Analysis of Knowledge Audit Models via Life Cycle Approach

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Abstract. Knowledge audit needs to be exercised in conscientious manner as it is the basis of knowledge management initiative. This paper illustrates the importance of knowledge audit in attempt to preserve and exploit organisational knowledge and analyses existing knowledge audit models by examining the step-by-step audit processes through the three main phases of audit cycle. A flexible KA model that is adaptable to different business environment is proposed based on the outcomes of the comparison analysis performed.

Keywords: knowledge, knowledge management, knowledge audit.

1. Introduction

Initiatives to streamline the activities and processes of creating, managing and exploiting knowledge to generate enduring values from organisational intellectual capital or knowledge-based assets can be seen in many entities in the current economy landscape. In the broadest context, this scenario is known as *knowledge management* (KM).

Knowledge, the core element of KM, is the strategic commodity that provides means of creating innovative products and services, as well as determines the creation of sustainable competitive advantage and economic of wealth of an organisation, must be well-protected and safeguarded from external leakages [1] - [6].

[7] identifies four (4) different types of KM projects that organisations can embark in their attempt to take full advantages of their organisational knowledge. These KM projects can be grouped into i) creation of knowledge repositories for easier knowledge retrieval; ii) improve knowledge access for better knowledge sharing; iii) enhance knowledge environment; and iv) manage knowledge as competitive and strategic assets.

Several literatures such as [8] - [10] have identified that k*nowledge audit* (KA) is one of the most important and critical activities in any KM projects. According to [8], "…knowledge audit is the undisputable first step in a knowledge management initiative …". This view is also seconded by [9] that emphasises enforcement of knowledge audit is one of the critical first steps in any KM activities.

A well-planned and well-executed KA helps organisations to better understand their knowledge capitals in terms of identifying existing and unused knowledge; determining the essential knowledge that is required to support organisational goals and improve performance; as well as discovering experts and best practices. These outcomes help to demonstrate organisational capability as it will put forward knowledge blockages, bottlenecks, relevancy, accuracy and cost, thus assist organisation to assess its strengths and prioritise areas for improvements. Outcomes of effective KA also provide relevant and required input in the development of effective KM projects. In addition, it may inculcate positive knowledge environment as staff would be more appreciative and cooperative if the outcomes are made transparent and help them to perform better.

This paper analyses ten (10) different KA models using audit life-cycle approach and highlights the strengths and weaknesses of these models in the attempt to demonstrate the requisite for a flexible and agile KA model.

2. Analysis

This section explains the comparison analysis performed on ten (10) existing KA models using the comparison frameworks adopted from [11] and [12]. Section 2.1 briefly describes the key concepts used in this research, whereas Section 2.2 explains the comparison analysis in detailed.

2.1. Key concepts

Knowledge management (KM)

A set of processes that exploit and transform intellectual or knowledge-based sources of an organisation in generating new values, maintaining current values, improving decision making with the ultimate aim of attaining organisational goals and aims

Knowledge

Professional and personal intellectuals that can be shared and communicated which can be transformed into actions to make informed decisions

Knowledge audit (KA)

An assessment of organisational knowledge resources to determine organisation knowledge condition by identifying existing knowledge, critical knowledge, untapped knowledge in order to establish KM needs, strengths, weaknesses, opportunities, threats and risks

Audit life-cycle

Systematic set of interrelated audit activities that transform the scope, objectives and criteria of audits into findings and conclusions [20]

2.2. Comparison analysis

A review of published literature shows that several studies have been conducted in the KA domain such as by [9], [10] and [12] – [15]. However, most of the existing KA models proposed in the studies are generic and lack details on the activities and processes involved in each phase of KA.

A comparison analysis of ten (10) KA was performed based on breadth and depth dimensions. The breadth dimension adopts the audit life-cycle where the activities in each of the three (3) main phases of audit life-cycle are evaluated as depicted in Fig 1.
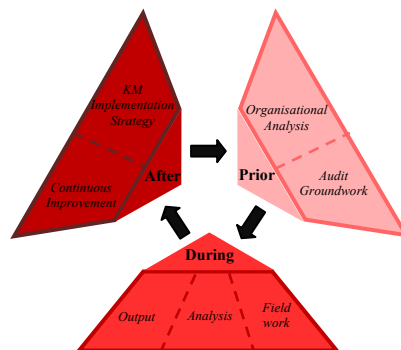

Fig. 1: Main phases of KA life-cycle.

The phases and elements being analysed in the breadth dimension are as follows:

a) Prior to the conduct of knowledge audit (Phase 1)

i. Organisational analysis –the background check on the organisation to be audited such as the goals, mission, organisational structure, infrastructure, industry benchmarking, etc

ii. Knowledge audit ground work – preparation of the audit objectives, team members, time frame, costs, constraints, data collection methods and tools to be employed for the audit, audit program, etc

b) During the conduct of knowledge audit (Phase 2)

i. Knowledge asset – identification of the existing available and unavailable knowledge assets and assess their impacts to the current and future needs of the organisation

ii. Knowledge process – identification of the knowledge flows, sources, destinations, purposes, criticality level of the current knowledge assets

iii. Knowledge audit output – outputs that are produced at the conclusion of knowledge audit conducts

c) After the completion of knowledge audit conduct (Phase 3)

i. Continuous improvement – the inclusion of any continuous improvements implementation and assessment activities

ii. KM implementation plan/strategy – the implementation plan for new or improved KM plan/strategy based on the findings and outcomes of the knowledge audit exercise

The depth dimension assesses the comprehensiveness of the framework in terms of the detailed descriptions and explanation of each activity included in the framework. This dimension is divided into three (3) levels, namely:

a) Descriptive – the framework provides only a theoretical description of phases or activities in knowledge audit conduct

b) Procedural – the framework provides a structured step-by-step description on the activities to be conducted in knowledge audit conduct

c) Practical – the framework provides instruments or tools that can be utilised during the knowledge audit to elicit and analyse collected data

3. Analysis Result

Fig. 2 illustrates the comprehensiveness of the KA models for each activity the three phases of the audit cycle. It can be seen that only a handful of KA models occupy the upper segment of the diagram, indicating that only several KA models elicit the detailed activities of the KA process, whereas the majority of the KA models provide only procedural or descriptive explanation on the process.
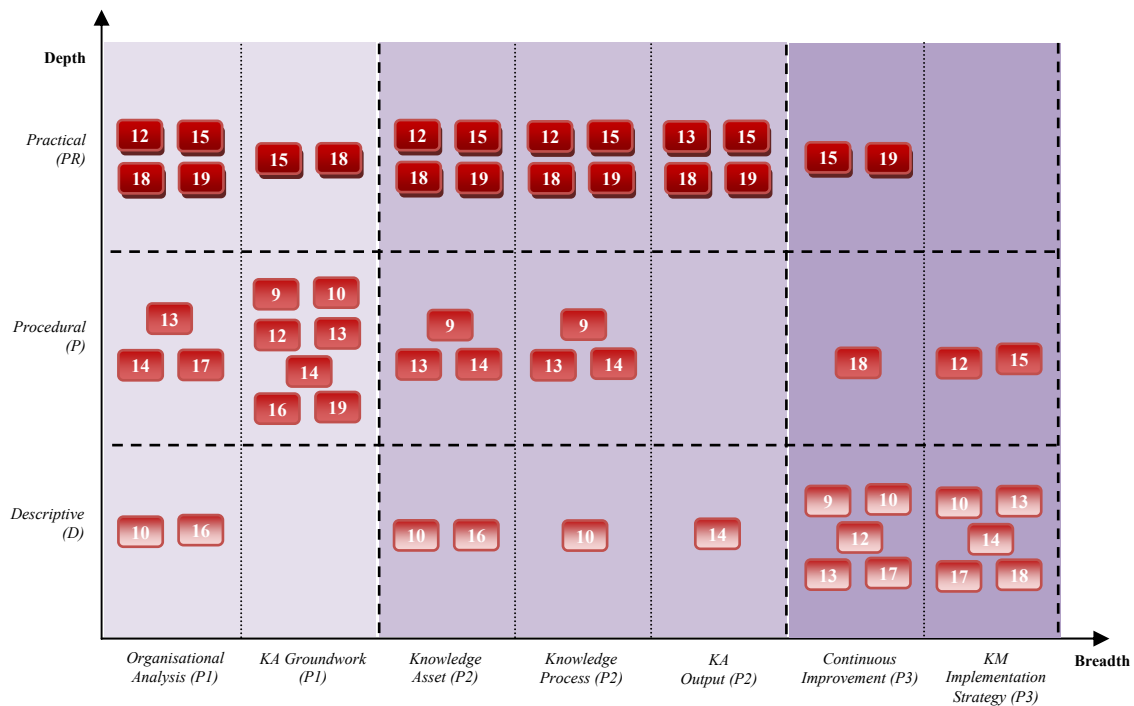

Fig. 2: Analysis of existing KA models.

Most of the methods concentrated on the lower part of the diagram, which shows that these methods provide only theoretical description and structured step-by-step framework in conducting knowledge audit. Only a small number of studies such as [15], [18] and [19] go further by providing details on information elicitation and analysis instruments.

Table 1: KA model analysis by authors

Authors / Activities (Phase)	[9]	[10]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]
Organisational Analysis (P1)	-	D	**PR**	P	P	**PR**	D	P	**PR**	**PR**
KA Groundwork (P1)	P	P	P	P	P	**PR**	P	-	**PR**	P
Knowledge Asset (P2)	P	D	**PR**	P	P	**PR**	D	-	**PR**	**PR**
Knowledge Process (P2)	P	D	**PR**	P	P	**PR**	-	-	**PR**	**PR**
KA Output (P2)	-	-	-	**PR**	D	**PR**	-	-	**PR**	**PR**
Continuous Improvement (P3)	D	D	D	D	-	**PR**	-	D	P	**PR**
KM Implementation Strategy (P3)	-	D	P	D	D	P	-	D	D	-

In summary, only 29% of the activities are being practical (annotated as *PR* in Table 1), which mostly concentrated in the activities in identification of knowledge asset and knowledge process. 27% of the activities are being elaborated in procedural (*P*) manner, which concentrated on the groundwork activities prior to the conduct of KA. Whereas, 23% of the activities are only being descriptively (*D*) elaborated and focusing on the activities after the conclusion of audit such as continuous improvement practices and KM implementation strategy. 21% of the activities are not being mentioned at all by the KA models being analysed and the majority of this omission is in defining KA output.

Table 2: KA model analysis based on the phases in KA life-cycle.

Depth (%) / Activities (Phase)	Descriptive (D)	Procedural (P)	Practical (PR)	Not Mentioned
Organisational Analysis (P1)	20	30	**40**	10
KA Groundwork (P1)	0	**70**	20	10
Knowledge Asset (P2)	20	30	**40**	10
Knowledge Process (P2)	10	30	**40**	20
KA Output (P2)	10	0	40	**50**
Continuous Improvement (P3)	**50**	10	20	20
KM Implementation Strategy (P3)	**50**	20	0	**30**
TOTAL PERCENTAGE	**160**	**190**	**200 29**	**150**

4. Conclusion

Some models such as [15], [18] and [19] have included quite substantial explanation on the processes of conducting KA. However, additional description may be expected to allow practitioners to adopt the models in order to be utilised in conducive and effective manner, such as in the areas of monitoring the outcomes of the audit for continuous improvement as well as ways to leverage KA output for KM project implementation. KA groundwork may require additional elaboration to allow the process involved to be practicable and viable.

In addition, the present KA models are also static in nature, in a sense that they may not be flexible and agile to adapt and accommodate the different requirements of KA conduct in various environments. This rigidity may not be able to fully meet the requirements of the organisation, thus the outcomes of the KA may not be directly valuable. As such, a KA model that is dynamic which can be acclimatised to audit objectives, case companies' nature and size as well as some other characteristics defined prior to the audit is advantageous as it provides a tailor-made method that suits to the requirements and environment of auditee. Thus, the results and output of the audit exercise will be more accurate and realistic.

5. References

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