11165-023-10099-5>

- Investigates how an intervention based on argumentation about socio-scientific issues (SSI) may affect secondary students' patterns of informal reasoning and reasoning quality. The results suggest that participants frequently relied on rationalistic informal reasoning or integrated informal reasoning patterns to solve SSI. Students' reasoning quality also improved as there was a higher incidence of students with a higher level of reasoning quality in the two post-tests when compared to the pre-tests.

Roslan, R., Nishio, Y., & Jawawi, R. (2022). Analyzing English language teacher candidates' assessment literacy: A case of Bruneian and Japanese universities. *System*, 111, 102934.

<https://doi.org/10.1016/j.system.2022.102934>

- Investigates English language teacher candidates' preparedness for assessment responsibilities. Participants were 56 English language teacher candidates from Brunei and Japan. A mixed-methods approach to data collection was utilised, involving questionnaires and interviews. The results revealed that teacher candidates in both Brunei and Japan lacked sufficient knowledge of assessment literacy, even though some of them possessed teaching experience before entering their teacher education programme. Implications for teacher training in English language (L2) contexts are discussed.

Makmun, R., Abu Bakar, R., & Maidin, A.B. (2022). Tema kebudayaan dalam novel Kelingkang: Satu penelitian aras Kognitif Bloom [Cultural themes in the novel Kelingkang: A study of in relation to Bloom's cognitive levels]. *Jurnal Pertanika Mahawangsa*, 9(2). <https://journalfbmk.upm.edu.my/ojs3/index.php/mahawangsa/issue/view/69>

- Analyses the novel 'Kelingkang' by Douglas Jaga, published by Dewan Bahasa dan Pustaka in 1998. The novel tells the story of a man in an Iban community who seeks modern treatment for his sick brother. This creates clashes with his father who prefers traditional methods of treatment. The novel is quite difficult to interpret, particularly as it requires an understanding and appreciation of the traditional and cultural elements of the Iban community. The paper uses a qualitative approach, specifically text analysis, to interpret the sequence of leitmotifs in each of the chapters and relates this to Bloom's Taxonomy (1956, rev. 2001) of cognitive levels.

Goh, A.Y.S (2022) Learning journey: Conceptualising "change over time" as a dimension of workplace learning. *International Review of Education*, 68, 81–100. UNESCO-UIL. <https://doi.org/10.1007/s11159-022-09942-0>. (Editor's Choice of the month).

- Proposes the concept of "learning journey" to explore the relational complexity of how individuals learn at different workplace settings across their working lives. The paper draws on the experiences of two workers with different roles at two points in time in different workplaces and argues that individual learning involves a complex interaction of positions, identities and agency. Understanding how individuals learn at work throughout their lives is significant for discussions of lifelong learning in the current era where changes can be unpredictable and frequent, as illustrated by the COVID-19 pandemic. To date, there is little research or theoretical understanding of "change over time" as a dimension of individual learning at work, which this paper seeks to address.

Goh, A.Y.S. and Lim, A.D. (2022). Towards a better understanding of dentists' professional learning using complexity theory, *Educational Philosophy and Theory*, DOI: 10.1080/00131857.2022.2138334

- Critiques the narrow conceptions of learning inscribed in formal continuing professional development (CPD) which focus on off-the-job activities, despite growing evidence that much invaluable learning occurs through and at work. Drawing on a vignette of dentists' professional practice at work, the paper argues for a shift in discussion from an emphasis on which CPD models work best to what counts as professional learning for dentists. The paper proposes using an innovative conceptual approach through the lens of 'complexity thinking' and the concept of 'co-present group'. Given the learning potentials of group practice and group learning, the paper concludes with suggestions to support dentists' lifelong learning at work.

Shahrill, M., Batrisyia, I., Musa, N. K. H., & Azamain, M. S. (2022). The enactment of lessons using comics to teach mathematics in Bruneian classrooms. *Proceedings of the Singapore National Academy of Science*, 16(1), 85-95.

<https://doi.org/10.1142/S2591722622400075>

- Discusses the lessons conducted by three teachers who used educationally related comics in their mathematics lessons. Among the main themes found were the students' positive insights on the use of comics, the influence of colour and image constructs of the comics, the emotions triggered by comics and

the beneficial inclusivity particularly at the primary and secondary school levels.

Shahrill, M., Gan, A. L., Mohammad, H. H., & **Jawawi, R.** (2022). Intentions of shadow education in mathematics: Insights of secondary school students in Brunei Darussalam. *Didactica Mathematicae*, 44, 81-105. <https://doi.org/10.14708/dm.v44i1.7182>

● *Reports on a survey of 816 Years 7 to 11 secondary school students in Brunei Darussalam to ascertain the percentage of students who receive private mathematics tuition and to explore their perceptions of the prevalent tuition teaching methods used. The findings contribute to the nexus between shadow education and the examination-driven context by suggesting that the more students become interested in passing their examinations in an examination-oriented culture, the greater the likelihood of receiving private mathematics tuition.*

Othman, R., **Shahrill, M., Roslan, R.,** Nurhasanah, F., **Zakir, N.,** & Asamoah, D. (2022). The questioning techniques of primary school mathematics teachers in their journey to incorporate dialogic teaching. *Southeast Asian Mathematics Education Journal*, 12(2), 125-148. <https://doi.org/10.46517/seamej.v12i2.198>

● *Questioning is one of the critical repertoires in dialogic teaching, and teachers who wish to teach that way need to be able to use questioning effectively. In this study, the questioning practices of three primary school mathematics teachers were analysed in their journey to incorporate dialogic teaching. Findings from this study indicated that the three teachers used effective questioning techniques in ensuring dialogic teaching, with focusing, genuine enquiry, and closed testing questions being the most predominant.*

Littlejohn, A. (2023). Language learning as education in the primary English classroom. In Xerri, D. and Valente, D. (eds). *Innovative practices in early English language education*. Palgrave Macmillan.

● *Argues that primary school language teaching has inherited a methodology and a view of language teaching that is inappropriate for language learning as part of the education. The chapter provides an alternative perspective drawn on social constructivist thinking about the nature of learning, roles of learners and sources of learner engagement and sets out principles for course design in the primary classroom, with examples of how these can be applied in practice.*

Wan, C. T. L., & **Abdullah, N. A.** (2023). Using CUBES strategy in a remote setting for primary mathematics word problems. *Jurnal Elemen*, 9(1), 132-152. <https://www.doi.org/10.29408/jel.v9i1.6864>

● *Examines the use of the CUBES Maths Strategy to solve word problems through action research using a mixed method approach. Participants involved were pupils, aged 8 -9, from a small local government primary school. Pre and post-tests were quantitatively analysed using Wilcoxon Signed-Rank Test, which concluded that there was no significant change in the difference in test scores. Newman's Error Analysis interview was conducted to investigate the source of errors committed by the pupils, which concluded that the most prominent type of error made was the comprehension error, followed by the transformation error. As the research was done in a remote setting, it can be deduced that the CUBES Maths Strategy was not fully utilized.*

Abdullah, N. A., & Haji Abbas, N. A. (2022). Teachers' exploration using Graphic Organizer for problem solving in primary mathematics. *Hiroshima Journal of Mathematics Education* 15 (1), 19-33. <https://www.jasme.jp/hjme/>

● *An exploratory study of primary school teachers utilising Graphic Organizer, an instructional strategy used to help students compartmentalize the necessary information to solve word problems. A group of mathematics teachers was introduced to embedding Graphic Organizer as a tool to address the issue in problem solving. They implemented the strategy in their respective classes and found ways to apply and assess students' problem-solving strategies. The paper discusses their reflections on the challenges and affordances suggested by use of the Graphic Organizer.*



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