

In this issue...

TPACK / Changing teachers' pedagogical beliefs ... Language education / Do teachers and learners live in the same 'world? ... Science classrooms / Conceptual Understanding Procedures (CUPs) ... Teachers' Pedagogical Content Knowledge ... Science education / Using 'Science Show' to bridge the gap Publication News SHBIE Seminar series

Language education / Do teachers and learners live in the same 'world?'



A language classroom in Brunei

A new research project in SHBIE is investigating the way in which teachers and learners 'see' the English language classroom and how far they share the same view of the purposes and value of what they are doing. "The overall aim," explains Dr Andrew Littlejohn, Principal Investigator, "is to understand the factors affecting success and failure in language learning. It's important that teachers and learners share the same view on what they are doing and why – otherwise it's quite likely that success for either party will escape them." The funded project, with team members Dr Sarah Boye and Dr Ishamina Athirah Gardiner from the Language Centre, and research assistant Najib Noorashid, investigates secondary school learners and their teachers, utilizing an innovative methodology with Personal Construct Repertory Grids to elicit their views on common classroom tasks. The Repertory Grid methodology has been chosen as it avoids or at least reduces the risk that the priorities of the researchers are imposed on the respondents, by eliciting their own terms ('constructs') to describe tasks. The project runs until July 2020. Further details and findings will be reported in a future SHBIE Research Newsletter.

Contact: andrew.littlejohn@ubd.edu.bn

TPACK / Changing teachers' pedagogical beliefs

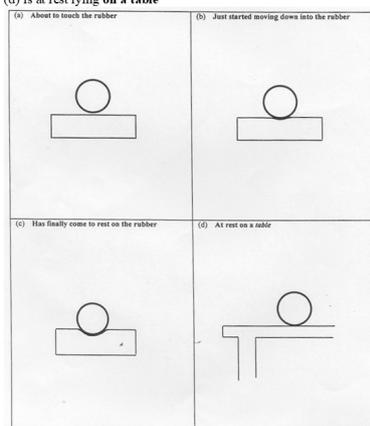
Dr Sallimah Mohd. Salleh is currently leading a research team (including Dr Dr Juraidah Musa, Dr Aliamat Omarali; Dr Norhedayah Abd Latiff) to evaluate how a professional development programme may develop teachers' technological, pedagogical and content knowledge for

innovative teaching (TPACK). The study hypothesises that for a successful shift in pedagogy which incorporates the use of technology, teachers need to develop the pedagogical beliefs in their ability to effectively mount such an innovative pedagogy. Therefore, this study aims to do just that. It mounts a professional development programme that aims to influence a change in teachers' beliefs towards using technology integration for innovative teaching. Contact: sallimah.salleh@ubd.edu.bn

Science classrooms / Conceptual Understanding Procedures (CUPs)

The use of Conceptual Understanding Procedures (CUPs) is a teaching procedure first developed in 1996, based on a constructivist approach that has 3 stages: individual, group and whole class. In an individual stage, students are required to think of a given exercise on their own and then proceed to discuss in a group of three or four students. Each team is then asked to reach an agreement with answers being written on a supplied worksheet which will be discussed in the final stage of a whole class. The teacher acts as a facilitator as all students move towards a final consensus.

FORCES ON A CAN OF PEACHES
A can of peaches is dropped from about 10cm above a block of sponge rubber. Draw forces acting on the can on the diagrams below when the can:
(a) is about to touch the rubber,
(b) has contacted the rubber and has just started to move down,
(c) has finally come to rest on the rubber, and
(d) is at rest lying on a table



A typical CUP stimulus, from www.peelweb.org/admin/data/articles_online/i65p041a1.htm

Past research has shown that using CUPs help to improve students' conceptual understanding. After more than two decades since its design, this project aims to introduce CUPs to local teachers in Brunei. Led by Dr Hardimah Said with

team members Dr Marlizayati Johari and Dr Hjh Sallimah Hj Salleh, CUPs were carried out by SHBIE MTeach Science teacher candidates during their professional teaching practice in schools. Data were collected using the teacher candidates' written reflections as well as through semi-structured interviews. The project is still on-going and the data collected so far have shown positive effects of the use of CUPs in teaching difficult science concepts, despite issues of time and challenges in preparing and planning stages. Positive results include increased students' confidence and participation and the discovery of students' misconceptions in science topics. The project is funded by a UBD Faculty Research Grant.

Contact: hardimah.said@ubd.edu.bn

Science education / Using 'Science Show' to bridge the gap

An important aim of this research project is to promote science awareness and engagement among science students via 'science show'. Science show emphasises the use of interesting demonstrations that mostly require everyday materials rather than typical laboratory apparatus. This demonstrates the application of science concepts in everyday life that students have learned in their science classrooms. The project investigates the use of science show as a pedagogical tool in teaching from the perspective of the science teacher candidates from SHBIE's MTeach programme. Reflective accounts from these teacher candidates will be analysed using thematic analysis. This research seeks to establish a collaboration between formal (SHBIE) and informal sectors (Oil and Gas Discovery Centre, OGDC) in engaging students to learn science. The research began in March 2019 and is expected to be completed in June 2020. The Science show was conducted in March 2019, which children aged between 3 and 15 years old attended with their parents or guardians.

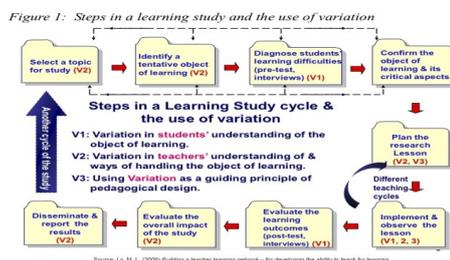
Members of the research team are Dr Marlizayati (principal investigator), Dr Hjh Hardimah (science), Dr Roslinawati (science), Dr Hjh Sallimah (science), Dr

Norashikin Yusof (language) and Khairul Amilin (mathematics).

Contact: marlizayati.johari@ubd.edu.bn

Learning Study / The Development of Teachers' Pedagogical Content Knowledge

SHBIE has received a major university grant to conduct a learning study research project to investigate the development of teachers' pedagogical content knowledge (see figure 1 below). Commencing in January 2020, the research design involves groups of 5-8 teachers per curriculum area who are invited to work with SHBIE specialists in cycles of action research. The research teams will identify necessary conditions for the improvement of student learning outcomes.



The project will be led by Prof Keith Wood, and will involve SHBIE facilitators Dr Juliana Shak (English), Dr Juraidah Hj Musa (ICT), Dr Hardimah Said (Science), Dr Siti Norhedayah Hj Abdul Latif (Science), Dr Aliamat Omar Ali (Malay) and Hj Masriatol binti Hj Sajali (PE).

Publications News from SHBIE

SHBIE scholars have continued their record of active publishing, with many new journal papers and articles, books and publishing contracts. Some highlights are:

Globalization, Education, and Reform in Brunei Darussalam

Set for publication later in 2020, this volume has been contracted by Palgrave Macmillan. Editors are Prof Phan Le Ha, Prof Keith Wood and Dr Hardimah Said. As the title makes clear, this will be the first book fully dedicated to the examination of the education system, schooling and teacher education in Brunei Darussalam in the context of globalization and reform. The volume features papers from numerous SHBIE scholars, and is divided into three inter-related main sections. Part A offers detailed accounts about Brunei's education system. The accounts are presented with analyses and rich discussion of Brunei Darussalam's

historical, social, political, and cultural contexts that shape and inform its education system and its development and major reforms. Part B shows how the major reforms and educational contexts discussed in Part A have been translated into teacher education in Brunei Darussalam. All the chapters are informed by empirical data collected on various aspects and levels of teacher preparation. Part C connects parts A and B to show how reform aspirations, teacher training, teaching, learning and schooling take place and take shape in the everyday classroom at varied educational settings and contexts in Brunei Darussalam.

WALS-Routledge Lesson Study Series

The World Association of Lesson Study has joined forces with Routledge to establish a new series specifically focussing on Lesson Study, with SHBIE's Prof Keith Wood as one of the main series editors. The series aims to provide opportunities for researchers and practitioners in Lesson Study to share their work beyond the boundaries of their countries, to an international audience. Lesson Study is increasingly popular as a tool for improving the quality of education and schools around the world. Originating in Japan, many countries are adapting and contextualizing Lesson Study to their own needs in response to educational and curriculum reforms cognizant that what matters most is what happens in classrooms and its impact on teachers and students. This series will also make available outstanding Lesson Study publications originally written in Japanese but extended and revised for an English audience.

Innovation in Language Teaching and Learning



Part of a series which focuses on the experience of innovation in language teaching and learning in different parts of the world, Dr Andrew Littlejohn co-edited this volume which specifically documents accounts from the Middle East and North Africa, and co-authored a chapter on 'The Evolution of a Research Project Course'. The thirteen research-based chapters draw on classroom, administrative and learning experiences from seven of the countries in the region. The major trends

analyzed across the volume include the language skills of reading and writing, the prevalence of technology and technology-enhanced instruction, and innovative teaching, learning and assessment practices that are now in place in virtually all levels of English language teaching and learning from primary school to university to adult education sectors.

SHBIE SEMINAR SERIES

2019 saw an active SHBIE seminar programme, led by SHBIE scholars and visiting academics on a wide variety of topics and research projects. An innovation this year was the introduction of two new seminar types in addition to paper presentation: 'Kite flying', to stimulate ideas for research projects, and 'Research Progress' to share ideas and get feedback on data collection. Seminars included the following topics. Please feel free to contact the person concerned for further details.

- Dr Andrew Littlejohn **Dialogic teaching and the challenge for language teaching task and materials design**
- Dr Roslinawati Bte Hj Roslan **Facets of STEM Learning for Sustainable Development Education**
- Dr Marlizawati Bte Johari **Exploring Brunei students' ideas of electricity in 3 settings (pen and paper; computer stimulation and laboratory apparatus)**
- Prof. Keith Wood **Changing teaching, changing teachers: Contrast, generalization and fusion**
- Dr Andrew Littlejohn (SHBIE), Dr Sarah Boye (Language Centre) and Dr Ishamina Muntithir Gardiner (Language Centre) on **"Makes head hurt!" and other learner reactions to the language classroom'**
- Dr Hj Gamal Abd Nasir Bin Hj Zakaria **Design and development of PBL mobile applications in Islamic Education**
- Dr Adeline Goh Yuen Sze **Towards a better understanding of workplace learning in teacher education**
- Dr Hj Hardimah **Investigating the pre-service and in-service science teachers' conceptions of "a teacher" at the beginning of their initial teacher training program**
- Dr Hj Gamal Abdul Nasir Zakaria **The challenges in building 'Rabbani' generation in Muslim countries**

