Knowledge Management System in Educational and Traning Institutions : Literature Review

Firmansyah

Balai Diklat Tambang Bawah Tanah

fmn.syah21@gmail.com

Abstract— this paper aims to make literature on knowledge management system (KMS) in education and training institutions. The reason the author took such topics as educational institutions and training is essential in creating competent human resources, which affects the improvement aspects for an organization. Knowledge management impact on information systems is very intimately, Knowledge management focus a lot on the company because of the company as an important component in the economy of a country.

This literature is to focus on the KMS in education and training institutions with a range of years 2011-2016 with 54 papers from various sources online database journals. process method for literature review authors takes from a source earlier researchers. In general, studies in Knowledge Management System, especially on Educational and training institutions are using a qualitative methodology. On the topic framework of Knowledge Management System is demand slightly to be examined which is about 9%. In the majority of the benefits of research in KMS is to support, service and utility of Knowledge for student and teacher as the main knowledge workers in education and training institutions.

Index Terms — **Knowledge management, Knowledge Management System, educational, training, review.**

I. INTRODUCTION

In this information age, Knowledge management is needed by various organizations in the world of this activity. In fact, the developed countries a lot of float or support Knowledge management as an important asset for the country. On the other hand, the developing countries that most of the Asian continent in supporting knowledge management was very poor. Some studies in Knowledge management focus a lot on the company because of the company as an important component in the economy of a country. Things that make Knowledge management is very important for us was its one of the main factors to rediscover what we have done is very useful for our work and life.

Here we will define in advance what the Knowledge management, it may simply be defined as doing what is needed to get the most out of knowledge resources. Although KM can be applied to individuals, it has recently Attracted the attention of organization. KM is Increasingly Viewed as an important discipline that promotes the creation, sharing, and leveraging of the corporation's knowledge [1]. Knowledge management impact on information systems is very intimately with the theory described in Knowledge management system. Rapid changes in the field of KM have to a great extent resulted from the dramatic progress we have witnessed in the field of information technology (IT). Information technology facilitates sharing as well as the accelerated growth of knowledge. IT Allows the movement of information at increasing speeds and Efficiencies [1].

According to Alavi and Leidner (2001), KMS is applied to manage the knowledge described as personal information related to the facts, procedures, concepts, interpretations, ideas, observations, and assessments. From the standpoint of KMS, knowledge or knowledge is meaningful information to be managed, accumulated, and planted in the creation and implementation. KMS mainly utilize codified knowledge, but also help communication or interference that is used to interpret the situation and to generate activity, behavior, and solutions. KMS combine and integrate services, for example for publication, organization, visualization, distribution of, search and recovery of explicit knowledge and expertise as well as the identification ability, communication, and collaboration in order to support the handling of the implicit knowledge.[2]

This paper aims to make literature on knowledge management system in education and training institutions. The reason the author took such topics as educational institutions and training is essential in creating competent human resources, which affects the improvement aspects for an organization. According to Bacerra-Fernandez (2014) in his theory of knowledge management system type consists of 4 (four) among other things: Knowledge discovery management systems, knowledge management systems capture, sharing knowledge management system, Knowledge application system. So we can conclude that information technology is very influential on knowledge management.

Background literature review authors do this is because of the need for research in the scope of the challenges of knowledge management system, especially in education and training institutions. It makes interesting because of the knowledge management system are many methods and tools in meticulous researcher renewable and very beneficial to the progress of an organization. Thus, this literature is to focus on the KMS in education and training institutions with a range of years 2011-2016. To optimize the focus, the authors used the following keywords: "Knowledge Management System", "Knowledge Management Systems" and "Knowledge

Management Tool" that is useful for finding relevant literature in journals online database that has a reputation. According to paper aim, the following research question such as : what methodology research and topic interesting in KMS can be formulated based on the study of literature? the answer will be discussed in section 4.

II. STUDY OF LITERATURES

In the span of years 2011 - 2016 At its process method for literature Review authors take from a source earlier researchers [3] [4]. From these results, the authors take variables for categorizing KMS, so that readers can easily read what the authors show in this paper. Variables it was: the implementation of KMS, framework of KMS, model of KMS, evaluation of KMS, development of KMS, Other of KMS. the author has managed to gather 54 papers from various sources online database journals.

A. Implementation of Knowledge Management System.

There are correlations between online faculty to student interaction, the degree of presence in a web- based learning environment, as well as personal e- learning experiences as potential drivers of students' desire to learn more about the subject matter KM[5]. Knowledge management portals as enablers for institutional competitiveness: Surveying universities in Southern African Development Community (SADC)[6]. Knowledge Management (KM) in libraries refers to the systematic management and control of knowledge as an important resource when producing high-quality library and information services[7]. IT support for knowledge management within R&D and Education[8]. The implementation of a customized knowledge management system that will be deployed and integrated as part of an existing university management system that is currently in use at the Lebanese International University[9]. Determining the benefits of social media support in lecturing[10]. Portal based on the knowledge system is very useful for each of them. Such portal provides an explicit platform for the cooperation of military universities in teaching, research and exchange of teachers and students [11]. Presents the MilUNI KMS for the collaboration among military universities. It collects publicly available information on the structure, people, education and research at the universities[12]. an enhanced structure of web-assisted instruction (WAI) system that contains an intermediate subsystem between WAC platform and potential MOOC platform[13]. Design and Implementation of a knowledge management prototype system of NII[14]. the implementation of knowledge management of conference information at two South African universities[15]. Implement learning system website through knowledge sharing to improve the competence of early childhood teachers, especially pedagogical and professional competence[16]. Implement knowledge management system of teaching materials to improve the competence of teachers[17]. a novel KM implementation for the educational domain[18]. A CMS may be perceived as an effective media for transforming tacit knowledge not only for information technology but others fields of knowledge. the prototype suggests that visual wiki can be an excellent tool that could be effectively used by people in community college when sharing and transferring to

any knowledge[19]. Implementing knowledge management systems in cloud-based environments: A case study in a computer science high school[20]. A functional approach of knowledge management system applied to institutions of higher education[21]. Human resource information system (HRIS) is mostly used for the administrative purpose and not taken as the strategic requirement. Results also revealed that the perceived functions, benefits, and barriers in an adoption of HRIS do not vary group-wise[22]. The analysis revealed that library podcasts have some basic features and are implemented for specific purposes. It also revealed that adoption of podcast varies along the geographical region[23]. Management perception of introducing social networking sites as a knowledge management tool in higher education[24]. Engineering domain expertise through best practices management: Application to the field of education[25].

B. Framework of Knowledge Management System

a KCS framework for faculty support and service innovation. Practical concerns and insights are provided to help other faculty support organizations adopt and implement the framework. It is hoped that this sharing of best practices can increase discussion about using knowledge management approaches to improve service quality and innovation among other faculty support organizations[26]. The conceptual Framework of Knowledge Management System based mentoring; The results of the study support a Knowledge Management System based on a mentoring framework as being useful to develop new staff to replace retired professors in a shorter timeframe when compared to existing processes and can be realized if it includes adequate technology and is easy to use[27]. framework eduKshare builds upon existing systems by encompassing the successful aspects from each existing system whilst adding on to them novel aspects and features which make eduKshare an innovative system that enables the consistent creation of knowledge through the sharing of educators' knowledge[18]. A framework for defining components of knowledge management and differences among most confusing terms-Data, Information, and Knowledge. It gives the overview of KM paradigms that must be followed in institutions. These paradigms create intellectual, social as well as management skills among consumers (teachers, students)[28]. A framework using KM Technology facilities to support Postgraduate research Supervision process. the framework highlights the critical knowledge management activities in research supervision process and the KM Technology based on the Task / Technology Fit theory[29]. Provides general criteria for an institutional RDMSS framework. It suggests that RDM in universities is at the very heart of the knowledge life cycle and is a central ingredient to the academic scholarships of discovery, integration, teaching, engagement and application[34].

C. Model of Knowledge Management System

The design and implementation of an intelligent system are working well in adjusting the curriculum system, generating different types of curriculum plan quickly and automatically, finding the relationship of course titles. The system can establish a logical curriculum and commend the selective

course to a student or logical course system according to the usage of the titles, making and keeping the knowledge system of NII as perfect and effective as possible[14]. Explores certain success factors in CMS and how CMS can be a KMS for knowledge transfer and sharing in community college environment[19]. The KMS architecture for cloud computing could be an alternative to the investment in an on-premise traditional infrastructure[20]. New life BP life Cycle Model for virtual communities that capture tacit knowledge as well as explicit knowledge. Implement The application of the BPC model in a real case.[21]. The epistemological spiral is used to obtain the ontologies that feed the ontological spiral. The result is a double spiral that allows the contribution of a conceptual model and the development of an innovative tool that enables and automates the effective management of knowledge in educational innovation[30]. Factor analysis produced five factors of KM orientation after deleting those items with a factor loading of less than 0.50. The results indicate that five attributes – i.e. knowledge acquisition, knowledge dissemination, leadership, culture, and technology – are important dimensions of knowledge management orientation in engineering institutions[31]. six success factors: "organization", "optimizing interactions", "infrastructure", "supporting tools", "strategy and goals" and "organizational support". These factors reflect the effective factors in educational organizations attempting to progress in KC should focus. Among these success factors, "strategy and goals" and "organization" have the highest effect on CoPs[32]. KS has a significant positive correlation with IC and its dimensions. The structural equation modeling confirmed the research model and showed a good match with it[33]. an architecture of a knowledge-based system, founded on an ontology that will build and enrich for the University of Manouba [35]. the model can illustrate the knowledge cycle within the integrated eLearning LORs and knowledge management environment when an interaction between entities occurs. These entities are Personalized eLearning Community, Explicit/Tacit Knowledge Management Tools, Saudi Learning Object Repository (LOR) 'Maknaz' and Knowledge Providers & Receivers (Learners)[36]. architecture for knowledge management system and its recommendations for improvement[37]. Enterprise Architecture prototype-CHE2 A- and implementations enhance the Teaching-Learning exercise to create a dynamic, agile and collaborative learning integrated with the environment, a fact that motivates and creates value for all those involved in the educational process[38]. Designing of the information component of pedagogical knowledge management system in a chair of the technical university[39]. Concept of smart university with Five components are : human and social capital (called smart people), available physical infrastructure (called smart building), an integrated information infrastructure (called knowledge grid), strategic decision-making processes (called smart governance) and aspects related to the protection of the environment (called smart environment)[40]. a KSS model based on academicians knowledge sharing behavior in Higher Learning Institutions in term of the type of knowledge being shared, how they share it, with whom they share, and why they share it[41].

D. Evaluation of Knowledge Management System

Representation of the function "Utilization" of KMS. findings may help academics and managers in developing a strategic knowledge management program to achieve greater innovation, efficiency and effectiveness[21]. provides evidence that even in HE, where it is generally acknowledged that there is a need to adequately capture, store, share and disseminate knowledge, as this can lead to greater innovation, creativity, and productivity, participants were suspicious of the nature of the technology and the fact that it could intertwine their professional and social life. As a result, they were not prepared to invest the relatively high effort required in employing SNS as a KM tool as they also have difficulty in establishing the added value. Consequently, in order to employ SNS for KM purposes cultural, behavioral and organizational issues need to be tackled before even considering technical issues[24]. It is commonly known that intellectual capital (IC) plays a remarkable role in organizations, especially in colleges and academic centers. The purpose of this study is to investigate the effects of knowledge sharing (KS) on IC[33]. This comparative study revealed several key reasons and best practices for implementing KM procedures in the selected university libraries. They are collected under three main issues: KM advantages; KM technological opportunities; and KM organizational culture[7]. Increasing the organizational quality level, i.e. from an organization's units which operated on the common level to the international R&D level[8]. reveal the general intention of the student to keep using Tweedback. This became especially obvious when asking for recommendations on further lecturers to be supported with Tweedback[10]. investigation on the implementation of knowledge management of conference information at two South African universities [15]. Investigates what efforts have been made so far to implement eLearning and LORs technologies in Saudi Arabia; and suggests what is required from participants in the higher educational institutions to link these technologies to education and pedagogy practices based on an integrated knowledge management system with eLearning to creatively create and exchange new knowledge localized in LORs[36]. explanation why university centers should evolve into a type of institution based on knowledge[40]. Investigate the tools/technologies that would be of value to libraries as they implement knowledge management (KM) and to map these to different phases of the KM cycle[42]. the research and knowledge gap in knowledge management studies in Ghana. Knowledge acquisition is one of the unexploited areas in knowledge management literature, especially in the Ghanaian context. This study tries to ascertain the factors affecting knowledge acquisition in Ghanaian universities[43]. investigate how libraries prevent the loss of knowledge with people leaving or resigning, and the strategies they adopt to retain this knowledge and to transfer organizational knowledge to new employees[44]. Identify and analyze the main strategies used in organizations to enhance intergenerational learning (IGL) and reduce knowledge loss. The emphasis is on universities that have an age layered or nested structure[45]. the challenges and examine the impact of the transition from print to electronic resources at a medium- sized academic library at a multi- campus

Caribbean university, The University of the West Indies (UWI), with particular reference to the St Augustine campus [46]. library and information science (LIS) have assimilated the core content of KM based on the combination of varying proportions of major perspectives and skill- sets of KM with an emphasis on information management and information technology- oriented courses. The study also finds that LIS has incorporated KM following a partial adoption process through mutual borrowing of knowledge between LIS and KM[47]. electronic open networks have a significantly higher impact on the structural and cognitive dimension of social capital and a less than moderate impact on the relational dimension. Electronic open networks are, thus, best suited for acquiring and assimilating new knowledge, however, the transformation and exploitation of knowledge require the cohesive ties of closed networks. [48]. Examine existing learning innovation systems and propose a systematic methodology of delivering educational innovations in the right amount, in the right place and at the right time[49]. the effective ways to utilize current awareness services (CAS) for library and information science (LIS) professionals. It seeks to identify core journals for systems librarianship based on Bradford analysis[50]. A comparison of the mean scores shows that there is hardly any difference in the way executives at the two levels perceive learning organization (LO). All the mean scores are below five on a scale of six, pointing to scope for improvement. Further, no statistical difference is found in the mean scores. The impact of KM dimensions on LO was found to be statistically insignificant for the two levels. Most of the KM dimensions were found to positively impact the LO as per the proposed hypothesis[51]. the factors can improve the success in the use of knowledge management system. the three factors totally affect knowledge management in universities. It shows that knowledge management in universities is influenced by culture, organization and information technology[52].

E. Development of Knowledge Management System

Designs an enhanced structure of web-assisted instruction platform for universities.The upgraded platform helps teacher manage curricular knowledge for different platforms, thus enhance the converting from WACs to MOOCs[13]. Rapid Application Development approach to developing learning system website through knowledge sharing to improve the competence of early childhood teachers, especially pedagogical and professional competence[16]. Rapid Application Development approach to a development knowledge management system of teaching materials to improve the competence of teachers Mts Se-DKI Jakarta[17]. The development of a knowledge management system. It allows the creation of new knowledge, its consolidation, distribution and combination in the field of educational innovation, in such a way that the knowledge is transferred from individuals to the organization and from the organization to individuals. To achieve this, the knowledge spirals of Nonaka are integrated. The epistemological spiral is used to obtain the ontologies that feed the ontological spiral[30]. Develop a Knowledge Management System (KMS) which implements the question-based method in lesson study[37]. A drawing learning support system based on the drawing process

model [53]. The LL system was developed based on the analysis of the issued documents. Their processing in the knowledge system facilitates obtaining information in a different way than studying dozens of documents; namely by the targeted approach to the integrated base of the articles from the LL documents that is 'wrapped up' by the knowledge layer allowing the navigation to information[54]. Constructed a suitable system that is able to manage and improve the Administration and academic performance management system[55]. a KMS tool for enhancing knowledge sharing using the semantic web. The system fulfills the knowledge management needs of the researcher at the university[56].

F. Other of Knowledge Management System

some significant overlaps between DL and KM and argues that a generic KM process of acquisition, organization, storage, retrieval, and dissemination of knowledge by receiving feedback can suitably be fitted in DL. It is apparent that an integration of KM can add value to building a knowledge sharing culture, promoting the KM culture, and ultimately increase the organizational output. It helps to improve efficiency, to ensure higher productivity and user satisfaction in the library[57]. Analyses the main content and correlations between knowledge management and other two kinds of knowledge management, raises that knowledge management provides an important supporting effect for the development of the other two kinds of management activities. It analyses the characteristics of the distance education institutions domain knowledge in aspects of generation, representation, component, and existence environment[58]

III. RESULT & ANALYSIS

According to the study of literature in a previous section (section two), we can make a taxonomy table /map of issues, there for main topics of Knowledge Management System in Educational and Training Institutions describe in table 1.

Var. Ref.	A	B	C	D	E	F
[5]	*					
[6]	*					
[7]	*			*		
[8]	*			*		
[9]	*					
[10]	*			*		
[11]	*					
[12]	*					
[13]	*				*	
[14]	*		*			
[15]	*			*		
[16]	*				*	
[17]	*				*	
[18]	*	*				
[19]	*		*			
[20]	*		*			
[21]	*			*		
[22]	*					

	A	B	C	D	E	F
[23]	*					
[24]	*			*		
[25]	*		*			
[26]		*				
[27]		*				
[28]		*				
[29]		*				
[30]			*		*	
[31]			*			
[32]			*			
[33]			*	*		
[34]		*				
[35]			*			
[36]			*	*		
[37]			*		*	
[38]			*			
[39]			*			
[40]			*	*		
[41]			*			
[42]				*		
[43]				*		
[44]				*		
[45]				*		
[46]				*		
[47]				*		
[48]				*		
[49]				*		
[50]				*		
[51]				*		
[52]				*		
[53]					*	
[54]					*	
[55]					*	
[56]					*	
[57]						*
[58]						*

Table1. Taxonomy based on Results.

Note of Table1:
- A: Implementation of Knowledge Management System.
- B: Framework of Knowledge Management System.
- C: Model of Knowledge Management System.
- D: Evaluation of Knowledge Management System.
- E: Development of Knowledge Management System.
- F: Other of Knowledge Management System.

The analysis of variable with proposed in these sections which are issues that make a significant contribution to Knowledge management System in Educational and Training institution. The result and evaluation are divided into several points.

a. Implimentation of knowledge management system that Appear, basically these studies are using a qualitative methodology and using the Knowledge tool that has been there before. Generally, most of the research aims to clicking incresing performance of the organization, namely in education and training institutions. So it is a very influential support to the survival of the organization and the library as a means for the development of the knowledge needed by the student and teacher.

b. Framework of knowledge management system, research in this sphere a lot of experience of researchers who used to membangan framework. Methods commonly used approaches such as stage stage: Work related, Requirements of Research Work, Data Collection, Data Analysis, Proposed Framework. Most of the goals of the research in this sphere is to build a framework that suporting inovative service for knowledge workers.

c. Model of Knowledge Management System, here the researchers are using a variety of methods such approaches include: ontology engineering, data mining, web symentic, COPS and descriptive qualitative research. analysis and the reliability of the scales was judged using Cronbach's α. Researchers in this sphere aimed mengsupport many knowledge sharing, knowledge acquisition and knowledge dissemination.

d. Evaluation of Knowledge Management System, in this study researchers used a lot meteodology or method such as: social aspect approach, systematic Methodical approach and an integrated approach. In general, many studies using qualitative research methodology. Research in this area aims to investigate the many and assessment results of the implementation of the KMS.

e. Development of Knowledge Management System, the issues in the development of KMS on education and training institutions passable still small. some researchers use a method or technique such as Rapid Application Development, semantic web technologies and engineering onthology. In general, research in this sphere is to build an information system to assist in the implementation of knowledge management.

f. Other of Knowledge Management System. The author discusses also the subject of other topics related to Knowledge management system. Researchers here using methods qualitate for research and the purpose of their research is to discuss activities and knowledge domain knowledge in the processing of the distance education institution.

After discussing some analysis on the knowledge management system in education and training institutions. To see the distribution of the various variables in the proposed we can see on the chart that is displayed in Figure 1.

IV. CONCLUSION

In general, studies in Knowledge Management System, especially on Educational and training institutions are using a qualitative methodology. On the topic of Knowledge Management System framework is demand slightly to be examined which is about 9% and the most widely discussed topics by researchers on the topic of implementation and evaluation of the Knowledge management system with the figure of 27% and 25%. In the majority of the benefits of research in KMS is to support, service and utility Knowledge for student and teacher as the main knowledge workers in education and training institutions.

In the future, according to data distribution that the Framework for knowledge management system still have

many challenges researchers carefully as to contribute substantially to the topic KMS. Hopefully, this paper can contribute for researchers to develop KMS are many benefits for organizations, especially in education and training institutions as the creator of human resources competent.
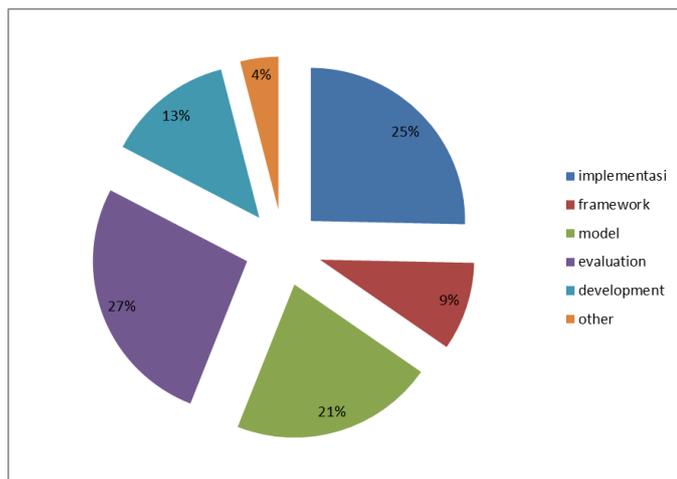

Figure 1. Distributions of different variables of KMS in Educational and training institutions

references

[1] Becerra-Fernandez, Irma, and Rajiv Sabherwal. Knowledge management: Systems and processes. Routledge, 2014.

[2] M. Alavi and D. E. Leidner, "Review: Knowledge Management and Knowledge Management Systems Conceptual Foundations and Research Issues," MIS Quarterly vol. 25(1), pp. 107-136, 2001.

[3] Susanne Durst, Ingi Runar Edvardsson, "Knowledge management in SMEs: a literature review", Journal of Knowledge Management, (2012) Vol. 16 Iss: 6, pp.879 – 903.

[4] S. Matayong and A. K. Mahmood, "The studies of Knowledge Management System in organization: A systematic review," Computer & Information Science (ICCIS), 2012 International Conference on, Kuala Lumpeu, 2012, pp. 221-226.

[5] Thomas Menkhoff, Thang Tze Yian, Chay Yue Wah, Wong Yue Kee, "Engaging knowledge management learners through web- based ICT: an empirical study", VINE, Vol. 41 Iss: 2, pp.132 – 151.

[6] Priti Jain , Bwalya Kelvin Joseph , "Knowledge management portals as enablers for institutional competitiveness: Surveying universities in Southern African Development Community (SADC)", VINE: The journal of information and knowledge management systems, Vol. 43 Iss: 4, pp.400 – 423.

[7] Núria Balagué , Petra Düren , Jarmo Saarti , "Comparing the knowledge management practices in selected European higher education libraries", Library Management, Vol. 37 Iss: 4/5, pp.182 – 194.

[8] S. Svetsky, O. Moravcik, J. Stefankova and P. Schreiber, "IT support for knowledge management within R&D and Education," Interactive Collaborative Learning (ICL), 2012 15th International Conference on, Villach, 2012, pp. 1-6.

[9] A. N. E. Bast, W. Kharfan, B. Hussein, M. Ghareeb and M. Raad, "University customized knowledge management system (KMS)," Digital Information and Communication Technology and its Applications (DICTAP), 2015 Fifth International Conference on, Beirut, 2015, pp. 136-142.

[10] U. Borchardt, J. Vetterick and C. H. Cap, "Determining the benefits of social media support in lecturing," Interactive Mobile Communication Technologies and Learning (IMCL), 2014 International Conference on, Thessaloniki, 2014, pp. 24-29.

[11] L. Buřita, K. Halouzka and V. Malý, "Portal CEFME for military universities cooperation," Military Technologies (ICMT), 2015 International Conference on, Brno, 2015, pp. 1-5.

[12] L. Burita, "Knowledge Management System for military universities cooperation," Communications (COMM), 2014 10th International Conference on, Bucharest, 2014, pp. 1-4.

[13] J. Peng, D. Jiang, C. Liu, Y. Jiang and X. Zhang, "Knowledge Dimension Management: Bridge the Gulf between WAC and MOOC," Information Technology: New Generations (ITNG), 2014 11th International Conference on, Las Vegas, NV, 2014, pp. 620-621.

[14] W. Wang and Z. Wei, "Design and implementation of a knowledge management prototype system of NII," Consumer Electronics, Communications and Networks (CECNet), 2012 2nd International Conference on, Yichang, 2012, pp. 3167-3170.

[15] A. G. van der Vyver, "Knowledge management of conference information: A tale of two South African universities: All yin but very little yang," 2011 Ninth International Conference on ICT and Knowledge Engineering, Bangkok, 2012, pp. 166-170.

[16] U. Maman, Y. Sugiarti and S. Ratnawati, "Learning system design using knowledge management systems to improve the competency of early childhood education teachers," 2016 4th International Conference on Cyber and IT Service Management, Bandung, 2016, pp. 1-6.

[17] Y. Sugiarti, "Implementation knowledge management system of teaching materials in improving teacher competence MTs Jakarta," Cyber and IT Service Management (CITSM), 2014 International Conference on, South Tangerang, 2014, pp. 25-30.

[18] C. De Raffaele and M. Galea, "Moving towards knowledge creating schools," Web and Open Access to Learning (ICWOAL), 2014 International Conference on, Dubai, 2014, pp. 1-6.

[19] M. Y. M. Yusoff, J. Jaafar and A. K. Mahmood, "The visual wiki for the first step of KMS in community college," National Postgraduate Conference (NPC), 2011, Kuala Lumpur, 2011, pp. 1-6.

[20] M. A. Mostefai, A. Annane, L. Kissoum and M. Ahmed-Nacer, "Implementing knowledge management systems in cloud-based environments: A case study in a computer science high school," Cloud Technologies and

Applications (CloudTech), 2015 International Conference on, Marrakech, 2015, pp. 1-6.

[21] M. Abdellatif and K. Asma, "A functional approach of knowledge management system applied to institutions of higher education," ISKO-Maghreb: Concepts and Tools for knowledge Management (ISKO-Maghreb), 2014 4th International Symposium, Algiers, 2014, pp. 1-7.

[22] Nisha Bamel , Umesh Kumar Bamel , Vinita Sahay , Mohan Thite , "Usage, benefits and barriers of human resource information system in universities", VINE: The journal of information and knowledge management systems, Vol. 44 Iss: 4, pp.519 – 536.

[23] Tanmay De Sarkar, "Introducing podcast in library service: an analytical study", VINE, Vol. 42 Iss: 2, pp.191 – 213

[24] Elaine Garcia, Fenio Annansingh, Ibrahim Elbeltagi, "Management perception of introducing social networking sites as a knowledge management tool in higher education: A case study", Multicultural Education & Technology Journal, Vol. 5 Iss: 4, pp.258 – 273

[25] A. Al-Rasheed and J. Berri, "Engineering domain expertise through best practices management: Application to the field of education," 2016 7th International Conference on Information and Communication Systems (ICICS), Irbid, 2016, pp. 133-138.

[26] Wu He, M'Hammed Abdous, "An online knowledge- centred framework for faculty support and service innovation", VINE, Vol. 43 Iss: 1, pp.96 – 110.

[27] P. Srivichai, K. Meksamoot, A. Jengjalern and N. Chakpitak, "Integrated knowledge management system based mentoring for new university staff development," 2011 Ninth International Conference on ICT and Knowledge Engineering, Bangkok, 2012, pp. 150-155.

[28] G. Jindal and J. Tyagi, "Aspects of knowledge management and impact of decision support system of e-governance model in professional education," MOOC, Innovation and Technology in Education (MITE), 2014 IEEE International Conference on, Patiala, 2014, pp. 1-6.

[29] K. T. Yew, W. F. W. Ahmad and J. Jaafar, "A framework for designing postgraduate research supervision knowledge management systems," National Postgraduate Conference (NPC), 2011, Kuala Lumpur, 2011, pp. 1-6.

[30] Ángel Fidalgo-Blanco , María Luisa Sein-Echaluce , Francisco García-Peñalvo , "Epistemological and ontological spirals: From individual experience in educational innovation to the organisational knowledge in the university sector", Program, Vol. 49 Iss: 3, pp.266 – 288.

[31] Vandna Sharma, "A perceptual study on KM orientation in Indian private engineering institutions", International Journal of Educational Management, Vol. 26 Iss: 3, pp.234 – 251.

[32] Peyman Akhavan , Babaeianpour Marzieh , Masoumeh Mirjafari , "Identifying the success factors of Communities of Practice (CoPs): How do they affect on students to create knowledge?", VINE, Vol. 45 Iss: 2, pp.198 – 213

[33] Peyman Akhavan , Farnoosh Khosravian , "Case study of a structural model to explore the effects of knowledge sharing on intellectual capital", VINE Journal of Information and Knowledge Management Systems, Vol. 46 Iss: 3, pp.338 – 352

[34] Joyline Makani , "Knowledge management, research data management, and university scholarship: Towards an integrated institutional research data management support-system framework", VINE, Vol. 45 Iss: 3, pp.344 – 359

[35] R. Meriem, "Towards a knowledge management system for the University of Manouba," ISKO-Maghreb, 2013 3rd International Symposium, Marrakech, 2013, pp. 1-6.

[36] A. M. Alammari and D. Chandran, "Populating contents of the Saudi eLearning objects repository "Maknaz" from information technology & knowledge management perspective," Computer Aided System Engineering (APCASE), 2014 Asia-Pacific Conference on, South Kuta, 2014, pp. 107-110.

[37] M. M. Mardhia, A. Z. R. Langi and Y. Bandung, "Knowledge management system development with evaluation method in lesson study activity," Advanced Computer Science and Information Systems (ICACSIS), 2014 International Conference on, Jakarta, 2014, pp. 482-487.

[38] R. Llamosa-Villalba, L. T. Carreño, Q. A. M. Paéz, Q. D. J. Delgado, A. B. Barajas and E. G. Sneyder, "Enterprise architecture of Colombian Higher Education," Frontiers in Education Conference (FIE), 2015. 32614 2015. IEEE, El Paso, TX, 2015, pp. 1-9.

[39] O. V. Lezina and A. V. Akhterov, "Designing of the information component of pedagogical knowledge management system in a chair of technical university," Interactive Collaborative Learning (ICL), 2013 International Conference on, Kazan, 2013, pp. 544-546.

[40] M. Owoc and K. Marciniak, "Knowledge management as foundation of smart university," Computer Science and Information Systems (FedCSIS), 2013 Federated Conference on, Krako??w, 2013, pp. 1267-1272.

[41] S. Abdullah and H. Haron, "Knowledge Sharing System Model for Higher Learning Institutions: Case Study," Advanced Computer Science Applications and Technologies (ACSAT), 2013 International Conference on, Kuching, 2013, pp. 97-102.

[42] Naresh Kumar Agarwal , Md Anwarul Islam , "Knowledge management implementation in a library: Mapping tools and technologies to phases of the KM cycle", VINE, Vol. 44 Iss: 3, pp.322 – 344

[43] Henry Boateng , Michael Dzigbordi Dzandu , Yinshan Tang , "An investigation into knowledge acquisition idiosyncrasies in Ghanaian universities", VINE: The journal of information and knowledge management systems, Vol. 44 Iss: 4, pp.579 – 591

[44] Naresh Kumar Agarwal , Md Anwarul Islam , "Knowledge retention and transfer: how libraries manage employees leaving and joining", VINE, Vol. 45 Iss: 2, pp.150 – 171

[45] Constantin Bratianu , Ramona Diana Leon , "Strategies to enhance intergenerational learning and reducing knowledge loss: An empirical study of universities", VINE, Vol. 45 Iss: 4, pp.551 – 567

[46] Sharon Premchand- Mohammed, "Bridging the gap between print and electronic resources at a multi- campus university library", VINE, Vol. 41 Iss: 3, pp.315 – 333

[47] Md. Roknuzzaman, Katsuhiro Umemoto, "Incorporating KM education into LIS curriculum: perspectives from LIS academics", VINE, Vol. 43 Iss: 1, pp.111 – 124.

[48] Karma Sherif, Methsika Munasinghe, Chhavi Sharma, "The combinative effect of electronic open networks and closed interpersonal networks on knowledge creation in academic communities", VINE, Vol. 42 Iss: 2, pp.277 – 294

[49] D.L. McEachron, C. Bach, M. Sualp, "Digital Socrates: a system for disseminating and evaluating best practices in education", Campus-Wide Information Systems, Vol. 29 Iss: 4, pp.226 – 237

[50] Fei Xu, "Journal based current awareness services for systems librarianship", VINE, Vol. 42 Iss: 2, pp.152 – 171

[51] Deepak Chawla, Himanshu Joshi, "Impact of knowledge management dimensions on learning organization across hierarchies in India", VINE, Vol. 41 Iss: 3, pp.334 – 357

[52] Du Feng-jiao, "The empirical analysis on contributing factors of the knowledge management in universities," 2016 13th International Conference on Service Systems and Service Management (ICSSSM), Kunming, 2016, pp. 1-6

[53] Takashi Nagai , Mizue Kayama , Kazunori Itoh , "A drawing learning support system based on the drawing process model", Interactive Technology and Smart Education, Vol. 11 Iss: 2, pp.146 – 164

[54] L. Buřita, O. Luňáček, V. Malý, V. Ondryhal and P. Hrůza, "Knowledge Management System based on Lessons Learned documents," Military Communications and Information Systems Conference (MCC), 2013, St.-Malo, 2013, pp. 1-6.

[55] M. M. Boukar and I. Muslu, "Administration and academic staff performance management system using content management system (CMS) technologies," Electronics, Computer and Computation (ICECCO), 2013 International Conference on, Ankara, 2013, pp. 151-154.

[56] N. U. Isika and M. A. Ismail, "SemKnow: A semantic knowledge management system for scholarly repositories," Information Society (i-Society), 2012 International Conference on, London, 2012, pp. 409-410.

[57] Md Anwarul Islam , Mitsuru Ikeda , "Convergence issues of knowledge management in digital libraries: Steps towards state-of-the-art digital libraries", VINE: The journal of information and knowledge management systems, Vol. 44 Iss: 1, pp.140 – 159

[58] Gu Yanchun and Yuan Lijuan, "Study on knowledge management of distance education institutions based on computer," World Automation Congress (WAC), 2012, Puerto Vallarta, Mexico, 2012, pp. 1-4.