

CELEBRATING  
COMMERCIALISATION  
YEAR 2014

# iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention  
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& design  
exposition 2014

INNOVATEUR  
wannabe!  
2014

27<sup>th</sup> - 30<sup>th</sup>  
APRIL 2014  
DEWAN AGUNG TUANKU CANSELOR (DATC)  
UNIVERSITI TEKNOLOGI MARA  
MALAYSIA

*Bridging  
the valley of death :  
advancing the  
commercialisation  
of research*

RESEARCH BOOK

# iiindex 2014

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innovation  
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## FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.

Tan Sri Dato' Sri Sallehuddin Mohamed  
Pro-Chancellor, Universiti Teknologi MARA

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## APPLYING INTERACTIVE MULTIMEDIA INSTRUCTIONAL SYSTEM DESIGN (ISD) IN A LANGUAGE PROFICIENCY COURSE: A LOOK INTO LEARNERS LEARNING STYLES

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Today, there are countless study materials available in the market. Nevertheless, not all the materials are suitable to the students' need in terms of learning contents, material presentation and learning styles. However, with properly customized learning materials, educators will be able to provide their students with better learning activities and more personalized learning opportunities. In this study, a customized and personalized learning courseware, designed based on the Felder & Silverman Learning Style Model (FSLSM), is proposed as a probable learning solution most appropriate and feasible for technology-based or self-learning environment. It characterizes students' in four dimensions according to their preference in processing, perceiving, getting and understanding of information. Firstly, active/reflective dimension, this dimension categorizes students according to how they process information. Active students are categorized as retaining and understanding information better by doing something with the learned material such as they like to discuss, apply or explain it to their peers. By contrast, reflective students tend to think about the concepts quietly first and they prefer to work alone. Next, sensing/intuitive dimension, students in this group are distinguished based on their understanding of the learning materials. As for sensing students, they like to learn facts and study concrete learning materials, whereas intuitive students are more comfortable with abstract materials. Moreover, in order to learn from concrete material sensing students prefer to solve problems using standard approaches and dislike complicated problems. They learn best when they see how it connects to the real world and they tend to be more practical. Intuitive students like discovering possibilities and relationships. Moreover, students in this category tend to be more innovative and like challenges than sensing students. Thirdly, visual/verbal dimension students differentiate in the way they get the information. Normally, visual students when they see pictures, diagrams and movies make them remember best. Their strategy to remember better is using techniques such as highlighting to colour-code their notes. In comparison, verbal students learn best from written and spoken explanations. Lastly, sequential or global dimensions, whereby sequential students prefer to learn in a linear way and they tend to follow logical steps in order to find solutions. They are also interested in the details. By contrast, global students prefer to look at learning materials randomly. They can put things together once they see the 'big picture'. They are interested in overviews and will look for connections between different areas. The purpose of using this solution is to cater the different students' learning styles. A research question was asked on what learning style(s) is/are preferred by the full-time (FT) and distance learners (ePJJ). An online Index of Learning Styles (ILS) questionnaire was employed as a measuring instrument. A total of 55 students from two classes, FT and ePJJ at UiTM Shah Alam participated in the study during the Sept-Dec 2013 session. The findings reveal that majority are inclined to active, sensing, visual and sequential students. The implication on this study supports the notion that students' learning styles can affect their success in language learning. Hence, language lecturers/instructors, who address their students' learning style, can provide their students with a more effective learning environment.