

Presentation a Model for the Maturity of Knowledge Management in the Country's Physical Education Agencies

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Abstract

Purpose: Design a model maturity for KM in the education ministry of with a holistic approach.

Method: It is mixed exploratory that the statistical community of that, the professors and experts in the field of KM. In the assessment stage, experts are in charge of the physical education department. Sample volume in the first stage, 65 articles, through the revision process, in the second step from judgmental sampling to theoretical saturation and in the third stage based on the Morgan chart, is a population of 278, which was used to choose the statistical population from the stratified random sampling method. The data collection tool in Meta-synthesis uses Shannon's entropy, to determine the validity of Glynn's critical evaluation. In the survey stage, three questionnaires were used with the reliability of the first, second, and third, respectively $\alpha=0.091$, $\alpha=0.09$, and $\alpha=0.09$. In the evaluation stage, the questionnaire was used to assess the maturity of the KM (Researcher-made), whose reliability was calculated at $\alpha=0.09$.

Results: All categories, concepts, and maturity codes extracted from the qualitative method are considered suitable for experts and can be considered as dimensions of the organizational KM maturity model and they can be developed as dimensions of the organizational KM maturity model. Terms of the level of the codes, concepts, and categories are at the level of commitment (level 2), and the percentage of organizational KM maturity is 58.7%.
Conclusion: The stage show will enable the organization to assess its current position and develop appropriate plans to reach higher levels of KM.

Keywords: KM maturity, Meta-synthesis, Shannon's entropy

Introduction

Today, the enjoyment of updated information and knowledge has become a solid situation for the survival of individual and social life, and even higher and faster organizational performance is subject to the acquisition and development of individual and organizational knowledge. To the extent that the basic knowledge of capital is considered. Knowledge management has attracted a lot of attention over the past decade. Many companies and organizations have employed KM tools such as e-learning, focus groups, document management systems, and other policies to motivate employees and share their knowledge.

The implementation of an effective knowledge management strategy and becoming a knowledge-based organization is the mandatory condition of an organization's success in a period that is known as the period of knowledge-based organizations. Knowledge management is a process that helps organizations in identifying, choosing, organizing, publishing, and transferring important information and skills that are part of an organization's record and are generally not structured in the organization. This enables knowledge creation, effective solutions, and task-making problems, dynamic learning, strategic planning, and better decision-making.

The first step to implementing knowledge management is to determine the current situation by systematically and accurately determining the activities and current conditions of the organization that are difficult for many organizations and organizational units to determine the situation. Kruger and Johnson (2010) suggest that knowledge management measures have different approaches, some of which are: Impact of Knowledge Management on Organizational Performance, balanced scorecard, return rate, knowledge management life cycle, and knowledge management maturity. Knowledge management maturity models help organizations evaluate knowledge

management projects and make appropriate strategies for improvement (Lin et al., 2012).

These models allow the assessment of architectural status and step-by-step planning to improve and improve the level of knowledge management. The absence of a descriptive assessment report on the current status quo of knowledge management practices will lead to managers not having enough knowledge about the effectiveness of their activities and their development barriers (Jafari et al., 2010).

As Krueger and Johnson (2010) argue, existing knowledge management maturity models, from this point of view (1) have a lot of emphasis on technology discussions (2) are very vague, and (3) have little attention to cultural and managerial discussions.

Therefore, the main problem of research is to explain the systematic and holistic model of knowledge management maturity by determining the dimensions of maturity and the importance of each dimension. Because of the wide range of knowledge management, most research has its own direction regarding the research fields of the researcher. Since the concept of knowledge management in the country is in its early stages, it is essential to develop a comprehensive maturity model and a methodology for advancing knowledge initiatives from a strategic perspective.

The Ministry of Education, as the key and most formal organization of the country, is undoubtedly required to learn organizational learning at various levels and fields. And experts in any field in educational organizations besides having knowledge initiatives implementation of knowledge should be able to make a good assessment of the implementation of knowledge management, identify and correct the obstacles to progress and take the necessary strategies by identifying and implementing the necessary steps in maturity models.

The Deputy Minister of Education and Health of the Ministry of Education, with numerous

experts' expertise, and experience, is able to take action in the very important part of the importance of health and physical health of its beneficiaries, which amounted to 13 million students. This issue is important for the growth and excellence of the organization as well as the implementation of upstream documents, particularly documents of fundamental transformation and national education programs. It is obvious that this aspect of knowledge management corresponds to the development of the knowledge and competency of employees with the organizational excellence model. Since in various studies, a model for measuring the maturity of knowledge management in the physical education domain was not observed Can the systematic and holistic model be formulated and clarified by identifying the dimensions of maturity and the importance of each dimension?

The aim of this study is to develop the maturity model of knowledge management in the field of physical education of the ministry of education with a holistic approach. Experts in the Ministry of Education and Physical Education, through crossing levels and the dynamic stages of knowledge management maturity, and the development of change in organizational learning and preservation, help innovation in more effective scientific thinking areas in the future. Despite the various models and frameworks that exist regarding the maturity of knowledge management, so far a comprehensive model that identifies all the multiple dimensions of knowledge management and its maturity has not been presented with the systematic literature review method and with the help of the meta-composite qualitative research method. In addition, in this research, the importance and priority of each dimension have been determined by the Shannon entropy quantitative method by the content analysis approach, so this research is innovative both in the methodology, which is an exploratory mix and in the results obtained. One of the

applications of the results of this research is to determine the maturity level of the organization's knowledge management, which will lead to the acquisition of immediate strategies, focus priorities, and investments to reach higher levels of maturity.

According to the above-mentioned materials and different opinions about the dimensions and components of the maturity of knowledge management and the lack of a comprehensive model in education was necessary to do this research.

Materials and Methods

This study is based on purpose, in the first and second stages, and is in the third stage of the applied type as a result of exploratory research. The statistical community in the extraction phase of the maturity model components is a set of literature and related studies in the maturity of knowledge management maturity and related concepts. In the survey of experts, the statistical population consists of professors and experts in the field of knowledge management. And in the assessment stage of the selected organization, the statistical population will include specialists in charge of training and physical training specialists in the provinces.

In the first stage, to select a sample of valid articles and studies related to research objectives, the review process included articles, articles, and a literature review conducted by this process and the number. In the second step (the opinion of the experts), the sample selection is used to sample the sample from judgmental sampling to theoretical saturation. In the third stage (the assessment of the selected organization), from the total of 1003, based on the Morgan table, the demographic population of the population will be 278, in order to choose the statistical population from the stratified random sampling method.

Table 1. The demographic characteristics

Variable	Frequency	Frequency Persantage
gender		
woman	85	30.5%
man	193	64%
Grade		
P.H. D	57	20.5%
Masters	209	75.1%
Bachelor's degree	12	4.3%
The amount of knowledge in KM		
Much	69	24.8%
average	201	72.3%
low	8	2.8%

Statistical methods

Analysis of the Mata synthesis method:

In the present study, we first consider all the factors extracted from studies as code, then classify them in a similar (Theme) concept by considering the concept of each code. In the following, we analyze and analyze the information obtained by Shannon's entropy method. The significance and priority of each concept have been discovered and the hidden metaphor is determined. In this process, the weaknesses of different models are covered with the strengths of other models and the flaws can be repaired in the new model. In order to determine the validity of the meta-synthesis (assessment tool), 2006 (and for validation), the two-code recognition coefficient was used using the kappa coefficient.

Survey method analysis:

In the first section, using a questionnaire in regard to categories, concepts, and codes are extracted and their classification according to the conditions of Iran will be discussed. In the second part, using a questionnaire survey of experts in the field of knowledge management, in relation to the codes related to the codes and importance of each index. In the third part, the

allocation of each of the developed model codes will be addressed to maturity levels, which are used in each part of the questionnaire. The first questionnaire containing 44 questions will be provided to the experts to discuss their opinions in relation to the three categories, not the concepts and the thirty-two extracted codes. Moreover, they were asked to present their ideas on factors that were not included in the list. the second questionnaire includes indexes related to 32 maturity model codes, which pundits have responded to the existence of the indices and their importance in the proposed model in the third questionnaire the requested pundits will classify them according to the definitions provided about each maturity model code at the end of the questionnaire based on the inspired levels of the integrated maturity model (CMMI) and clarify their opinions about the level in which each of these concepts should be considered. In addition, the number of codes is 32 cases and the number of maturity levels is 5, the total questionnaire has 160 questions, and in all three questionnaires, a five-point Likert scale was used. in order to analyze the data obtained from the survey method, two types of descriptive and inferential statistics are used descriptive statistics were used to show

demographics and inferential statistics techniques, descriptive statistics and the kolmogrov-smirnov, sign test. Cronbach's alpha was calculated for the reliability of the first questionnaire (model components), the survey of experts of $\alpha=0.091$ and the second questionnaire (model indexes) survey of experts was $\alpha=0.09$ and the third questionnaire (model level of knowledge management maturity model) was also calculated $\alpha=0.09$.

Analysis of the Evaluation method:

At this stage, based on the results obtained from earlier steps, a questionnaire assessment questionnaire consisting of 95 questions and a five-point Likert scale will be distributed from the CMMI Project Management Model in the Education Ministry 's Physical Training area to evaluate the effectiveness of the model using the assessment methodology. In this section, we use descriptive statistics to show the demographic information and determine the level of each component and finally the overall level of maturity.

Reliability of the questionnaire has been made (the assessment of the maturity of the knowledge management) by the professors as well as $\alpha=0.09$.

Results

Meta-synthesis:

In the first step, the research questions were set and secondly, after reviewing the literature systematically using keywords in search engines, 185 reviews were found. The third step of the search and selection of articles was appropriate in the assessment process based on the critical (2006) instrumental assessment tool, the researcher between 185 articles, 65 articles for information analysis. In the fourth step, the results were extracted and in the fifth step analysis and integration of qualitative findings were done considering the concept of each code and they were categorized in a similar concept. In this way, the relevant concepts are grouped into a more general category called categories. the sixth step is to maintain quality control, which is based on a number of selected articles under the authority of one of the experts, using the instrumental assessment tool Glynn's (2006) and the results achieved through an agreement between two Kappa indices ($K=0.885$). The seventh step is to provide the findings that the extracted indices are based on the evaluation of each of the codes and the design of the questionnaires.

Table 2. The conceptual model of the research

Categories	Concepts	Codes
Stragic	Knowledge management strategy	Strategy and goals of knowledge management
		Relationship Management Relationship with Organization Strategies and Objectives
		Knowledge management governance
		Senior management support
		Knowledge management architecture
		Provide knowledge management value
	Administrative factors	Change Management
		Process reengineering
		Managing Knowledge Projects
	Knowledge management environment	Benchmarking
Environment assessment		
Enterprise/ Human	Individuals	Human Resources / Human Resource Management teamwork
		Empowerment of employees
		Participation and involving of employees
		Motivation and Rewards
		Experts and expertise associations

	Organizational support and infrastructure	Organizational structure and processes
		Education and learning
		Organizational culture
		Training Management Practices
		Resources (financial and temporal)
	appraisal	Performance appraisal
Process and stream of knowledge management		Knowledge Management Users Satisfaction
		Processes and management of knowledge activities
Technical/ Content	Content	Document Management
		Knowledge and information quality
		Data Management
	Information technology infrastructure issues	Information technology / knowledge management systems
		Security
		Information technology management

Content Analysis:

Table 3. Results from the ranking of the concepts and codes extracted using Shannon's entropy

Concept	Codes	Frequency from 65 articles	$\sum_{i=1}^m [p_{ij}(I)]$	Information Load	importance coefficient	Ranking
Knowledge management strategy (Weight: 171, Ranking: 3)	Strategy and goals of knowledge management	26	3.26-	0.78	0.056	6
	Relationship Management Relationship with Organization Strategies and Objectives	9	2.2-	0.52	0.038	11
	Knowledge management governance	1	0.00	0.00	0.00	19
	Senior management support	44	3.78-	0.9	0.065	2
	Knowledge management architecture	2	0.69-	0.16	0.012	18
	Provide knowledge management value	1	0.00	0.00	0.00	19
Administrative factors (Weight: 0.05, Ranking: 9)	Change Management	3	1.1-	0.26	0.019	17
	Process reengineering	2	0.69-	0.16	0.012	18
	Managing Knowledge Projects	3	1.1-	0.26	0.019	17
Knowledge management environment (Weight: 0.055, Ranking: 8)	Benchmarking	6	1.8-	0.43	0.031	14
	Environment assessment	4	1.39-	0.33	0.024	16
Individuals (Weight: 0.191,	Human Resources / Human Resource	24	3.18-	0.76	0.054	7

Ranking: 2)	Management					
	Teamwork	8	2.08-	0.5	0.036	12
	Empowerment of employees	4	1.39-	0.33	0.024	16
	Participation and involving of employees	5	1.61-	0.38	0.027	15
	Motivation and Rewards	19	2.94-	0.7	0.05	9
	Experts and expertise associations	1	0.00	0.00	0.00	19
Organizational support and infrastructure (WeightL 0.215, Ranking: 1)	Organizational structure and processes	31	3.43-	0.82	0.059	5
	Education and learning	22	3.09-	0.74	0.053	8
	Organizational culture	41	3.71-	0.89	0.064	3
	Training Management Practices	1	0.00	0.00	0.00	19
	Resources (financial and temporal(10	2.3-	0.55	0.039	10
Appraisal (Weight: 0.084, Ranking: 5)	Performance appraisal	34	3.53-	0.84	0.06	4
	Knowledge Management Users Satisfaction	4	1.39-	0.33	0.024	16
Process and stream of knowledge management (Weight: 0.081, Ranking: 6)	Communication / Flow of Knowledge	5	1.61-	0.38	0.027	15
	Processes and management of knowledge activities	23	3.13-	0.75	0.054	7
Content (Weight: 0.057, Ranking: 7)	Document Management	2	0.69-	0.16	0.012	18
	Information Quality of Information	7	1.94-	0.46	0.033	13
	Data Management	2	0.69-	0.16	0.012	18
Information technology infrastructure issues (Weight: 0.109, Ranking: 4)	Information technology of Knowledge Management Systems	47	3.85-	0.92	0.066	1
	Security	4	1.39-	0.33	0.024	16
	Information technology management	3	1.1-	0.26	0.019	17

Results from a survey of experts:

The demographic information of the questionnaires consisted of gender, degree of

study, and activity history in knowledge management knowledge, which used descriptive tests. The normalized condition of the research variables: Since the significance of

the majority of the research variables is less than 0.05 level, the null hypothesis of the null hypothesis and the null hypothesis is that they are non - normalized from variables such as project evaluation project management, expertise associations and satisfaction assessment of knowledge management users. Due to the fact that the majority of variables are non-normal, nonparametric tests are used. The sign test for the first questionnaire showed that all categories, concepts, and maturity codes were extracted from the perspective of the experts for the appropriate maturity model.

The sign test for the second questionnaire showed that the indicators "distributed authority for knowledge management activities" "management of knowledge management", "Redesign of processes", "relevance to the concept of knowledge protection" and "knowledge management", "Knowledge management" and "availability of knowledge management systems" are approved by experts.

In the second questionnaire, in addition to a survey of experts in relation to the existence of indicators in the maturity model, their importance is also evaluated. Among codes of strategic alignment, top management support, objectives and strategies of knowledge management, and knowledge management communication with organization strategies and objectives are of paramount importance in alignment. The governance of knowledge management among components of the concept of strategic alignment has the lowest weight. Among the codes related to managerial factors, the management of knowledge projects has the greatest importance, and the management of change and re - engineering of processes are of paramount importance, respectively. The environment assessment has more importance than vector patterns in the context of a knowledge management environment. Human Resource Management Human Resource

Management has the highest importance and teamwork relative to the rest of the concept of people is the least importance.

Organizational culture and learning and learning have the greatest importance among codes related to support and organizational infrastructure. Resources and organizational processes and processes are less important than others. Among the components of the assessment concept, the satisfaction of knowledge management user satisfaction is more important than performance evaluation. KM activities and processes are more important than the knowledge flow relationships in the concept of processes and knowledge flows. Among content concept codes, information knowledge quality code has the most importance, and codes of management of documents and information management in the second and third ranks. Information technology is of utmost importance and security and information management in order to be more important in the concept of information technology infrastructure. The abstract human organizational category is the most important and the technical category of content is of less importance than the other two categories.

The third questionnaire is used in order to achieve a plan for the maturity of the organization's knowledge management.

Experts classified the factors that were extracted based on the (CMMI) integrated model of the Capability Maturity Model (CMMI) and expressed their opinions regarding the reality of each of the codes in the category.

As shown in the table, the proposed maturity model consists of three key categories ranging from the strategic category of human organizational category and the content technical category that have a key role in implementing knowledge management.

Each of the KM codes belongs to a certain level of maturity.

Table 4. concepts and levels associated with maturity model codes

Categories	Concepts	Codes	Level One	Level two	Level three	Level four	Level five	
Stragic	Knowledge management strategy	Strategy and goals of knowledge management		*				
		Relationship Management Relationship with Organization Strategies and Objectives					*	
		Knowledge management governance		*		*		
		Senior management support				*		
		Knowledge management architecture		*				
		Provide knowledge management value					*	
	Administrative factors	Change Management					*	
		Process reengineering		*				
		Managing Knowledge Projects				*		
	Knowledge management environment	Benchmarking				*		
		appraisal			*			
Enterprise/ Human	Individuals	Human Resources / Human Resource Management		*				
		Teamwork			*			
		Empowerment of employees			*			
		Participation and involving of employees		*				
		Motivation and Rewards			*			
		Experts and expertise associations			*			
	Organizational support and infrastructure	Organizational structure and processes				*		
		Education and learning		*				
		Organizational culture			*			
		Training Management Practices			*			
		Resources (financial and temporal)		*				
	Appraisal	Performance appraisal				*		
		Knowledge Management Users Satisfaction				*		
	Process and stream of knowledge management	Communication / Flow of Knowledge		*				
		Processes and management of knowledge activities			*			
	Technical/ Content	Content	Document Management		*			
			Information Quality of Information			*		
Data Management				*				
Data Management					*			
Information technology infrastructure issues		Information technology of Knowledge Management Systems					*	
		Information technology management			*			

Results from Evaluation Analysis:

The demographic data from the researcher's questionnaire showed 97% of respondents had a physical education and physical education, which had more than 68% of the education and doctorate degrees, and had good knowledge of knowledge management. To assess the level of each of the model components first, the status of indicators related to that factor is measured by questionnaire. Then, the average indicator status is multiplied by its weight, and in the end, the sum of the measured averages is the capability of the organization's capability in that factor. Through code of maturity,

motivation, and reward, reengineering processes and expertise have the lowest level of capability. Education and learning codes, senior management support, and training management practices have the highest capability level. Among the concepts of maturity model, the concepts of assessment, process, flow of knowledge, and management factors respectively have the lowest capability level, and content concepts, strategic alignment, and information technology infrastructure have the highest capability level.

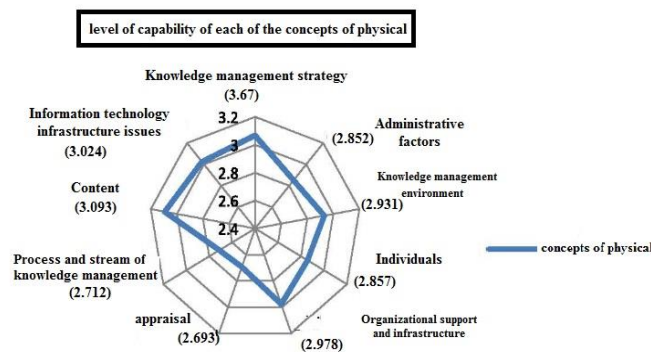


Figure 3. the - radar - diagram of the Knowledge Management Maturity Concepts

In order to determine the overall maturity level of the organization, the factors given at the relevant level have the optimum level of capability (Level 3 from 5) to allow the organization to pass through (Valdes et al., 2011; Storm et al., 2013) (Khatibiyani et al.).

For example, if the level of the second-level codes is not at an acceptable level, the overall level of maturity of the organization is still 2, despite the code that has a higher level of capability than 3.

The maturity percentage comes from the total capability level of each of the codes divided by the total capability.

The percentage of organizational knowledge

management maturity is achieved by the Ministry of Physical Education in the Ministry of Education 58.7%. The maturity percentage is used to prioritize the units or organizations that fall into a maturity level. Each one having higher degrees of maturity is better qualified to move on to the next level.

Discussion

Among the concepts, the concept of people from the perspective of experts has the greatest importance. Kazmi and Allahyari (2010) and Meghdadi (2009) suggest that people are key factors in creating organizational knowledge. "Strategic alignment" holds second place.

Several researchers explicitly point to the importance of alignment of strategy and

knowledge management, and how this alignment contributes to enhancing organizational performance (Chen & Huang: 2012 Booto Ekionea et al.: 2008 Evans: 2003).

Support and organizational infrastructure are also ranked third, while in literature the greatest emphasis is on the concept of organizational support and infrastructure, and the concept of individuals and strategic alignment is important in the next.

Human resource management is the most important from the perspective of experts and, "Top management support" and "knowledge management practices" are ranked second and third among the extracted codes.

It can be stated that attention to the characteristics of human resources such as analytic skills, communication, decision-making, creative thinking and skill-solving

skills, self-control, and self-development skills, people's commitment to implementing the knowledge management processes and activities and actions The hiring of individuals with a positive tendency to manage knowledge plays a strategic role in advancing knowledge management to fill in knowledge gaps, analysis, and evaluation of expertise in the organization. Information technology, which is ranked first in literature, is ranked fourth in terms of experts. Top management support is also ranked second from the perspective of experts and in the literature.

The result of the first stage of the research was to arrive at a conceptual model including 32 codes, 9 concepts, and 3 categories, these codes include all the concepts related to knowledge management, which, unlike the majority of past research, did not have a specific orientation.

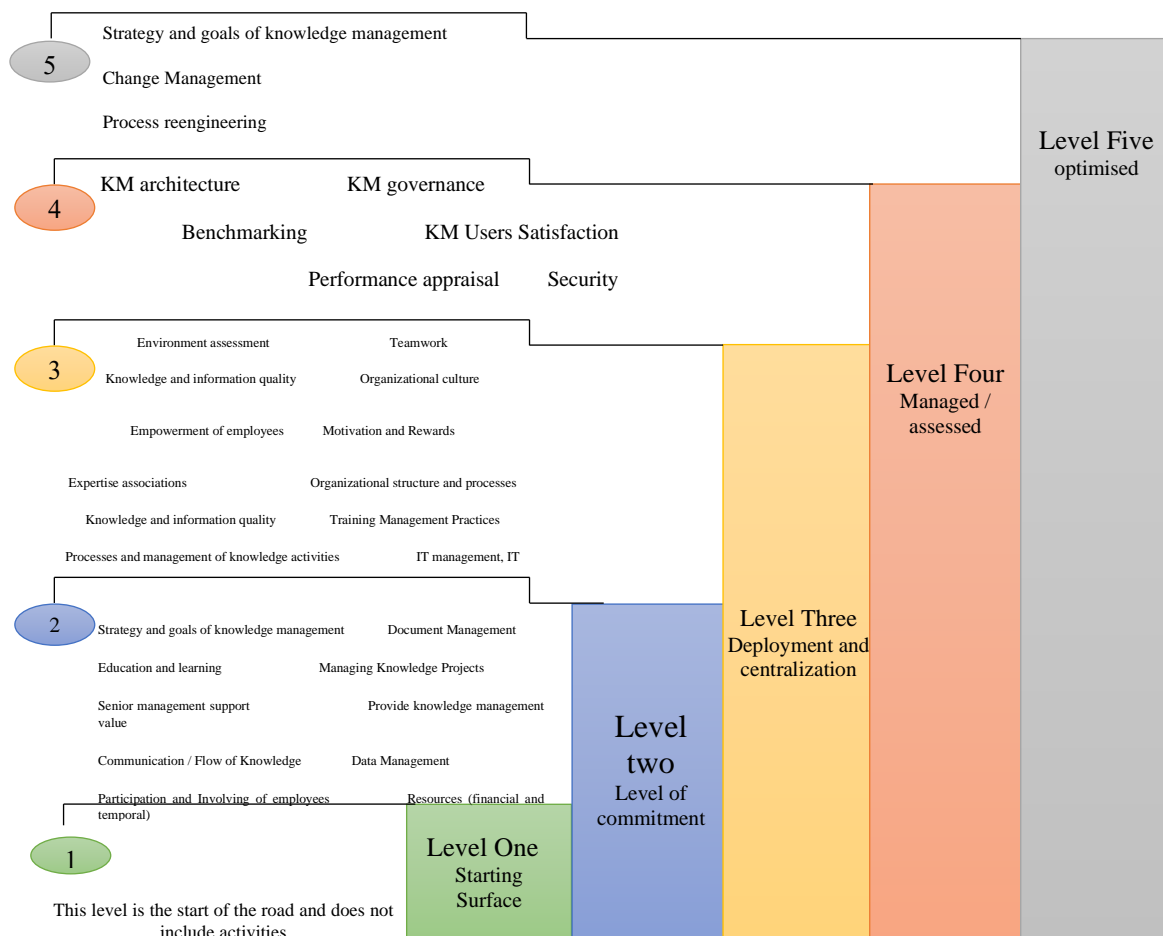


Figure 2. stage representation of the Knowledge Management Maturity Model

The integrated maturity model helps organizations assess maturity and determine priorities for improvement and implementation. The stage shows not only the implementation of knowledge management in a structured way but enables the organization to assess its current position in relation to KM practices and develop appropriate action plans to reach higher levels of knowledge management.

Conclusion

After determining the final maturity model, the information related to each of the relevant indicators in physical education agencies has been developed to provide the basis for determining the level of each component and the overall level of maturity. The results show that through the code of maturity, motivation, and reward, re-engineering of processes, and Expertise

Communities have the lowest capability level. During a meeting with top managers of knowledge of physical education, the low level of reward and motivation in the field of knowledge management at the level of management of physical education departments was due to the low level of motivation and reward. In the Civil Management Service, the management of knowledge management has not been discussed and the rewards associated with the activities and practices of KM are not seen.

Concerning the importance of the re-engineering of processes, it must be recognized that organizations need to make a dramatic shift in their collection to achieve the highest level of improvement in their abilities and employees.

Re-design and effective knowledge management processes by eliminating unnecessary activities and replacing old and aging processes as an enabler to perform this kind of change in order to achieve specific achievements in the fields of speed, productivity, service, quality, and innovation

(Tka & Ghannouchi, 2012). Expertise associations have made improvements in the improvement of core competencies encourage innovative learning, improve operations efficiency and increase responsiveness, and have a great impact on the growth of knowledge management efforts. (Lee et al.2012)

Due to the low level of expertise related to the expertise of the experts, expertise related to the expenses related to the payment and the costs of knowledge extraction through this expertise was explained.

However, it was said that the Deputy was about to define a project in relation to the strengthening of expertise associations over the next few months and the most important problem facing the project is the lack of mechanisms for paying people knowledge to operate in such communities. On the other hand, the training and learning codes, senior management support, and training management practices have the highest capability level.

A schematic of the radar diagram has been used to draw a schematic of the implications of each concept in the field of physical education. The right level in this study indicates the level of abilities of physical education in the concepts of knowledge management maturity. Among the concepts of the maturity model, the concepts of assessment, processes, and flows of knowledge and management factors have the lowest capability levels, and content concepts, strategic alignment, and information technology infrastructure have the highest capability level.

Abstract the level of capability of different concepts reflects the asymmetric growth of the organization as well as heterogeneous investment in the areas of knowledge management maturity.

In order to determine the overall level of maturity of the organization, employing the procedural model studies the level of codes allocated to each level. Since among the code

top-level code, the codes of providing value management value, involvement and involvement of employees, communication/flow of knowledge, and financial resources and time have no desirable level of capability.

Therefore, the organization is at the level of two maturities or the level of commitment. This level of commitment arises from the organization "s managers to promote and grow knowledge management.

Because of codes that have not achieved the desired state, financial and temporal resources have the lowest capability (2,686) in order to achieve the next level of maturity. Communication/flow codes/knowledge flows, involvement and involvement, and presentation value of knowledge management are addressed in the next priorities.

According to the obtained results, it is recommended to departments and organizations Take action by preparing the appropriate annual budget for the implementation of knowledge management and the development of incentive mechanisms in order to continuously improve the participation of employees. Documenting the success of primary knowledge management projects, improving knowledge transfer channels and creating coordination between employees and units, developing a periodic schedule, and giving employees enough time to perform knowledge activities, all contribute to the advancement of knowledge management activities. It will help improve the level of communication ability and knowledge flow. Future researchers are suggested to conduct comparative analytical research and implement knowledge management in all organizations, both public and private, and compare the results with each other.

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References

1. Ale, M., Toledo, C., Chiotti, O., Galli, M. (2014). A conceptual model and technological support for organization knowledge management. Science of computer programming, Available online 11 January 2014.
2. All-Ammary, J. H. (2010). knowledge management strategic alignment in the banking sector at the Gulf copration council (GCC) countries, PhD thesis, Murdoch University, Australia.
3. Arias-Pérez, J., Tavera-Mesias, J., & Castano-Serna, D. (2020). Building a knowledge management maturity model for a multinational food company from an emerging economy. El Profesional de la Información, 25(1),88-102.
4. Arling, P., Chun, M., W, S. (2011). Facilitating new knowledge creation and obtaining KM maturity. Journals of knowledge Management, 15 (2),231-250.
5. Booto Ekionea, J., Swain, D. (2008). Developing and aligning a knowledge management strategy. international journals of knowledge management 4(1), 29-45.
6. Brien, J. (2013). The need for a Robust knowledge Assessment Framework: Discussion and findings from an Exploratory case study the Electronic. journals of knowledge Management, 11(1), 93-106.
7. Chen, L. (2010). Bussiness-IT alignment maturity of companies in china. information & management, 47,9-16.
8. Evans, C. (2003). managing for knowledge HR S strategic role. Butter worth Heinmann, UK.
9. Fashami, C. S., & Babaei, M. (2019). A behavioral maturity model to establish knowledge management in an organization engineering. Technology & Applied Science

- Research, 7(3),1725-1731.
10. Jafari, M., Rezaenour, J., Akhavan, P., Fesharaki, M. (2010). Strategic knowledge management in aerospace industries: a case study, *Aircraft Engineering and Aerospace Technology*, 82(1),60-74.
 11. Jarrar, Y. F. (2020). Knowledge management: learning for organizational experience. *Managerial Auditing Journal*, Vol 17, No. 6, pp 322-328.
 12. Heisig, P. (2009). Harmonization of knowledge management Comparing 160 knowledge management frameworks around the global. *Journals of knowledge Management*, 13(4), 4-31.
 13. I. Becerra-Fernandez, & R. Shaberwal (2022), *Knowledge Management: System and Processes*, 2nd Ed., Routledge, New York, p. 61-77.
 14. Khatibian, N., Hasangholipour, T., Abedi jafari, H. (2010). Measurement of knowledge management maturity level with in organizations. *Business strategy series*, 11(1), 51-56.
 15. Kimble, C. (2013) What cost of knowledge management? The Example of Infosys. *Global Bussiness and organizational*, 32(3), 6-14.
 16. Kruger, C., J, & snyman, M. (2007). Guidelines for assessing the knowledge management maturity of organizations. *south African journals of Information Management*, 9(3), dio: 10, 41.2\sajim. 79i3, 34.
 17. Kruger, C., Johnson, R. (2010). Information managements as enablerof knowledge management maturity: A south African prespectiv. *international journals of Information Management*, 30, 57-67.
 18. L. Montañez-Carrilloa (2021), *Adaptation of the General Maturity Model of Knowledge Management (G-KMMM)*, *International Journal of Control Theories and Applications (IJCTA)*, Vol.9, No.44, pp. 129-134.
 19. M. A. Wibowo and R. Waluyo (2019), *Knowledge management maturity in construction companies*, *Procedia Eng.*, vol. 125, pp. 89-94.
 20. Lin, Ch., Wu, J. C, Yen, D. (2012). Exploring barriers to information knowledge flow at different knowledge management maturity stage. *Information Management*, 49, 10-23.
 21. Lopez-Nicolas, C., Merono-Cerdan, A. (2011). Strategic knowledge management innovation and performance. *international journals of Information Management*, 31, 502-509.
 22. Momeni. (2011). Provide a new approach for knowledge management systems with the method of analyzing the gray relation. *Research and Production Management Research and Operations*, Second Round,55-72.
 23. Nanik, Q., & Rela, S. (2020). *Knowledge Management Maturity Model: A Case Study at Ministry XYZ*. *Knowledge management maturity models: identification of gaps and improvement proposal*.
 25. Natarajan, G. (2005). A knowledge management Maturity Model for the software Industry. *knowledge management Review*, 8(2), 20-23.
 26. Oliva, F. L. (2021). Knowledge management barriers, practices and maturity model. *Journal of Knowledge Management*, 18(6), 1053-1074.
 27. Rasula, J., Vuksic, V., Stember, M. (2008). The Integrated knowledge management maturity Model, *Zagreb. International Review of Economics & Business*,11(2),47-62.
 28. Siemens, L. (2019). *Knowledge*

management maturity model (KMMM): Methodology for assessing and developing maturity in knowledge management.

29. Sun, S., Chen, Y. (2008). Consolidating the strategic alignment model in knowledge management, *Int. J. Innovation and Learning*, 5(1), 51-65.
30. T. Baykiz, (2020). An Assessment of knowledge. Management maturity among the public institutions in Turkey, Middle East Technical University.
31. Yokell, M. (2008). A qualitative correlational study of the relationship between knowledge Management maturity and performance. PhD thesis, University of phoenix.
32. Zhao, J., Ordonez de Pablos, P., Qi, Z. (2012). Enterprise knowledge management model based on china's practice and case study. *Computers in Human Behavior*, 28, 324-330.