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DESIGN OF A KNOWLEDGE MANAGEMENT SYSTEM FOR THE RESEARCH-TEACHING NEXUS: EVIDENCE FROM INSTITUTIONAL AUDIT REPORTS [ABSTRACT]

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ABSTRACT

Aim/Purpose	The need for Higher Education Institutions (HEIs) to maximize the use of their intellectual property and strategic resources for research and teaching has become ever more evident in recent years. Furthermore, little attention is paid in developing an enabling system that will facilitate knowledge transfer in the Research-Teaching Nexus (RTN). Hence, this study assesses the current state of practice in knowledge management of the nexus in higher education in Oman. It also explores the context of how Knowledge Management System (KMS) for the nexus can be designed and utilized by HEIs and challenges them to rethink their traditional approaches in managing their knowledge assets to boost individual and organizational learning.
Background	This study provides a Knowledge Management-based framework and design of a knowledge management system that support the academic community towards the improvement of the nexus. This study sets out ideas from various academic and professional experts on how academic stakeholders in the higher education can improve and promote knowledge transfer and make better use of its knowledge and research assets for teaching and learning. It stressed the importance of having the knowledge assets or resources that can easily be pooled, accessed, and made available to its intended stakeholders.
Methodology	Data were gathered from 29 out of 49 institutional quality audit reports of all HEIs in Oman. The panel comments were coded and analysed to extract valuable insights regarding the management of knowledge assets in research. Additionally, data were gathered from the institutional accreditation

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	<p>outcomes page of the same website. Manifest and latent content analyses were used in reporting the findings of the panel.</p>
Contribution	<p>The study will contribute to a greater understanding and acceptance of Knowledge Management (KM) in higher education and extended the body of knowledge concerning knowledge management for the RTN.</p>
Findings	<p>The reports revealed a very limited practice of the nexus in terms of people and culture, structure and processes, and computing and web technologies. A few staff are involved in RTN work, there is an uneven understanding of the RTN among staff, limited joint research between staff and students are some of the reasons for this. Significantly, there is no explicit research framework or policy for the RTN, and systems and/or mechanisms are limited. Furthermore, the reports did not account any use of computing and web technologies for the nexus. These limitations can lead to students with less academic, research, and graduate skills. Hence, this study presents a feature design of a KMS that incorporates various RTN best practices, as informed by the reports and literature. The design will allow the staff to utilize the research assets in the classroom, at the same time, engages students in research and scholarly undertakings.</p>
Recommendations for Practitioners	<p>All HEIs must have a innovative system that integrates a formal agenda and approach, and set initiatives, strategies, policies, and procedures for knowledge management in utilizing research assets for teaching and learning. It must be designed so that RTN practices remain up-to-date, relevant, and responsive to the needs of the stakeholders, as well as, address academic accreditation challenges.</p>
Recommendation for Researchers	<p>Researchers can evaluate the knowledge management of RTN practices of other HEIs outside of Oman to effectively recommend the proper course of action for teaching and learning improvement.</p>
Impact on Society	<p>This study will redefine the role and contribution of HEIs, which are key players in advancing a knowledge economy. HEIs are expected to be powerhouses where academic knowledge is discovered, created, disseminated, shared, and re-invented. They must be able to fully grasp the value of managing knowledge to be able to effect positive and purposeful change to the community.</p>
Future Research	<p>Future work should include staff and student surveys that examine the knowledge management need of the learning organization to better inform the design of a KMS for the RTN. Thereafter, future research can test the stage to test the effectiveness of the conceptual design.</p>
Keywords	<p>knowledge management, knowledge management system, research-teaching nexus, social computing, tacit knowledge</p>

BIOGRAPHIES



Dr. Alrence S. Halibas is a seasoned administrator and educator who has an excellent academic track record for the past 20 years. She is currently the Senior Program Manager for Digital Marketing at RMIT University, Vietnam. She once served as an Assistant Professor and Program Leader of the Faculty of Computing Sciences at Gulf College, Oman from Apr 2012- Jan 2020. Prior to joining Gulf College, Dr. Halibas held the post of the Dean of the College of Computer Studies and Associate Dean of the School of Engineering and Information Technology at La Salle University, Philippines, from Jul 2000 to Mar 2012.

Dr. Halibas is a holder of several IT certifications, an active researcher, and a reviewer. She has published research papers in several refereed journals and peer-reviewed conference proceedings, including the Institute of Electrical and Electronics Engineer (IEEE) and Informing Science Institute (ISI), USA. Her research works are indexed in Scopus, EBSCOhost, IEEE, Google Scholar, and other reputable research databases. Moreover, Dr. Halibas has participated as a technical panel member and session chair in numerous international research conferences. Her current research interests include learning analytics, educational management and technology, entrepreneurship, and marketing.



Dr. Rolou Lyn R. Maata is a PhD holder, certified SAP lecturer, licensed professional teacher, research reviewer, and a computer science professor taught in higher education institutions from various universities in Philippines, Bahrain and Oman. She has more than eighteen (18) years of administrative and teaching experience in academe and held various positions such as Department Head for Information Management and Computer Science, Associate Dean for College of Computer Studies and Engineering, Dean and Alumni Head.

She joined Gulf College in 2014 as Lecturer and was promoted as Assistant Professor in 2017. Presently, she is the Final Year Project (FYP) coordinator of Faculty of Computing Sciences (FCS). Also, Dr. Rolou is a certified SAP Lecturer issued by SAP University Munich, Germany and the main contact of SAP University Alliances EMEA from her previous international university in Bahrain. She was also one of the professors who led the integration of SAP for the improvement of Business Informatics Curriculum in Bahrain. She attended various trainings related to SAP ERP in Napier University, Scotland, UK and SAP University, Waldorf, Germany.

Dr. Rolou is also a certified research reviewer of The Research Council (TRC) Oman and Institute of Informing Science in USA. She presented and published research papers in local and international conferences and research journals. Her research interests lie in the area of IoT, Educational Technology, Enterprise Applications, and Computer Security.



Mr. Mohamed Abdul Kader Varusai is a computing lecturer, programmer and internal quality auditor. He has 15 years of total teaching experience in India and Oman. He also worked as a Senior Software Engineer in the IT industry and had worked for many international projects. Mr. Varusai is currently pursuing his Ph.D. degree in Data Mining. He completed his Master of Philosophy in Computer Science from Periyar University, India in 2007, Master of Computer Applications in 1999, and B.Sc. Computer Science in 1996 from Manonmaniam Sundaranar University, India. He is an excellent teacher as well as a lifelong learner. Also, Mr. Varusai is a Certified Internal Auditor and a holder of several IT certifications. Additionally, He serves as a supervisor and assessor for final year projects students in Gulf College. He has published research and conference papers in journals including IEEE. His research interests include software engineering, human-computer interaction, and data mining.



Dr. Ali Al-Badi is the Deputy Dean for Academic Affairs and Research, at Gulf College; previously he worked as an Assistant Dean for Postgraduate Studies & Research, Associate Professor in the Department of Information Systems at Sultan Qaboos University (SQU), Muscat, Oman. Dr. Ali received his education in different countries (Oman, Kingdom of Saudi Arabia, UK and USA). Ali has more than 27 years of practical and academic experience in IS/IT field. Immediately, after obtaining his B.Sc. in Computer Science from Reading University, UK in 1991, he worked in the Center for Information Systems, SQU, where he gained most of his practical experience. Ali joined the academia in 1999 and completed his PhD in UK in 2005. From Sep 2007 – March 2011 Ali held the CIS Director's position, sharing his time between managing the Center and performing his academic duties. From Sep 2012 – Sep 2015 Ali held the Head of Department position at the Information Systems, College of Economics & Political Science, Sultan Qaboos University, Oman. Furthermore, Ali contributed to 15 different IT-focused committees both at the university and national level.

Dr. Ali Al-Badi is an active researcher, having a good record of publication (citations: 910; h-index: 145; h10-index: 25), published more than one hundred and twenty-four (124) international conference/journal papers, chapters in a book or report. His work has been cited in ISI, DBPLP, Scopus, ACM, IEEE, Google Scholar and other databases. He regularly reviews papers for international journals and conferences. In addition to publishing single or co-authored papers, Dr. Ali is also well-known for his patience and commitment in helping and empowering our students in sharpening their research skills. As a result of his hard work and his scholarly activities, he received a number of awards/recognitions including “Excellence in Research Award” from Clute Institute, Colorado, USA, “Certificate of Outstanding Contribution in Reviewing” and “Best Researcher Award” from Sultan Qaboos University, Oman, and “Best Paper Award” at a conference in Paris, France. He also co-supervised, supervised/ supervising number of postgraduate students at local, regional and international universities. Dr. Ali Al-Badi received several internal, TRC and HMTF strategic grants and Microsoft worth total of 142,393 OMR. He is on editorial board of number international journals and reviewers for international journals. Dr. Ali also chaired local and international conferences/workshops and was invited as a Keynote speaker at 5 different conferences.



Mr. Peyman Nouraey has been teaching English as a Foreign Language for more than ten years. He has taught at both institutional and higher education level. At present, he is an English Language Lecturer at the Centre for Foundation Studies (CFS) and the College Research Coordinator at Centre for Postgraduate Studies and Research (CPSR). His area of interest in research includes Translation Studies, Teaching English as a Foreign Language (TEFL), Critical Discourse Analysis, Linguistics, and Comparative Literature. He has published his research papers in reputable international refereed journals. To date, he has published four books on Translation Studies, as well as English language and literature and presented his research papers in various reputable conferences.