

CONFERENCE **ABSTRACT**

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Parallel Session 4

Topic: Modern educational technology and management

Session Chair: Dr. Peter Francis Holowka, University of Calgary, Canada

Time: 15:45-17:00

[Bridgetower Room]

<p>T3022 15:45-16:00</p>	<p>Title: The Determinants of Educational Technology Infrastructure in Western Author: Peter Francis Holowka Presenter: Peter Francis Holowka, University of Calgary, Canada</p> <p>Abstract: As the use of educational technology expands globally, it is critical for academics and practitioners to better understand the IT infrastructure that enables its use. This presentation explores the question of what are the greatest influences on IT infrastructure and cloud computing adoption within K-12 education. Given the influences of district priorities, location, size, regional legislation, leadership structures, as well as purely technical considerations, this presentation examines which of these factors is the most influential on a district's IT infrastructure. The findings and implications of this presentation are based on an exhaustive study of all 75 large K-12 districts in Canada's three westernmost provinces: British Columbia, Alberta, and Saskatchewan. Multiple case study analysis, followed by correlation analysis, was used to explore the nature of IT infrastructure and cloud computing use in these provinces. A data transformation model mixed methods triangulation design methodology was used. This study encompassed over 1.1 million students and a geographical area of 2,258,483 square kilometres, resulting in one of the most comprehensive investigations of educational technology infrastructure and cloud computing adoption in the world.</p>
<p>T3054 16:00-16:15</p>	<p>Title: MathE - Improve Mathematical Skills in Higher Education Authors: Maria F. Pacheco, Ana Pereira, Florbela Fernandes Presenter: Maria F. Pacheco, Instituto Politécnico de Bragança, Portugal</p> <p>Abstract: Higher education students of scientific subjects often lack the basic mathematical skills to follow lectures and make the most of the lecturer's teachings. It is necessary to identify the gaps in each students' understanding of the concepts and offer teachers adequate resources to motivate and provide their students the skills and competences they miss. The main goal of MathE - Improve Maths Skills in Higher Education is to encourage training and exchange in order to enhance and strengthen the quality of teaching and to support the use of digital and online technologies to improve pedagogies and assessment methods. MathE also aims to set up transnational teacher training courses and strengthen cooperation between</p>

	<p>universities that already offer such courses.</p>
<p>T3062 16:15-16:30</p>	<p>Title: Flipping the Reading Strategies and Comprehension through an Interactive Big Data Reading Platform Authors: P.C.W. Ho, W.W.T. Fok, C.K.K. Chan, H.H. Au Yeung, H.W. Ng, S.L. Wong, S.Y. Ngai, P.H. Kwok, Y.S. Ho, K.H. Chan Presenter: HO CHEUK WING PRAJNA, THE UNIVERSITY OF HONG KONG</p> <p>Abstract: The purpose of this study is to investigate the learning approach of the designed Flipped Reading Platform (FRP) and its effects on primary school students' general Chinese reading and comprehension capabilities. This study was undertaken as part of the Quality-Education-Fund projects in Hong Kong titled "Flipped Reading: Enhancing the Learning and Teaching of Reading Strategies and Comprehension in Chinese via an Interactive Cloud Platform".</p> <p>This paper presented the design of the Interactive Cloud Platform Flipped Reading Platform incorporating both elements of reading strategies and learning activities, investigating the changes in students' reading performance, applied strategies, and the level of active learning with the application of FRP. Among the participants in the pilot scheme, the overall results showed students generally gain more in three stages of reading comprehension, favoring the experimental students using the FRP. Meanwhile, low-achieving students learned the strategies better. Analysis of FRP log activities shows students' active engagement in reading and perceived competence. Different learning outcomes were also found within the experimental group categorized by BYOD and non-BYOD classes. Implications of the study show the effectiveness of FRP, and the design demonstrates how the reading measures have integrated the assessment indicators of both international and local standards in the domain of Chinese Language reading. Further research can be developed to examine individual online reading performance and learning behavior on FRP.</p>
<p>T3063 16:30-16:45</p>	<p>Title: The Moderating Effect of Education and Experience on the Use of Learning Management Systems Authors: Sami S. Binyamin, Malcolm J. Rutter and Sally Smith Presenter: Sami S. Binyamin, Edinburgh Napier University, UK</p> <p>Abstract: Based on the technology acceptance model, this research investigated the variables that affect students' use of LMS in Saudi public universities. The study also examined the moderating impact of education and experience on the students' behavior toward LMS. 851 online surveys were submitted by students at three Saudi universities, and 833 responses were used for data analysis. The collected data were analyzed using Partial Least Squares Structural Equation Modelling along with multigroup analysis. Amongst 40 paths, the results revealed that education and</p>

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	<p>experience moderated only four relationships in the proposed model. Discussions, insights and implications for decision makers in Saudi higher education are provided at the end of this paper.</p>
<p>T3080 16:45-17:00</p>	<p>Title: New Technologies in Education for Security and Safety Authors: Małgorzata Gawlik-Kobylińska, Paweł Maciejewski Presenter: Małgorzata Gawlik-Kobylińska, Paweł Maciejewski, War Studies University, Poland</p> <p>Abstract: The paper is a qualitative study on the use of new technologies and didactic tools in education for security and safety. The aim of the research was to explore their potential in two aspects: key competencies acquired and developed during technology enhanced training, as well as the most desirable tools used in education for security and safety. The respondents were 32 international experts who teach security and safety topics in civilian and military institutions. The research results indicated that reactions to emerging threats, crisis response situations, decision making and managerial skills were the key competencies. The most desirable tools were characterized by two features: instant access for learners and teachers, and the possibility of painless learning on mistakes. The study also reflected teachers' awareness on the use of digital tools in education for security and safety.</p>

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