

**CAIC SERIES**

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**TEACHING**  
**AND**  
**LEARNING**

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CAIC Collection of Resources Written by UMP Experts for Communitising Technology

**SERIES III**



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**SERIES III**

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# INTRODUCTION

**CAIC Series: Teaching and Learning** has continued its publication to its 3<sup>rd</sup> edition. This time, Centre for Academic Innovation & Competitiveness (CAIC), Universiti Malaysia Pahang gladly presents a compilation of interesting findings from UMP inspiring educators. These educators were holders of CAIC's research grants. The grants were focused on teaching & learning matters that portrayed the implementation of flexible education in UMP. The 3<sup>rd</sup> series focuses on the theme "**Learning experience in IR4.0 era**" as teaching and learning adaptation to accommodate the Z and  $\alpha$  generation learners.

The series addresses UMP Strategic Leap Research and Innovation Prominence to showcase UMP experts in teaching and learning innovation to a broader audience. The third series of the monograph marks CAIC's objective to publish regularly to promote teaching & learning nexus to a bigger audience.

The editors would like to express their deepest gratitude to CAIC members for their assistance and support in making this **CAIC Series 3.0** into a reality.

**Editors:**  
**Nasratun Masngut**  
**Athirah Ruzaini**



# PREFACE

The 3<sup>rd</sup> edition of CAIC Series reflects a continual contribution of UMP experts in teaching & learning research that can be divided into three topics:

- **Assessment**
- **Teaching & learning tools**
- **Student well being**

**Awanis Romly** presents her findings on the importance of tacit knowledge assessment for academic staff. The work was conducted through teaching & learning grant with number RDU1603143. In her work, the importance of tacit knowledge assessment for academic staff has been highlighted and discussed. In the education institution like universities, the tacit knowledge of academic staff is the main power key of their comparative advantages. However, the intangibility nature of tacit knowledge makes it a big challenge that faces the management of tacit knowledge resources. Therefore, the most important success factor of knowledge management is knowledge measurement, which can manage and develop tacit resources based on clear vision and processes. Moreover, KPI has been integrated with balance scorecard (BSc) method, as a useful method, and adopted in the organizations to measure the performance level of tacit knowledge resources. However, in the universities, there is no clear KPI models based on BSc were introduced to support the tacit knowledge measurement of academic staff. A conceptual KPI model has been proposed based on BSc method to improve the knowledge measurement especially the tacit knowledge.

**Ruhil Amal Azmuddin** explores the use of Interactive Reading for Academic Disciplines (iREAD) to support reading of English for Science and Technology online materials. The study was conducted with support from teaching & learning grant with number RDU1603142. It examines how students used discussion forums and annotation tools to interact and collaborate more effectively in the learning process. A well-known content analysis model was applied in analysing discussion threads and annotation analyses among students enrolled in a 14-week English for Specific Purposes course. The study revealed that online tools allowed reading to be in a more structured and systematic manner in order to process and comprehend online materials better. In addition, students indicated phases of knowledge construction through sharing, discovering and negotiating. Pre and post-test scores showed a significant difference, implying that iREAD plays an important role in language learning and teaching. The study concluded the need to use iREAD in order to assist reading and enhance collaborative learning among students in higher institutions.

**Zuraina Ali** shares students' perspectives on the use of Hot Potatoes in learning vocabulary through a research conducted with teaching & learning grant number RDU1603144. In the current study, Hot Potatoes is used by the teacher-researcher to develop a vocabulary quiz that tests students on their knowledge of Academic Word List (AWL). This study sets out to explore students' views of the use of Hot Potatoes in terms of its design and effectiveness in learning vocabulary. Results show that the design of Hot Potatoes was not appealing to them as they viewed that it is not interactive. It seems to suggest that Hot Potatoes is not compatible with the programs that are available and be used in teaching and learning nowadays. This is due to the rapid changing of technology in catering the needs of its users/ learners. Therefore, the study should be repeated by integrating more multimedia features in the program; Hot Potatoes, for the purpose of learning vocabulary.

**Nabila Abdul Malek** is a senior language teacher at the Centre for Modern Languages, Universiti Malaysia Pahang (UMP). She started her career in teaching since 2011. She has taught various English language courses for diploma and undergraduate students at UMP. She has also contributed to writing academic papers on the uses of technology in Second Language Learning. Her research interests include TESL, language anxiety and the use of web-based learning environments to enhance teaching and learning.

**Nurul Nadia Muhammad** is a language teacher in the Department of English Language at the Centre for Modern Languages, Universiti Malaysia Pahang (UMP). She has started her teaching profession since 2013. Throughout the years, she has taught various English language courses for both Diploma and undergraduate students. She has a keen interest in the research area of Second Language Acquisition (SLA), language testing, as well as discourse analysis.

**Rosnani Ismail** is a language teacher at the Centre for Modern Languages, Universiti Malaysia Pahang (UMP). She has started her career in teaching since 2010. Throughout her service, she has taught various English language courses offered for both Diploma and undergraduate students. She has also taken active roles in being a researcher, co-author as well as exhibitor in several areas including vocabulary learning, e-learning and web-based learning.

**Rohana Hamzah** introduces the finding on self-leadership transformation program towards producing holistic graduates among off-campus students. The work was supported by teaching & learning grant RDU1603145. The program proved that developing spiritual intelligence is incomplete without the integration of human's responsibility as a leader in managing themselves, as well as developing a good social connection with others and their environment, practically. However, developing social intelligence without spiritual intelligence as the foundation will cause the

education process to lose guidance and fail to develop a sense of responsibility among human beings.

### **Final Remarks**

The editors would like to thank all authors for their valuable knowledge sharing in this 3<sup>rd</sup> CAIC series. Hopefully, with this professional sharing of their studies would benefit for various stakeholders.

### **Editors**

**December 2019**

# THE IMPORTANCE OF TACIT KNOWLEDGE ASSESSMENT FOR ACADEMIC STAFFS

A. Romli, Z. Amin

## 1. ABSTRACT

The main objective of this work is to highlight the importance of tacit knowledge assessment for academic staffs.

In general, in universities, academic staffs represent essential knowledge resources. The academic staffs' tacit knowledge is acquired through activities such as teaching, research, and supervision. Thus, this knowledge needs to management and development for sustained competitive advantage. However, measuring tacit knowledge of academicians represents a big challenge faces universities and due to its intangibility. Consequences, identifying and determining the tacit knowledge performance level of academic staffs is very difficult. Therefore, for that reason, in this work, the key performance indicator (KPI) model based on Balance Scorecard (BSc) method has been proposed. The proposed model has been developed using financial and non-financial measurement indicators to measure the level and performance of tacit knowledge for academic staff in the universities. The financial and non-financial measurement indicators are used in the BSc method to measure the success of a university according to the knowledge resources performance and profits from tacit knowledge.

## **2. INTRODUCTION**

Knowledge is a collection of experiences, values, and expert insights that are produced during working activities. This gained knowledge can help in the assessment and incorporation of new experiences and information (Gammelgaard & Ritter, 2004). Moreover, this knowledge commonly can be either explicit or tacit knowledge. The explicit knowledge can be codified in varied format and stored in an electronic database or printed manual like books and articles (Stevens, Millage, & Clark, 2010). Whereas, the knowledge that is stored in workers' minds such as experiences and skills is called tacit knowledge (Bollinger & Smith, 2001).

Furthermore, the tacit knowledge of employees and the ways they used to accomplish their tasks a direct effect on the performance of work activities. Therefore, to implement businesses strategies successfully, the organizations have to develop a useful tacit knowledge (Romero & Martínez-Román, 2012). In addition, the accurate tacit knowledge aids the staff to get up new ways to increase their achievements and at the same time enhance the organizations' profits through decreasing the existing tasks and in turn reduce the production cost.

The explicit knowledge, as one major source, can be used to develop tacit knowledge. Therefore, transformation and sharing the explicit knowledge to build tacit knowledge is considered as an issue in the field of knowledge management. Where knowledge management plays a significant role in managing intellectual capital and improving the organization performance via its staffs' tacit knowledge. Therefore, the organizations of various fields such as academic institution take on the knowledge management systems through managing their useful and valuable knowledge. This will improve their productions operations and in turn lead to reinforce its services and competitive products. As a result, in a successful organization, based on the ability of the