

NORTH ATLANTIC UNIVERSITY UNION

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Azami Zaharim

Valery Vodovozov

Recent Advances in Educational Technologies

**Proceedings of the 4th International Conference on
Education and Educational Technologies (EET '13)**

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Cambridge, MA, USA, January 30 - February 1, 2013



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Plenary Lecture 1

Application of On-line Facilities in Producing Human Capital for Malaysian New Economic Model



Professor Riza Atiq Rahmat

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Abstract: Malaysia launched New Economic Model in Mac 2010 to drive Malaysia's transformation into a high income economy by 2020. The foundation of this economy is innovative entrepreneurship. This new model was introduced in response to the current world situation where job market is constantly changing at a very fast rate and stiff competition between countries and between individuals. As Malaysia moves to innovation and entrepreneurship based economy, universities must produce graduates who are very independent, innovative and highly entrepreneurial. In addition, more and more digital-native students whose learning habit very much different from ours are enrolling to universities. This is a convergence of education needs and the new student learning habits that require immersive-collaborative environment, more student initiative, experience-led, and project based instead of course based. To facilitate this learning requirement, on-line facilities are required to enable the students to gain new knowledge as much as possible, to collaborate globally, to synthesis new knowledge or to engage in computer simulations that replicate the real situation.

Brief Biography of the Speaker: Prof. Ir. Dr Riza Atiq obtained his B.Eng. (Civil Engineering) in 1980, M.Eng (Transportation Engineering) in 1991 from UTM and PhD (ITS) from UKM in 2002. He started his academic carrier in UKM in 1994 after working as an engineer with City Hall of Kuala Lumpur for 14 years. While in City Hall he developed a transport model for Kuala Lumpur and surrounding area for planning purposes. He has five intellectual properties, three books, more than 100 scientific research papers and 14 innovation awards including one from Geneva, three from Korea and one from IEM. His research is mainly in Intelligent Transport System and learning-teaching. His professional expertise includes bridge design, urban transport planning, urban transport management and sustainable urban transport. His current post in Universiti Kebangsaan Malaysia (UKM) is the Director of Centre for Academic Advancement. While holding the post, he initiated the formulation of 11 policies to transform the curriculum and teaching-learning practices in UKM. His professional qualification includes being a professional engineer (Civil Engineers, Board of Engineers Malaysia) and member of Road Engineering Association of Asia and Australasia.

Plenary Lecture 2

The Place of Diagnostic Testing in Preparing Students for 21st Century University Education



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Abstract: University education is not only meant for brightest 10% top of the country students, but open to all that can meet the basic criteria of entrance qualifications. Selection of students into the Malaysian public universities is guided by a quota requirement so as to ensure a representative sample of students based on racial composition of the national population, has access to university education. Thus, those are somewhat deprived of quality education because of this schools locations including marginalized children in the remote areas and handicapped children have a fair chance of gaining access to higher education. As result, the students are not only diverse in composition but also more diverse in terms of their preparation for university education. More and more students are entering universities now than a decade ago. This paper reports on some works to overcome students' deficiencies preparation for university education in the sciences and engineering. The traditional standardized examination results do not provide what student needs were nor their strength and their weakness to face university education. This paper describes the development of diagnostic tests to identify their needs. One of the areas that have been embarked is the development of diagnostic tests such as mathematic and research skills diagnostic tests, prior knowledge tests for university education in various disciplines. The model emphasizes the need for the development of a system in self-diagnostic in tests and interventions programmes, but informally as student is left to decide whether they need to follow self-diagnose interventions programmes or not. The universities have yet to develop a system of a formalized remedial programmes like those practiced in some universities in the USA, even though some research projects have begun which is presented in this paper.

Brief Biography of the Speaker: T. Subahan Mohd Meerah is a professor in Curriculum and Evaluation at the Faculty of Education, the National University of Malaysia. He has successfully produced over 40 PhD graduates in his field. He has published over 100 papers in journals and proceedings at the national and international level in his area. He has been a consultant in various agencies including World Wide Fund Malaysia, Malaysian Astronomy Agency and Malaysian Examination Syndicate, Ministry of Education and has collaborative research with numbers of universities in Indonesia. He is a member of Chairman Committee Sub Education Programme IYA for National Space Agency. He is known as an expert and lead resource person in many programs such as in the development of module for inculcating science interests in Space Science for the National Astronaut Program in 2006 and also in the technical committee of Instrument Development for a study on 'Public Understanding of Environment' National Level, collaboration between WWF, Ministry of Education, University Malaya, Universiti Kebangsaan Malaysia & Department of Environment in 2004 and present. Prof. Datuk Dr. T. Subahan also experienced as a Chief of Writing Module for SPACE Science Education Programme in Conjunction with the Launching for the 1st Malaysian Astronaut to ISS. He is a person who is recognized by the Faculty of Education, The National University of Malaysia as Lead Scholar in research. Currently, he is Head of the Centre for Educational Evaluation at the Faculty of Education, the National University of Malaysia.

Plenary Lecture 3

Higher Education Research and Gender Inquiry



Professor Ruzy Suliza Hashim

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Head of Project Group for Action Research

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Abstract: In higher education research, students are often made to go the extra mile by going beyond the given syllabus and prescribed textbooks. In an undergraduate course entitled Gender Identities: Malaysian perspectives, students have the opportunity to analyse literary texts from the gender lens. With the premise in mind, the course took on a virtual dimension by allowing students to study gender construction online. This is a strategy to show them the fluidity of gender and the seductive nature of virtual communication where one is not necessarily hindered by face-to-face interactions. In a literature classroom, students are taught the skills to analyse texts in terms of their plots, points of view, narrative styles, characterization, use of symbols and themes. Since literary works are mimetic of the realities of our daily lives, they actually present an excellent opportunity to relate texts with current contexts. Hence, combining the skills of critical analysis with an awareness of gender construction online becomes an aspect of teaching and learning in the literature classroom. To achieve this aim, we incorporated virtual constructions of gender in the design the literature syllabus of a course entitled Gender Identities: Malaysian Perspectives to include recognition of the complexities involved in cyberspace discourse and gender constructions.

Brief Biography of the Speaker: Ruzy Suliza Hashim has been teaching at the School of Language Studies and Linguistics, Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia since 1988. She obtained her BA with Honours from University of Otago, New Zealand in 1986, MA in Sociology of Literature from Essex University, UK and and PhD (Literature) in 1999 from University of Otago, New Zealand. Her areas of research include gender issues in literature, literature and diaspora, and action research in higher education. She was involved in a number of literary awards as the panel of judges including the esteemed SEAWRITE award. In 2005, her book *Out of the Shadows: Women in Malays Court Narratives* won the National Book Award (Malaysia). She is currently heading the Action Research component at her faculty as well as heading two university grants on Malay revisionary writing, and Malay pop culture and the Malay Unconscious. She is on the editorial board of four international journals.

Plenary Lecture 4

Lifting Up the Research University Status by Capitalizing Undergraduates Students' Research Skills



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Abstract: As one of the research universities in Malaysia, The National University of Malaysia has to face challenges in sustaining and lifting up its status. Besides incentives and concerted effort were invested towards research and publication, the university also regards teaching as its main priority, particularly in realizing its vision and mission. In fact, significant amount of funding was allocated to stimulate and encourage innovative teaching among its lecturers. As one of the educational objectives of the Malaysian undergraduates programme, research skills is often conceptualized as comprising critical thinking, organizing ideas, finding information, reading and writing skills, ability to work with numbers and graphs, oral communication skills, ability to ask questions, methodological knowledge, sense of big picture, time management and ability to work with others. Nonetheless, it was found that even though universities are investing considerable resources to equip students with research skills, the attainment of learning outcomes related to research skills is often not as good as expected. This paper will signify the importance of research skills as well as analyzing the current status of research skills among the undergraduates at the National University of Malaysia. It will then propose better approaches to teaching and helping the research universities students of how to learn scientific thinking and research methods in a more effective and deeper way.

Brief Biography of the Speaker: Assoc. Prof. Dr. Kamisah Osman is currently the Deputy Director, Centre of Academic Advancement, the National University of Malaysia. After completing her undergraduate education at the National University of Malaysia in 1993, she then taught Chemistry and Physics at one of the secondary schools in Malaysia. Her passion towards effective pedagogy in science towards meaningful acquisition of scientific knowledge and dispositions has inspired her to pursue her studies in Science Education. She then obtained her Masters in Science Education from the Centre for Science and Technology Education, The University of Manchester, UK in 1996 and continued her doctoral study soon after that at the same university. In 1999, she successfully completed her Phd in Science Education and then joined the National University of Malaysia as a Science Education Lecturer in 2000. Currently, she is actively engaging herself in the Science Education Programme, at the Faculty of Education, the National University of Malaysia. Her research interest includes science education, thinking skills as well as curriculum innovation. Besides, she is also immersing herself in maintaining the Quality Assurance and Programme Accreditation processes, not only at the university level, but also national and international levels. She is an Executive Editor of Asian Journal of Learning and Teaching in Higher Education, an Editorial Board member of the Eurasian Journal of Science and Mathematics Education, Science Education Review, Malaysian Journal of Education and Malaysian Action Research Journal. Her passion towards inspiring innovative teaching particularly at the university level has made her one of the key players of Action Research Committee at the National University of Malaysia.

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