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Identification of factors and models of knowledge management maturity: a systematic literature review

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ABSTRACT. Studies related to the knowledge management maturity (KMM) model in libraries have been successfully identified. However, the model is at risk of bias because, in these studies, the KMM assessment within the organization is based on the total score across all criteria/components/factors. This poses a risk of bias if one of the criteria required at the initial maturity level is not met. Therefore, this study aims to identify KMM factors and models from various sectors to support research on developing a KMM model in the library sector. In identifying KMM factors and models, the researchers will conduct a Systematic Literature Review (SLR). The method used in this SLR is the Kitchenham method. Of the 103 KMM factors, the most widely used in previous studies were in the process category, including organizational culture. Based on the factors that make up the KMM model, it can be seen that, among the 17 KMMs, those used in previous studies had the greatest advantages in the process category, such as the army KM3. In addition, based on the objectives of the KMM model, one model that assesses the maturity level of Knowledge Management (KM) implementation and serves as a guideline for KM implementation is the General KM Maturity Model (GKMMM). Based on the issues and results of the SLR conducted, the researchers plan to develop a knowledge management maturity model for the library sector in the next study.

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INTRODUCTION

Libraries are repositories of knowledge, as they store various types of books and other written works. However, the effective management of knowledge within libraries remains a critical challenge. Libraries are also important tools for improving public information literacy (Ningsih & Sayekti, 2023). Therefore, libraries require proper management to organize document storage, maintenance, and infrastructure. Library management can be enhanced by implementing knowledge management (KM).

Knowledge management is a process of collecting, grouping, sharing, and analyzing resources owned by an organization or its members (Hebibi et al., 2019). Applying knowledge management helps to control the knowledge scattered throughout the library and distribute it evenly (Nurarini, 2022). With knowledge distributed evenly, it can reduce the risk of problems occurring when members are dismissed or retire. In KM, there are four main processes, namely knowledge discovery, knowledge capture, knowledge sharing, and knowledge application (Fernandez & Sabherwal, 2015). In these four processes, there are seven supporting processes, namely socialization, externalization, combination, internalization, exchange, direction, and routines (Fernandez & Sabherwal, 2015).

Several studies have previously examined the use of knowledge management in libraries. The first study discussed the implementation of knowledge management in university libraries (Nurarini,

2022). From this study, activities that can be carried out in implementing knowledge management in libraries can be identified, namely conducting book reviews, knowledge sharing among employees, and educational activities from librarians to library users (Nurarini, 2022). The second study examined librarians' perceptions of knowledge management in Nigerian university libraries and identified the knowledge management practices implemented in these libraries (Onifade et al., 2023). From this study, it can be identified that librarians have a positive perception of the application of knowledge management in university libraries in Nigeria. It can also be seen that there are knowledge management practices that have been implemented in university libraries in Nigeria, namely brainstorming, knowledge sharing, and mentoring (Onifade et al., 2023).

To determine the extent of knowledge management development implemented, the knowledge management maturity model can be used. Various KMM models have been used in research, including the APO framework, the General KM Maturity Model (GKMMM), and the Knowledge Sharing Maturity Model (KSMM). The APO framework has five levels, namely reaction, initial, development, control, and maturity (Kianrad et al., 2024). The APO framework has seven supporting criteria, namely leadership, technology, employees, process, knowledge process, learning and innovation, and KM results (Kianrad et al., 2024). In the APO framework, the maturity level is determined based on the total score of the seven criteria implemented in the organization (Kianrad et al., 2024). Based on this, the focus of the APO framework is to assess the maturity level of Knowledge Management (KM) implementation.

The General KM Maturity Model (GKMMM) consists of five levels: initiation, awareness, definition, management, and optimization (Ramadhan et al., 2020). The GKMMM also has three key process areas used in assessing KMM levels, namely people, process, and technology (Ramadhan et al., 2020). In the GKMMM, organizations must fulfill each maturity level without skipping the previous levels (Ramadhan et al., 2020). Based on this, to achieve the Optimizing level, organizations need to fulfill the 28 descriptions available in the model.

The Knowledge Sharing Maturity Model (KSMM) consists of five levels: initial, aware, define, managed, and optimized (Almashmoum et al., 2025). The KSMM has five categories used to assess KMM levels, namely awareness, types of knowledge sharing, individual factors, departmental factors, and technological factors (Almashmoum et al., 2025). Based on the research by Almashmoum et al. (2025), each maturity level in the KSMM is influenced by the previous level.

Currently, there is still little research discussing knowledge management maturity models in libraries. Research on the knowledge management maturity model in libraries has been successfully identified. However, the model used is at risk of bias because, in that study (Kianrad et al., 2024), the KMM assessment in organizations was based on the total score across all criteria/components/factors. This poses a risk of bias if one of the criteria that needs to be met at the initial maturity level has not been fulfilled.

Given these issues, new research is needed on KMM models that discuss the maturity level of each factor used in the KMM model. The purpose of this study is to identify KMM factors and models to support research on the development of KMM models in the library sector. In identifying KMM factors and models, the researchers will conduct a Systematic Literature Review (SLR). The method used in conducting the SLR is the Kitchenham method.

However, during the literature search process, researchers found only a small amount of literature related to KMM factors and models in the library sector. Therefore, researchers focused on identifying KMM factors and models from various sectors in literature published from 2020 to 2025. Based on the research objectives, there are three research questions (RQ) in this study, namely:

RQ1: What are the factors in knowledge management maturity?

RQ2: What are the advantages of each knowledge management maturity model based on its factors?

RQ3: What knowledge management maturity models provide information on the maturity level requirements for each factor?

Furthermore, the discussion of the stages researchers follow in conducting a Systematic Literature Review (SLR) is in the methods section. Then, the discussion regarding the results of screening and assessing the quality of the literature, the results of data extraction, and the results of data synthesis can be found in the results and discussion section. In addition, the discussion regarding conclusions and future research plans can be found in the conclusion section.

METHODS

In conducting SLR, the researchers use the Kitchenham methodology. In the Kitchenham methodology, there are three main stages, namely planning, implementation, and reporting (Kitchenham, 2004). The methodology flow can be seen in Figure 1.

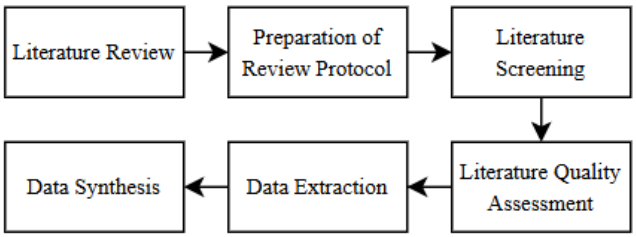

Figure 1. Flow of research methodology

Literature Review

At this stage, researchers search for and review literature related to the Knowledge Management Maturity (KMM) model in the library sector to identify the background of the SLR research to be conducted. In Kitchenham's methodology, this stage is included in the planning stage.

Preparation of Review Protocol

In developing a review protocol, there are several steps involved, namely the development of PICOC; determination of the Boolean search; determination of the year, type, and source of literature; development of inclusion and exclusion criteria; determination of quality assessment checklists; determination of data extraction procedures; and determination of data synthesis procedures. In Kitchenham's methodology, these steps are included in the planning stage.

Development of PICOC and Research Question

In helping determine the research question and the Boolean search, researchers compiled the PICOC (Wahono, 2015). Details of PICOC are shown in Table 1.

Table 1. PICOC

Population	*Knowledge management maturity, KM maturity*
Intervention	*Model, framework, success factor, factor*
Comparison	-
Outcome	*Knowledge management maturity model, knowledge management maturity factor*
Context	-

Based on Table 1, the study population used by the researchers was knowledge management maturity and KM maturity. Then, the interventions in the study were models, frameworks, success factors, and factors. The study's results included the knowledge management maturity model and the knowledge management maturity factors. However, the comparison and context did not discuss anything. After completing the PICOC, the researcher formulated research questions based on the PICOC details. In addition to the PICOC details, the researcher also considered research questions based on the desired synthesis results.

Boolean Search Determination

The researchers determined the Boolean search based on the PICOC details that had been created. The main Boolean search used by the researchers was ((“Knowledge management” OR KM) AND (maturity) AND (model OR framework OR “success factor” OR factor)). However, the Boolean search was slightly modified when used on certain databases to reduce the risk of obtaining literature that did not meet the criteria. In the Sciencedirect database, the Boolean search changed to Title, abstract, keywords: ((“Knowledge management” OR KM) AND (maturity) AND (model OR framework OR “success factor” OR factor)), while in the Scopus database, the Boolean search changed to TITLE-ABS-KEY ((“Knowledge management” OR KM) AND (maturity) AND (model OR framework OR “success factor” OR factor)), and in the ProQuest database, the Boolean search changed to abstract(((“Knowledge management” OR KM) AND (maturity) AND (model OR framework OR “success factor” OR factor))).

Determination of Year, Type, and Source of Literature

The researcher collected literature from 2020 to 2025. The types of literature selected by the researcher were journals and conferences. In addition, the sources of literature selected by the researcher were EBSCOhost, IEEE Xplore, ProQuest, ScienceDirect, and Scopus. The researcher collected literature citations from each database on September 22, 2025.

Literature Screening

In the SLR, several inclusion and exclusion criteria needed to be met at each stage of the literature screening. Details of the inclusion and exclusion criteria for each stage of the literature screening are shown in Table 2.

Table 2. Inclusion and exclusion criteria

Stages	Inclusion Criteria	Exclusion Criteria
Initiation stage	• In accordance with search keywords. • Publication year 2020-2025. • Article/journal/conference/research article.	• Publication year outside of 2020-2025. • Not an article/journal/ conference/ research article.
Stage 1 (title and abstract selection)	• There is a knowledge management maturity component. • Written in English.	• No knowledge management maturity components. • Written in a language other than English. • Review paper. Duplicate paper.
Stage 2 (full-text selection)	• Discussion of the knowledge management maturity model. • Discussion of knowledge management maturity factors. • Available for download. • Written in English.	• No discussion of the knowledge management maturity model. • No discussion of knowledge management maturity factors. • Cannot be downloaded using a campus account. • Written in a language other than English. • Review paper.

In the literature screening stage, the researcher first retrieves literature from several predefined databases using a previously determined Boolean search. Then, the researcher performs three stages of literature screening: the initiation stage, stage 1 (selection of titles and abstracts), and stage 2 (selection of full-text). In conducting the literature screening and citing, the researcher uses Mendeley Desktop, Mendeley Reference, and Zotero. The process of retrieving citation data from the database was conducted on September 22, 2025. In the Kitchenham methodology, this stage falls under the implementation phase.

Literature Quality Assessment

After completing the literature screening stage using inclusion and exclusion criteria, the next stage is to assess the quality of the literature using a checklist. Details of the literature quality assessment checklist are shown in Table 3.

Table 3. Quality assessment checklist

Checklist	Question Checklist
C1	Does the article clearly describe the research objectives?
C2	Does the article include a literature review, background, and research context?
C3	Does the article present related work from previous research to demonstrate the main contribution of the research?
C4	Does the article describe the proposed architecture or methodology used?
C5	Does the article clearly describe the knowledge management maturity model or factors?
C6	Does the article contain research results?
C7	Does the article present conclusions that are relevant to the research objectives/problems?
C8	Does the article recommend future work or improvements for the future?

During the literature quality assessment stage, each piece of literature from the screening results will be evaluated using 8 previously created checklists. Each checklist item can be scored as 0, 0.5, or 1. The checklist score for each study must be at least 5 points to proceed to the next stage. In the Kitchenham methodology, this stage falls under the implementation phase.

Data extraction

In the data extraction stage, researchers determine the literature data they want to obtain. The data to be obtained from the literature include research titles, publication types, publication years, Knowledge Management Maturity (KMM) models, KMM factors, and research sectors. In this stage, the researchers retrieves data from each literature that has received a minimum score of 5 in the previous stage. In the Kitchenham methodology, this stage falls under the implementation phase.

Data synthesis

In the data synthesis stage, the researchers synthesizes the factor and KMM model data. For the factor data, the researcher identifies factors within the KMM, then classifies each factor into 4 categories: people, process, technology, and support. For the KMM model data, the categorization is divided into 2 types. The first categorization groups models based on the strengths of the categories they possess. At this stage, the researcher identifies the factors within the model, then checks the category of these factors based on the synthesis of the factor data, and subsequently calculates the percentage of each category within the models. The second categorization groups models based on the purpose of the model. In this stage, the researcher classifies the models by purpose. In the Kitchenham methodology, this stage is included in the implementation phase.

RESULTS AND DISCUSSION

The results and discussion section will discuss the results of screening and assessing the quality of literature; year of publication of literature; type of publication source; research sector; synthesis of Knowledge Management Maturity (KMM) factors; first synthesis of the Knowledge Management Maturity (KMM) model; and second synthesis of the Knowledge Management Maturity (KMM) model.

The Results of Screening and Assessing the Quality of Literature

The screening and quality assessment of the literature have been completed. This section describes the number and sources of literature from the initial screening stage to the quality assessment stage. Details of the results are shown in Table 4.

Table 4. Literature screening and quality assessment results

Database	Initiation stage	Stage 1 (title and abstract selection)	Stage 2 (full-text selection)	Quality Assessment
EBSCOhost	148	7	4	4
IEEE Xplore	49	4	3	2
ProQuest	82	9	6	6
ScienceDirect	74	4	2	2
Scopus	344	17	5	5
Total	697	41	20	19

From the results in Table 4, it can be seen that in the final stage or quality assessment, the largest number of literature came from the ProQuest database, namely 6 pieces of literature. Details of the percentage of the number of literature in the database at the final stage can be seen in Figure 2.

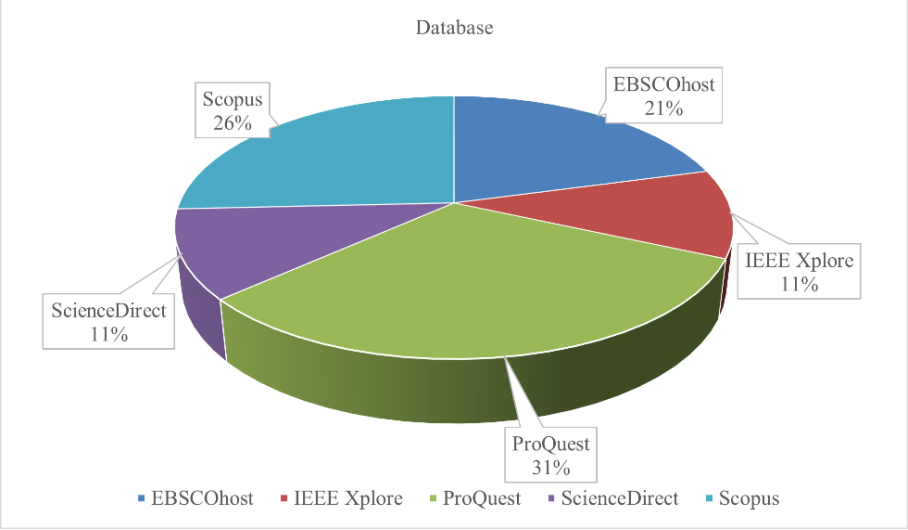

Figure 2. Database

Based on Figure 2, the distribution of databases across each literature has a quality value greater than 5. From the figure, it can be seen that literature from the IEEE Xplore database has a percentage of 11%, literature from the ScienceDirect database has a percentage of 11%, literature from the EBSCOhost database has a percentage of 21%, literature from the Scopus database has a percentage of 26%, and literature from the ProQuest database has a percentage of 31%.

Year of Publication of Literature

Based on the SLR conducted, 19 studies relate to the criteria used. Of these 19 studies, publications were made from 2020 to 2025. Details on the publication years of the 19 studies of literature are shown in Figure 3.

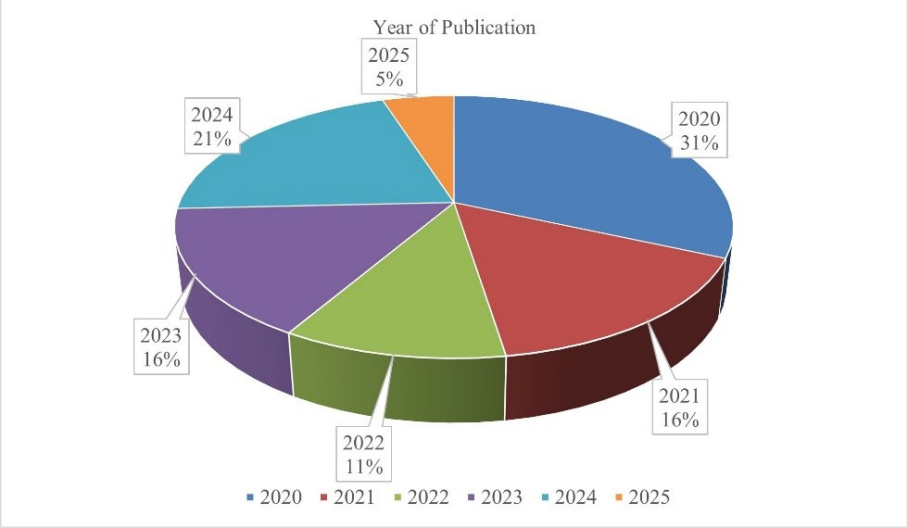

Figure 3. Year of publication

From Figure 3, it can be seen that of the 19 papers extracted, 31% were published in 2020, 16% were published in 2021, 11% were published in 2022, 16% were published in 2023, 21% were published in 2024, and the remaining 5% were published in 2025.

Type of Publication Source

Based on the SLR conducted, 19 studies relate to the criteria used. Of these 19 studies, some may have originated in journals or conferences. Details of the types of publication sources in the 19 studies can be seen in Figure 4.

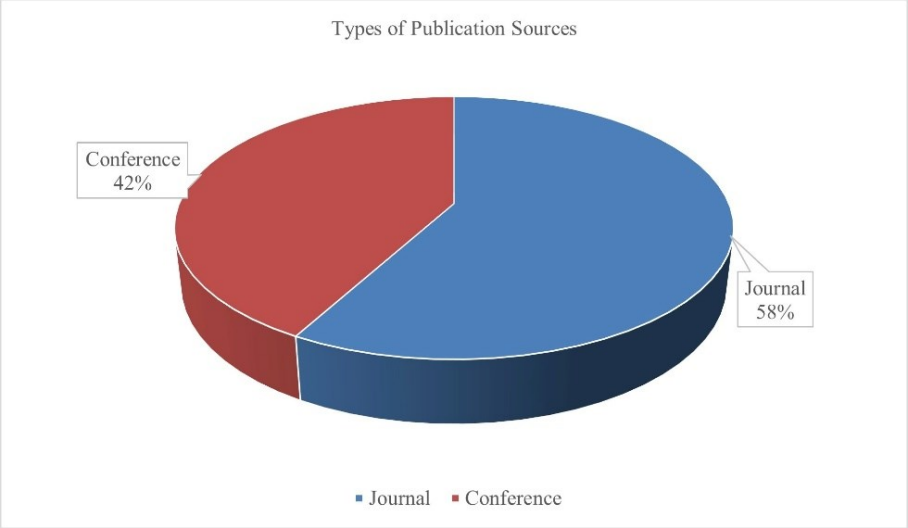

Figure 4. Types of publication sources

From Figure 4, it can be seen that of the 19 literature sources, most of them came from journals, with a percentage of 58%. The percentage of literature from conferences was 42%.

Research Sector

Based on the SLR conducted, 19 studies relate to the criteria used. Of these 19 studies, some discuss research in different research sectors. Details of the research sectors across the 19 studies are shown in Figure 5.

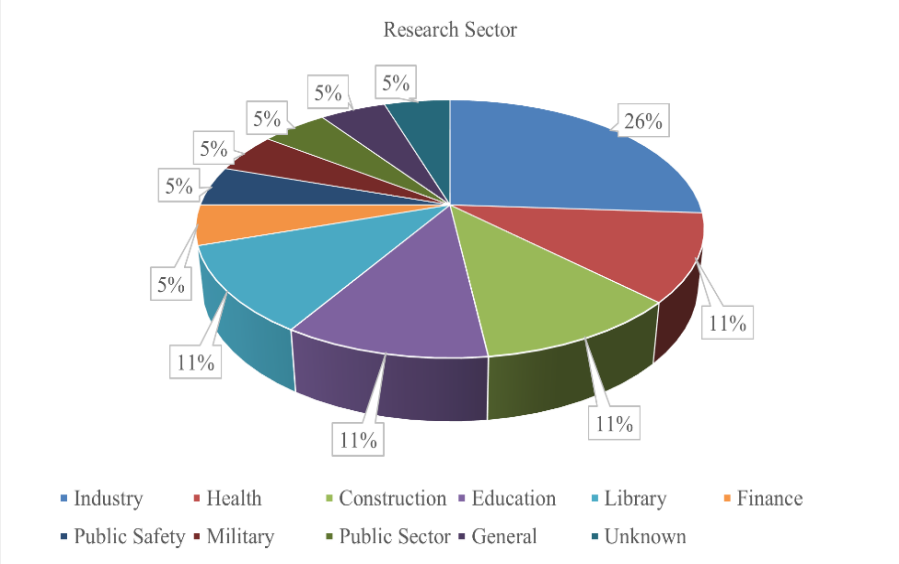

Figure 5. Research sector

From Figure 5, it can be seen that 19 of the 19 literature reviews were conducted in the industrial sector, accounting for 26%. The percentage of literature conducted in the health sector is 11%. The percentage of literature conducted in the construction sector is 11%. The percentage of literature conducted in the education sector is 11%. The percentage of literature conducted in the library sector is 11%. The percentage of literature conducted in the financial sector is 5%. The percentage of literature conducted in the public security sector is 5%. The percentage of literature conducted in the military sector is 5%. The percentage of literature conducted in the public sector is 5%. The percentage of literature whose models or factors can be used generally or in various sectors is 5%. The percentage of literature that does not discuss the sector is 5%.

Synthesis of Knowledge Management Maturity (KMM) Factors

This section discusses the supporting factors for the KMM model identified from the SLR results. The initial number of factors identified from the SLR was 154. These factors were filtered based on terms similar to them. After filtering, 103 factors supported the KMM model. These 103 factors were grouped into four categories, namely people, process, technology, and support. Details of the factors are in Table 5.

From Table 5, it can be seen that several factors in the people criteria are awareness, leadership, and employee skills. Then, several factors in the process criteria are knowledge management processes, governance, and policy and strategy for KM. Furthermore, several factors in the technology criteria are communication technology, information technology, and business applications. Next, several factors in the support criteria are organizational infrastructure, specific structures, and support of top management.

Table 5. Knowledge management maturity (KMM) factors

Category	Factor	References
People	People	(Azmee et al., 2023; Borba, 2022; Laar et al., 2020; Ramadhan et al., 2020; Straccia & Florencia Pollo-Cattaneo, 2023)
	Manpower (Staff)	(Kianrad et al., 2024)
	Leadership	(Azmee et al., 2023; Harin et al., 2024; Kianrad et al., 2024; Putri et al., 2023)
	Employee Skills	(Azmee et al., 2023)
	Awareness	(Almashmoum et al., 2025; Harin et al., 2024; Maqnun et al., 2021)
	Individual Factors	(Almashmoum et al., 2025)
	Departmental Factors	(Almashmoum et al., 2025)
	Learning, and Innovation	(Kianrad et al., 2024)
	Management, Leadership, and Support	(Demchig, 2020)
	Motivational Aids	(Demchig, 2020)
	Training and Education	(Demchig, 2020; Putri et al., 2023)
	Human Resource Management	(Demchig, 2020)
	Training Needs Analysis	(Putri et al., 2023)
	Curriculum Development	(Putri et al., 2023)
	Training and Improvement of Human Performance	(Septari & Latief, 2020; Zain & Latief, 2020)
	Communications	(Harin et al., 2024; Huang, 2024)
	Skills	(Huang, 2024)
	KM Motivation	(Ekionea & Fillion, 2021)
	KM Inciting	(Ekionea & Fillion, 2021)
	KM Rewards	(Ekionea & Fillion, 2021)
	Resistance to Change	(Harin et al., 2024)
	Wrong Perception of KED	(Harin et al., 2024)
	Lack of Understanding of the Customers and Their Voices	(Harin et al., 2024)
	Lack of Consultants/Expertise in the Field	(Harin et al., 2024)
	Inappropriate Recognition System	(Harin et al., 2024)
	Lack of Employee Involvement	(Harin et al., 2024)

The synthesis of KMM factors continues in Tables 6–8, which present the remaining factors across the process, technology, and support categories identified from the reviewed studies.

Table 6. Knowledge management maturity (KMM) factors (continuation)

Category	Factor	References
People	Lack of Supplier and Customer Collaboration	(Harin et al., 2024)
Process	Organisational Culture	(Azmee et al., 2023; Maqnun et al., 2021; Rodríguez et al., 2024)
	Types of Knowledge Sharing	(Almashmoum et al., 2025)
	Process	(Borba, 2022; Hsieh et al., 2020; Kianrad et al., 2024; Laar et al., 2020; Ramadhan et al., 2020; Straccia & Florencia Pollo-Cattaneo, 2023)
	Culture	(Demchig, 2020; Hsieh et al., 2020; Laar et al., 2020; Putri et al., 2023)
	KM Results	(Kianrad et al., 2024)
	Strategy and Purpose	(Demchig, 2020)
	Measurement	(Demchig, 2020; Jääskeläinen et al., 2022)
	Processes and Activities	(Demchig, 2020)
	Policies / Strategies	(Zain & Latief, 2020)
	HR Planning and Processes	(Septari & Latief, 2020; Zain & Latief, 2020)
	Procedure Methods, & Documentation Processes	(Zain & Latief, 2020)
	Approaches to Capturing / Using Tacid Knowledge	(Septari & Latief, 2020; Zain & Latief, 2020)
	KM Culture	(Ekionea & Fillion, 2021; Septari & Latief, 2020; Zain & Latief, 2020)
	Policy and Strategy for KM	(Septari & Latief, 2020)
	Document Management	(Septari & Latief, 2020)
	Implementation	(Borba, 2022)
	Sharing	(Borba, 2022)
	Creation	(Borba, 2022)
	Performance Measure	(Borba, 2022; Harin et al., 2024)
	Values	(Putri et al., 2023)
	Vision and Goals, and Business Models and Execution	(Putri et al., 2023)
	Value Identification	(Putri et al., 2023)
	Value Realization Planning	(Putri et al., 2023)
	Value Realization	(Putri et al., 2023)
	Governance	(Huang, 2024; Putri et al., 2023)
	Methods & Tools, and Process Optimization	(Putri et al., 2023)
	Change Impact Analysis	(Putri et al., 2023)
	Change Management Planning	(Putri et al., 2023)
	Change Management Execution	(Putri et al., 2023)
	Framework , Organization, and Execution	(Putri et al., 2023)
	Vision and Strategy	(Jääskeläinen et al., 2022)
	Governance and Organization	(Jääskeläinen et al., 2022)
	Information Needs	(Jääskeläinen et al., 2022)

Table 7. Knowledge management maturity (KMM) factors (continuation)

Category	Factor	References
Process	Information Acquisition	(Jääskeläinen et al., 2022)
	Information Products	(Jääskeläinen et al., 2022)
	Information and Knowledge Sharing	(Jääskeläinen et al., 2022)
	Knowledge Usage	(Jääskeläinen et al., 2022)
	KM Performance	(Hsieh et al., 2020)
	Knowledge Management Processes	(Ekionea & Fillion, 2021; Kianrad et al., 2024; Rodríguez et al., 2024)
	Strategy, Culture	(Straccia & Florencia Pollo-Cattaneo, 2023)
	KM Strategy	(Maqnun et al., 2021)
	Verification Environment	(Fan et al., 2021)
	Knowledge Coverage	(Fan et al., 2021)
	Using Effect	(Fan et al., 2021)
	Lack of Estimation of Execution Cost	(Harin et al., 2024)
	Lack of an Effective Hierarchical Plan	(Harin et al., 2024)
	Implementation Evaluation	(Maqnun et al., 2021)
	Lack of Process Thinking and Process Ownership	(Harin et al., 2024)
	Misalignment Between the Project Goals and the Customer Demand	(Harin et al., 2024)
	Poor Project Selection and Prioritization	(Harin et al., 2024)
	Time Consuming / Lack of Time	(Harin et al., 2024)
	Ineffective Evaluation of Data and Results	(Harin et al., 2024)
	Waiting/Delays	(Harin et al., 2024)
	Failure of Past KED Efforts	(Harin et al., 2024)
	Difficulty in Sustaining Current Quality Improvement Benefits	(Harin et al., 2024)
	Ineffective Project Management	(Harin et al., 2024)
	Risk of Disruption to Operations.	(Harin et al., 2024)
	Storage	(Borba, 2022)
	Application	(Borba, 2022)
	Each Activity	(Straccia & Florencia Pollo-Cattaneo, 2023)
Technology	Technology	(Almashmoum et al., 2025; Borba, 2022; Hsieh et al., 2020; Huang, 2024; Kianrad et al., 2024; Ramadhan et al., 2020; Straccia & Florencia Pollo-Cattaneo, 2023)
	Information Technology	(Demchig, 2020; Septari & Latief, 2020; Zain & Latief, 2020)
	Information Analytics	(Putri et al., 2023)
	Business Applications	(Putri et al., 2023)
	Technology Infrastructures	(Ekionea & Fillion, 2021; Harin et al., 2024)
	Technology, ICT, Information Management	(Straccia & Florencia Pollo-Cattaneo, 2023)
	Information Organization and Storage	(Jääskeläinen et al., 2022)

Table 8. Knowledge management maturity (KMM) factors (continuation)

Category	Factor	References
Technology	Partnership	(Huang, 2024)
	Wrong Selection of KED Tools	(Harin et al., 2024)
	Communication Technology	(Putri et al., 2023)
Support	Tools	(Laar et al., 2020)
	Organizational Infrastructure	(Demchig, 2020)
	Resources	(Demchig, 2020; Harin et al., 2024)
	Poor Organizational Structure	(Harin et al., 2024)
	Specific Structures	(Ekionea & Fillion, 2021)
	Support of top Management	(Azmee et al., 2023; Harin et al., 2024)

First Synthesis of the Knowledge Management Maturity (KMM) Model

Based on the factor synthesis, the KMM supporting factors have been grouped into four categories: people, process, technology, and support. This section will discuss the grouping of each KMM model based on the advantages of these four factor categories. Details of the first synthesis of the KMM model are shown in Figure 6.

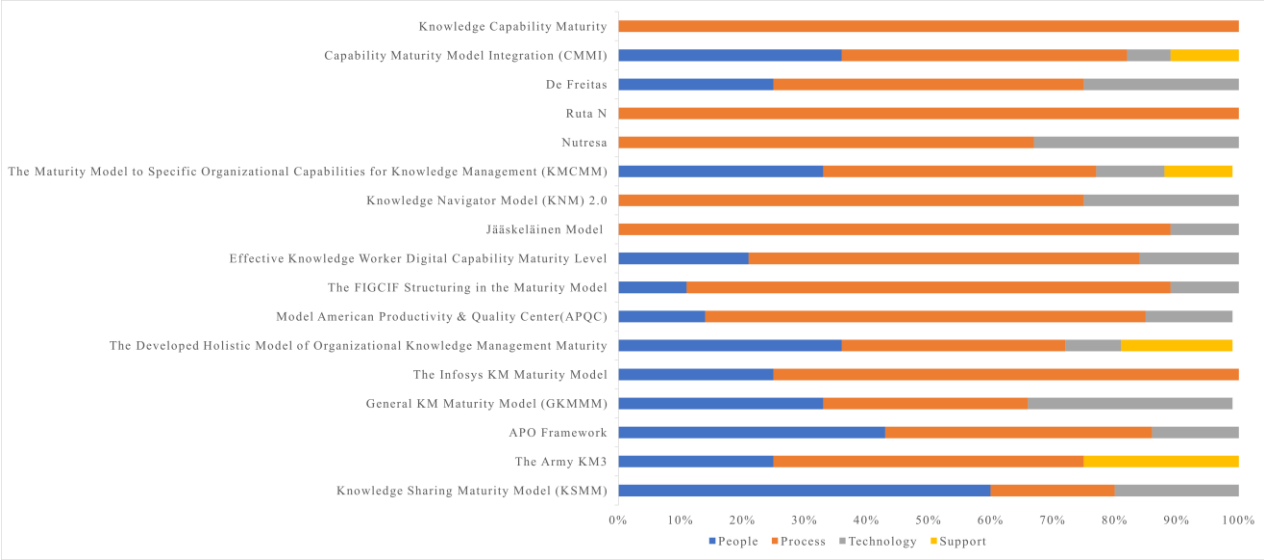

Figure 6. First synthesis of the KMM model

Based on Figure 6, the advantages of each model in their respective categories can be identified. The Knowledge Sharing Maturity Model (KSMM) excels in the people category with 60%. The Army KM3 excels in the process category with 50%. The APO Framework excels in both the people and process categories with 43%. The General KM Maturity Model (GKMMM) excels in the people, process, and technology categories with 33%. The Infosys KM Maturity Model excels in the process category with 75%. The Developed Holistic Model of Organizational Knowledge Management Maturity excels in both the people and process categories with 43%.

The American Productivity & Quality Center (APQC) excels in the process category with 71%. The FIGCIF Structuring in the Maturity Model excels in the process category with 78%. The Effective Knowledge Worker Digital Capability Maturity Level excels in the process category with 63%. The Jääskeläinen model excels in the process category with 89%. The Knowledge Navigator Model (KNM) 2.0 excels in the process category with 75%. The Maturity Model to Specific Organizational

Capabilities for Knowledge Management (KMCMM) excels in the process category with 44%. Nutresa excels in the process category with 67%. Ruta N excels in the process category with 100%. De Freitas excels in the process category with 50%. The Capability Maturity Model Integration (CMMI) excels in the process category with 46%. The Knowledge Capability Maturity excels in the process category with 100%.

Second Synthesis of the Knowledge Management Maturity (KMM) Model

According to researchers, the KMM model has two main objectives: to assess the maturity level of Knowledge Management (KM) implementation and to serve as a guide for Knowledge Management (KM) implementation. The model that assesses the maturity level of Knowledge Management (KM) implementation discusses the assessment procedure, determines the maturity level, and explains the overall description of the maturity levels. The model that assesses the maturity level of Knowledge Management (KM) implementation and serves as a guide for KM implementation discusses the assessment procedure, determines the maturity level, and provides a detailed description of the maturity levels for each factor. Based on this, this section will discuss the grouping of each KMM model based on the model's objectives. Details of the second Synthesis of the KMM model can be seen in Table 9.

Table 9. Second synthesis of the KMM model

Objective	Model	References
Assessing the Maturity Level of Knowledge Management (KM) Implementation	The Army KM3	(Laar et al., 2020)
	APO Framework	(Kianrad et al., 2024)
	The Infosys KM Maturity Model	(Maqnun et al., 2021)
	The Developed Holistic Model of Organizational Knowledge Management Maturity	(Demchig, 2020)
	Model American Productivity & Quality Center(APQC)	(Zain & Latief, 2020)
	Jääskeläinen Model	(Jääskeläinen et al., 2022)
	The Maturity Model to Specific Organizational Capabilities for Knowledge Management (KMCMM)	(Ekionea & Fillion, 2021)
	Capability Maturity Model Integration (CMMI)	(Harin et al., 2024)
	Knowledge Capability Maturity	(Fan et al., 2021)
	Nutresa	(Straccia & Florencia Pollo-Cattaneo, 2023)
	Ruta N	(Straccia & Florencia Pollo-Cattaneo, 2023)

The remaining KMM models, which assess KM maturity and simultaneously provide guidance for KM implementation, are presented in Table 10.

Table 10. Second synthesis of the KMM model (continuation)

Objective	Model	References
Assessing the Maturity Level of Knowledge Management (KM) Implementation, and as a Guide to Knowledge Management (KM) Implementation	Knowledge Sharing Maturity Model (KSMM)	(Almashmoum et al., 2025)
	General KM Maturity Model (GKMMM)	(Ramadhan et al., 2020; Straccia & Florencia Pollo-Cattaneo, 2023)
	The FIGCIF Structuring in the Maturity Model	(Borba, 2022)
	Effective Knowledge Worker Digital Capability Maturity Level	(Putri et al., 2023)
	Knowledge Navigator Model (KNM) 2.0	(Hsieh et al., 2020)
	De Freitas	(Straccia & Florencia Pollo-Cattaneo, 2023)

Based on Tables 9 and 10, several models can be identified that assess the maturity of knowledge management implementation, namely The Army KM3, APO Framework, and The Infosys KM Maturity Model. Several models that assess the maturity level of knowledge management (KM) implementation and serve as guidelines for KM implementation can also be identified, namely the Knowledge Sharing Maturity Model (KSMM), General KM Maturity Model (GKMMM), and the FIGCIF Structuring in the Maturity Model. Guideline models provide information on the maturity-level requirements for each factor.

CONCLUSION

This study reveals that various KMM factors and models were used in previous studies published from 2020 to 2025. Of the 103 KMM factors, the most widely used in previous studies were in the process category, including organizational culture, types of knowledge sharing, and strategy and purpose. Based on the factors that make up the KMM model, it can be seen that of the 17 KMM models, the models used in previous studies had the most advantages in the process category, such as the Army KM3, the Infosys KM maturity model, and the American Productivity & Quality Center (APQC) model. Furthermore, based on the objectives of the KMM model, it can be seen that out of 17 KMM models, the models used in previous studies mostly had the objective of assessing the maturity level of Knowledge Management (KM) implementation, such as the APO Framework, the developed holistic model of organizational knowledge management maturity, and the Jääskeläinen model. The results of the SLR show that there is still little research on KMM factors or models in the library sector. One publication discussing the KMM model still has problems. In that study, the KMM assessment was based on the total score of all criteria/components/factors, which risks bias if one of the criteria required at the initial maturity level has not been met. Based on the issues and results of the SLR conducted, the researchers plan to develop a knowledge management maturity model for the library sector in the next study.

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