Knowledge Management Lifecycle Model in Islamic Banks

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ABSTRACT: Literature addressed how conventional banks have successfully implemented knowledge management strategy using various models to support their business performance. Meanwhile, limited studies have been proposed regarding how Islamic banks manage different knowledge to support their business process. By using knowledge management lifecycle theory, the authors studied knowledge management process within two branches of Islamic Banks in Central Sulawesi. Data were gathered through observation, written material, and in-depth interviews with key informants from both banks. The findings show the knowledge management lifecycle model within Islamic banks does not necessarily follow the theoretical model built in conventional banking organizations because Islamic banks have unique characteristics. Islamic banks have to integrate the knowledge into Islamic values and norms before it is stored, shared, used, and improved as showed in the theoretical construct. As a result, the knowledge management lifecycle model was revised according to Islamic banks characteristics.

Keywords: Knowledge Management, Knowledge Lifecycle, Islamic Bank

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1. Introduction

Knowledge is considered as a vital resource for modern organizations. Organizations commit high effort to manage their knowledge effectively to support their business operation. Effective management of knowledge has been described as a critical ingredient for organizations seeking to ensure sustainable strategic competitive advantage [1]. Individuals within an organization possess their own unique knowledge and bring it to the organization. This causes an organization to possess a diversity of knowledge because workers bring their previous education, experience, knowledge, and expertise to add value to the organization [2]. Prior studies [For example: 3, 4] highlight that firms which apply knowledge management perform better innovation in terms of produces and management strategy.

Innovation is a key success for Islamic banks [5]. The success of the innovation relies on the availability of various knowledge and its knowledge management systems [6]. Even though, previous studies [e.g.: 1, 7, 8] have found the importance of knowledge management to improve organizations performance, there are many aspects of the knowledge management that are less well understood. We still know relatively little about how new knowledge arises, stores, shares, and uses in a knowledge management lifecycle in particular within Islamic bank contexts. There are some scholars [e.g.: 6, 9] who studied knowledge management in Islamic banks, but their studies merely focused on comparison of knowledge management between Islamic and conventional banks, and on the building of information systems for knowledge management in Islamic banks.

Lack studies focus on building a knowledge management lifecycle in Islamic banking industries might lead to poor understanding of how knowledge should be managed across the knowledge lifecycle in support the banks business process. Through the use of knowledge management lifecycle theory, this study attempts to provide in-depth insight into knowledge management lifecycle of Islamic banks. The aim is to shed light on a better strategy of knowledge management within Islamic banks and to build a model of knowledge management lifecycle according to Islamic banks contexts and characteristics. In addressing the problem, the authors will answer the following research questions: *How is knowledge management lifecycle Model in Islamic banks? And How the knowledge is managed across the lifecycle stages?*

The structure of this paper is as follows: following this section, literature review is discussed in the second section. The methodology is presented in the third section, while result and discussion are presented in the fourth and the fifth sections respectively. Conclusion and future research are presented the sixth and last sections.

2. Literature Review

2.1 Related Studies

Scholars have carried out a number of research on knowledge management within government and private organization contexts. The organizations are included manufacture companies [10, 11], insurance [12, 13], transportation [14, 15], and banking companies [16-18]. All those studies mainly focused on conventional business organization with characteristics are different with Islamic business organizations such as Islamic banking.

Sanchez and Mahoney [10] focused on how knowledge management in a manufacturing company influence the products development. In their study, which involved workers in the product's development division, they found that a good knowledge management strategy can improve the products quality. The workers obtained and accessed innovative knowledge from other workers through the knowledge repository within the company.

Meanwhile, Huang et al., [19] studied knowledge management in an insurance company. Through in-depth interviews which involved 10 higher level employees within the company, they found that the use of technology in knowledge management improved their work performance. The higher level employees were able to generate creative and innovative ideas to produce new insurance products and new marketing strategies. They accessed knowledge storage in the company data based using information technology instruments.

Studies on knowledge management in Islamic banks organization contexts mostly focus on certain stages of knowledge management lifecycle or on building a certain system for knowledge storage. The studies were conducted in Islamic banks in Pakistan [e.g: 20] and United Arab Emirates [e.g: 9], and Nigeria [e.g: 21]. Abuazoum, Azizan, & Ahmad (2013), for example, only focus on knowledge sharing within an Islamic bank. Their study found that successful knowledge sharing is determined by workers motivation. An Islamic bank is required to consider determinant motivational factors in knowledge sharing process.

2.2 Understanding Knowledge

It is difficult to define what knowledge is. Davis [22] defines knowledge as "information organized and processed to convey understanding, experience, accumulated learning, and expertise as they apply to a problem or activity". Meanwhile, Gamble and Blackwell [23] divide knowledge into two types; "represented (explicit) and embodied (tacit) knowledge". Explicit knowledge is an objective and rational knowledge that can be expressed in words, sentences, numbers, or formulas (context-free), while tacit knowledge is a subjective and it is experiential knowledge that cannot be expressed in words, sentences, numbers, or formulas (context-specific) [24]. Within a broader context, knowledge is also understood as beliefs, commitments, action, and meaning which shows clear distinction with information [25].

Tacit knowledge is hard to define because "it consists of mental models, beliefs, and perspectives" [26] and it is implicit in our patterns of action and in our head for the thing with which we are dealing [27]. This characteristic makes tacit knowledge difficult to communicate to other individuals. The owner of tacit knowledge will therefore always "know more than they can say" and for this reason, tacit knowledge can never fully be in the possession of a firm [28]. Even though tacit knowledge is hard to articulate and communicate, tacit knowledge can be shared through socialization and externalization.

2.3 Knowledge Management Lifecycle Theory

A number of knowledge management lifecycle model have been proposed [e.g. 29, 30, 31]. Each of the model depicts knowledge management stages within an organization. Rebitzera, et al., [32] describe "lifecycle" as it includes loops between the several life phases and they give examples of such loops are the reuse and recycling of post-consumer products (originating in the endof-life phase) or recycling of production scrap. This means when products reach end of life phase, they can be recycled to produce new products. A lifecycle model is better explained in knowledge management models proposed by Evans, et al., (2014) and Hosseingholizadeh [31].

Evans et al., [30] propose a six-stage (identify, create, store, share, use, lean, and improve) of knowledge management lifecycle within organizations. Evans et al., (2014) argue that organizations gather knowledge from external and internal organizations. At the identify stage knowledge management involves eliciting codified and encapsulated knowledge assets (e.g., documents in electronic and print format stored in a knowledge repository and/or live demonstrations and observations of artifacts). At the identify stage subsequently involves analyzing and assessing the assets based on specific organizational rules, cultures, and evaluation criteria. If none of the knowledge are found through searching during the identified stage, A knowledge request may trigger the need for new knowledge assets to be created. The knowledge is, then, stored as an active component of the organizational memory. After it is stored, the knowledge assets are retrieved from the organizational memory, to be shared (disseminated/communicated) both internally and externally.

Meanwhile, Hosseingholizadeh [31] built a knowledge management lifecycle model from the extraction of 32 previous seminal publications. The model consists of nine stages of knowledge management in which it begun from goal setting, identification, acquisition, evaluation, organization, preservation, sharing, application, and finally an organization evaluate the effectiveness of the knowledge management. In the effectiveness evaluation stage, an organization get a feedback from the goal setting and the knowledge management process may return the first stage again.

Furthermore, Birkinshaw and Sheenan [29] proposed four stages of knowledge management. According to Birkkinshaw and Sheenan (2002), knowledge management is begun when organization creates knowledge through various activities. The knowledge is, then, mobilized to provide more concrete ideas. In further stage, the knowledge is diffused to entire organization to make it available for everyone. Finally, in the commoditization stage, knowledge turns into common-knowledge, or in economic language, or a public good.

3. Methodology

Since the focus of this study is on knowledge management lifecycle within two Islamic bank branches, case study research is a better choice. The cases study are two branches of Bank Mandiri Syariah and Bank BNI Syariah. A case study is appropriate for exploratory analysis when investigating contemporary phenomenon within its real-life context, and when the boundaries between the phenomena and the contexts are not clear [33, 34]. In addition, the case study also has strengths in term of the ability to deal with many types of evidence such as written material, artifacts, interviews and observations [33]. This evidence provides a wide range of information to the case being researched.

Data was collected through multiple strategies such as: written material, archival records, physical artifact, websites, observation and interviews [33, 35-37]. However, most data was obtained from in-depth interviews using the case study protocol which was targeted and focused directly on the case study topic and provided perceived causal inferences [33]. In-depth interviews involved five informants from Bank Mandiri Syariah and five informants from Bank BNI Syariah. The informants were recruited from the different level of the banks hierarchy which included Managerial level and Staff who graduated from Islamic education and conventional education institutions. The interviews were between 30 to 45 minutes each and they were tape recorded to preserve sense and meaning.

All data analyses broadly followed grounded theory data analysis method outlined by Strauss and Corbin [38] in that the data

analysis was carried out through iterations; open coding, axial coding and selective coding. The authors also took into consideration data conceptualization strategy from Urquhart, et al., [39] in gaining in-depth insight and understanding. The conceptualization process started from a simple process (description) where the researcher begins an initial understanding of the concepts at the level of categories and properties through open coding. Conceptual saturation was reached when no new categories were generated from the open codes and the gap in emerging concepts was filled [40].

4. Results

4.1 Case Study Description

This study was carried out in two branches of Islamic banks in Palu Central Sulawesi. The banks are Bank Mandiri Syariah dan Bank BNI Syariah. Both banks have relatively similar in employees number and business models. Bank Mandiri Syariah employs 43 workers in two branches in Palu, while Bank BNI Syariah have 36 employees in a single branch.

Bank BNI Syariah sells the product such as saving, deposit, and funding. Funding is focused on individual funding, micro industry, and corporate. Meanwhile, Bank Mandiri Syariah also sells products such as saving, giro, deposit, and consumers funding. In selling the products, Bank BNI Syariah incorporates Islamic term "syariah" in their products to show the bank compliance with Islamic law. For example, BNI Syariah has BNI Syariah multipurpose (funding), BNI Syariah Otomotif (car or motorcyle credit funding), and BNI Syariah Gold Investment. Bank Syariah Mandiri also does similar strategy by using Syariah terms in their product promotion on the website. Instead, both banks operate under Syraiah law, the banks still require collateral in any funding schemes offered to customers.

4.2 Knowledge Management Lifecycle

The findings of this study show that knowledge management lifecycle process within two Islamic banks mostly resembles to the previous theory. However, there is an important finding in this study which leads to improvement of the theory. Knowledge within Islamic banks is not directly passed to storage stage after it is identified or created. The knowledge is integrated through various mechanism to produce common knowledge to fit Islamic bank contexts before it is stored in the bank repository or employees memory. Each stage of knowledge management lifecycle within two case studies of Islamic banks is discussed in the following subsections.

4.2.1 Knowledge Identification and Creation Stage

Knowledge identification and creation within both bank Syariah was carried out through a number strategis such as network analysis or brainstorming sessions, analyzing and assessing the knowledge assets based on specific organizational rules and cultures, employees selection during the recruitment process, and through assessing document in electronic or print format. Brainstorming is usually practiced in the morning for duration 10 to 15 minutes before they start working. Employees express their ideas to the forum. When there is a brilliant idea proposed by an employee, the bank stored the idea in a print document or electronic storage for future use.

Meanwhile, employees' belief and values according to Islamic values is established through Friday morning prayer as a participant asserts "we pray every morning because it is the rule of management and after the praying time we are requested to give argument related to our job or propose new idea if we have one". This strategy is intended to establish strong Islamic perspective within employees' personality and behaviour. It is also could be considered a strategy to facilitate the institutionalization of knowledge creation processes at every phase of the interactions between tacit and explicit knowledge.

Source of knowledge of Bank Syariah is also obtained from external sources such as newspaper, television, and Internet. For example an informant from BNI Syariah stated that they often find new marketing strategies from newspaper and Internet. Books are also important knowledge sources for the banks. Books and brochures are sent by the central office to all branches. The staffs can use the books and brochures to possess certain knowledge related to their job as remarked by an informant from Bank Mandiri Syariah.

4.2.2 Knowledge Integration Stage

Integration is the most important stage of knowledge management lifecycle within both Islamic banks because the sources of knowledge are different. For example, some of their employees were graduated from Islamic education institutions, while others from conventional education institutions. In addition, knowledge which was obtained from media other than humans also have different characteristics which might not compatible with the banks' norms and values. This requires the banks to integrate the

knowledge to produce common knowledge which is understood by both groups of employees and adjusted to the banks' organization norms and values.

At this stage, knowledge integration is supported by some means such as information technology, intranet system, seminar, workshop, and regular praying. An intranet system was used for knowledge integration (such as circulating knowledge among employees) and for service provision purposes. Both banks have intranet systems that were developed by their central offices. Telephone is also commonly used for knowledge integration as stated by a participant as follow:

"We use a telephone to discuss a variety issues related to our products with our Sharia Advisory Board in the central office in Jakarta. Sometimes we come across a problem when we want to finance certain business and telephone is a good facility to use because we can talk directly with the source".

Routinization and directions are two mechanism to support knowledge and culture integration. Routinization is practiced through regular morning meeting and weekly praying. For example, Bank Mandiri Syariah use Friday morning praying to integrate conventional knowledge employees into Islamic knowledge and values. Meanwhile, Bank BNI Syariah practice Friday afternoon praying to build common knowledge among all Islamic-based and conventional knowledge employees. Praying is not only intended to build similar perspective toward the banks principles but it is also intended to establish common Islamic values and norms among the employees.

BNI Syariah regularly allocates budget to support religious activity. Each week they provide between 1-2 million budget for food and for inviting *Ulama* (A Muslim cleric). All employees are expected to increase their Islamic knowledge and build moral values based on Islamic teaching. Bank Mandiri Syariah established the corporate culture based on Islamic value which include excellence, teamwork, humanity, integrity and customerr focus. The bank cooperate with Islamic institutions such as Syariah Economy Banking Institute (SEBI), Tazkia Institute and Karim Business Consulting.

4.2.3 Knowledge Storage Stage

Once the knowledge has been deemed valuable to the organization based on the analysis and assessment in the *identification/creation* and *integration* phases, the knowledge, then, stored in storeage bins to allow future use [41]. Both bank Mandiri Syariah and Bank BNI Syariah store knowledge within an internal information system. This system allows employees to access all information they required to solve a problem or improve their knowledge. Bank Mandiri Syariah, for example, stores knowledge on their corporate website. Under *Edukasi Syariah* facility, employees can access various syariah knowledge on the website such as Syariah finance, Syariah wealth management, women role in family finance management, donation (*sadakah*), resignation (*tawakkal*), etc. This online knowledge repository helps employees if they need a solution for their job. An informant from Bank Syariah Mandiri stated that:

"If I do not know something relating to Islamic issues, I go there (website) to find Shariah fatwas and look into the Q & As (question and answer facility on the website), which discusses latest concerns in Islamic Banking".

Bank BNI Syariah also stores their valuable knowledge in their database which can be accessed all the time if required. The bank calls this knowledge as "business intelligence" because it plays a crucial role in the success of the bank's business operation. This intelligence knowledge was harvested from employees experiences, mass media and research. Bank Mandiri Syariah has three information system which is used to store their knowledge. They are; Human Resources Information System (HRIS), Learning Management System (LMS), and Competency Based Human Resources Management (CBHRM). Employees can use those information systems to access knowledge such as through e-learning system [42].

4.2.4 Knowledge Sharing Stage

There is a policy from the management of the banks to encourage staff to use information technology for the transferring and sharing of knowledge. The use of information technology for knowledge integration activities are based on the awareness of the staff themselves as said by a participant as follow:

"Management encourages staff to use IT for knowledge transfer and sharing; we let them increase their awareness of the important of IT for the knowledge sharing process. We do not allow staff to keep important information for their own benefits. They have to share it with other employees".

In terms of sharing knowledge, both Syariah Banks have established a culture of mutual teaching among employees as argued by a participant; "our company culture obliges senior staff to transfer knowledge to junior staff and vice versa". Another informant from Bank BNI Syariah also expressed the same fact as follow: "We often have interesting discussions and interactions with other staff in my workplace and I often get support from the division manager". This habit has become the banks' organizational culture which is understood as shared beliefs, values, and practices of a group within the organization. This habit is reflected in Tabligh (leadership) culture at Bank Syariah Mandiri.

Social media has become a strategic instrument to shared knowledge among employees within both banks. Both bank Mandiri and Bank BNI Syariah have Facebook and Twitter account for their employees knowledge sharing. Through the social media sites, employees can socialize and shared knowledge to establish common knowledge among them.

4.2.5 Knowledge Use Stage

Both banks Syariah activate their knowledge storage (whether from the bank's database or from the employees' memories) to be used in their routines jobs or daily business activities. Employees who have involved in a training or workshop have to implement their new skill and knowledge into their daily works. For example, a participant said:

"I took e-banking training for two weeks in Makassar central office. They taught us how to provide e-banking services such as SMS banking and Telephone banking. I use that knowledge to teach my customer and promote banking services to our customers".

Regarding teaching customers and promoting services, employees had obtained adequate knowledge sources through knowledge sharing and transfer. Employees who had ever worked at conventional banks use knowledge they obtained from training programs or from daily knowledge sharing to promote syariah banks' products such as mudharabah and murabahah financing schemes. Similarly, employees with Islamic knowledge-based obtained business and marketing strategy knowledge from their counterparts. This study shows a high significantly positive relationship between product knowledge and underlying principles followed by training, religiosity and perception. All employees can activate available knowledge to support daily work and practices relating to the banks business operation.

4.2.6 Learning Continuity and Improvement Stage

Bank Syariah Mandiri and BNI Syariah encourage their employees to continuously learn and practice through various strategis in order to accumulate knowledge and expertise. The banks held a number of training both technical and soft skills competencies. Bank BNI Syariah, for example, has held 123 training programs and involved 2890 employees across branch offices in 2014 [43].

The numbers of learning mechanisms have been applied by both banks Syariah to support their employees' learnig. One of those mechanisms is training program such as basic Islamic banking training and advanced Islamic banking training. All new and old staff are required to join a training program before they are fully employed or to improve their competencies. This training is aimed at providing them with latest knowledge and skill related to their job at Bank Syariah. Bank Syariah Mandiri, for example, has established a BSM Training Centre since 2003. A participant said "the training programs are oriented at improving competence, skill, attitude, the motivation of employees both in term of hard skill and soft skill including internalization and transformation of corporate culture.

According to a Manager of BSM the basic banking training for new employees is held for 3 months and other training to improve staff quality is held one month and two weeks such as "Know Your Customers training". In the Bank Mandiri Syariah annual report, it is stated that to add more specific skills and employees' quality, a variety of practical education and training programs have been on the run including service excellence, export/import, financing analysis, payment point, product knowledge, risk management, Syaria accounting, information system operation skills, management trainee, collateral taxation, leadership and stress management, financing problem solving.

5. Discussion

Knowledge within two banks syariah has been managed through five lifecycle stages which are creation or identification, integration, sharing, use, and improvement. The lifecycle metaphor allows this study to make sense of all the stages of knowledge development as well as the processes of evolution and exploitation, as it moves from one stage to the following stages [29]. A knowledge request within the Islamic banks may trigger the need for new knowledge assets to be created, if none

are found through searching during the identified stage.

New knowledge assets may also need to be created if existing knowledge assets only partially satisfy knowledge needs [30]. Islamic banks identified or created new knowledge from internal and external sources. Internal sources of knowledge was obatained from reading material provided by the banks and routines brainstorming before employees start working every morning. This type of informal meeting has been found as a effective moment to produce innovations that provide solutions for their organization [For example: 44]. It is also could be considered a strategy to facilitate the institutionalization of knowledge creation processes at every phase of the interactions between tacit and explicit knowledge [44] because the morning informal meeting also involve religious activities. This is also an effort to embed employees into the Islamic banks' institutional culture.

External knowledge sources was obtained from mass media and internet. External knowledge has been found to enhance process innovation performance within an organization [45]. External knowledge support employees to obtain new ideas and knowledge to enhance their work performances. In some cases, new knowledge may obtained faster from external sources [46] because the wide range of knowledge sources and suppliers.

Integration stage the most important stage of knowledge management lifecycle within both Islamic banks because the sources of knowledge are different. The ability of the banks to combine and recombine knowledge-based resources continuously in a creative and flexible way has resulted in common knowledge perception among employees. Common knowledge has been found can potentially reduces the difference (distinctiveness) of the specialized knowledge [47]. Due to Islamic banks possess specialized knowledge located within individuals and groups, integration become a strategic solution to combine the diversity of knowledge and make it understood for everyone.

Once the knowledge has been deemed valuable to the organization, based on the analysis and assessment in the *identify* and *create* phases as well as after it is integrated, it is stored as an active component of the organizational memory [30]. Nonaka [48] and Hansen, et al., [49] also suggest companies codify knowledge carefully and store it in single integrated storage or database. It is also suggested that only explicit knowledge can be stored and re-accessed in multiple times. Meanwhile, tacit knowledge is not possible to be stored in a storage or database system. Instead, tacit knowledge is stored in the mind of inventors or employees [50]. Explicit knowledge of the banks is stored in a database systems, while tacit knowledge is embedded in the banks employees. Routinization such as morning praying and othe informal meetings are instruments to help employees access tacit knowledge.

Knowledge assets are retrieved from the organizational or individual memories, to be shared (disseminated/communicated) both internally and externally [30]. Key success factors for knowledge sharing are organizational culture and information technology (IT) facilities [51]. Both syariah banks encourage mutual teaching from senior to junior staff. This habit has become the banks' organizational culture which is understood as shared beliefs, values, and practices within the organization [52]. Another study [eg: 53] argues that shared belief is usually emerged as interaction among workers continually practice in daily works.

Information communication technologies infrastructures such as the internet, intranet, telephone, and facsimile have become a familiar source of communication instruments within both Banks Syariah. Sharing knowledge among the employees were carried out through the utilizing those ICTs. The use of ICTs such as discussions via teleconferencing, video conferencing, and email lists for knowledge sharing has been addressed in previous studies [For example: 54]. The banks' social media sites have also become strategic instruments for knowledge sharing and transfer. This strategy has been suggested by previous studies in conventional organizations such as Panahi, Watson, and Partridge [55]. Kingston [56], even, strongly recommend organizations to use social media sites such as websites, Wikis, and Blogs to share knowledge among employees.

Once shared, knowledge assets can be activated (put to use) – their value can be extracted and applied throughout the organization, to solve problems, make decisions, improve efficiency, or promote innovative thinking [30]. Employees of the banks use the knowledge from the organizational or individual memories to support their daily tasks. The employees possess adequate Islamic and commercial economic knowledge, the help them in problem solving and decision making.

Davis [22] argues that knowledge is formulated through accumulated learning and expertise as they apply to a problem or activities. The syariah banks employees accumulate knowledge through continuous learning activities such as training from basic to advance kevek and regular brainstorming. This is a continuous learning culture encouraged by the management. Previous studies [For example: 57] argue this type of *learning* culture could *improve* the quality of professional practice,

satisfaction, and lifelong *learning* in order to improve employees's competencies and provide effective and quality services. New knowledge gained from continuous learning and improvement is store again in the banks and employees memories to allow future shared and use in the knowledge management lifecycle.

6. Conclusion

This study highlights the complexity of knowledge management in Islamic banks in which the process is influenced by knowledge characteristics, perspectives on knowledge, openness of firm boundaries and elements of knowledge sharing and combining [58]. The complexity of knowledge management across lifecycle within two Islamic banks was carried out through five stages. Previous studies such as Birkinshaw & Sheehan [29], Evans, et al., (2014), and Hosseingholizadeh [31] did not include "integration" in their knowledge management lifecycle model. However, this study found that Islamic banks have different characteristics compared to conventional organizations, which requires a new model of knowledge management lifecycle. After the knowledge is identified and created, it cannot be stored directly in organizations' database or memory. This highlights that making sense of the knowledge lifecycle conditions might require different knowledge management strategies under which characteristics of an organization.

The knowledge in Islamic banks should be integrated to meet the banks characteristics such as business process, culture, and vision because the banks are operated under Islamic values and norms. Knowledge in Islamic banks come from Islamic and non-Islamic external institutions which then require adaptation to meet the Islamic banks, vision, cultural, and norms. As a result, knowledge management lifecycle model is revised. A New model of knowledge management that meets Islamic banks characteristics is proposed as in figure 1.

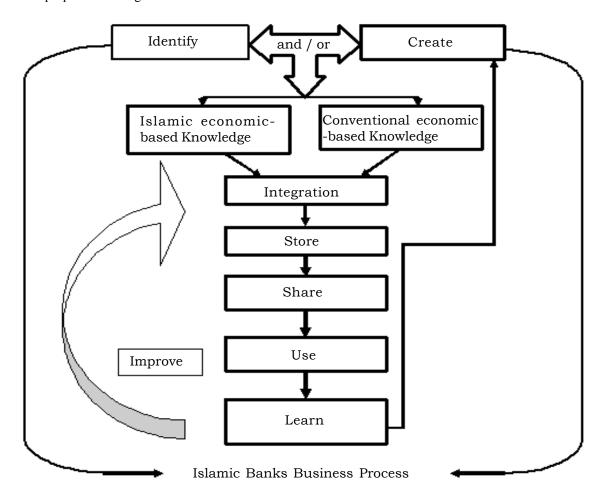


Figure 1. Knowledge Management Lifecycle Model in Islamic banks

7. Limitation and Future Research

This study relies on a limited number of case studies and considers *integration* as a new stage in Islamic banks' knowledge management lifecycle. Further studies could examine the challenge of knowledge integration in in different Islamic bank contexts. This study highlights one important findings is that knowledge management in Islamic banks does not necessarily follow knowledge management model proposed by previous studies which were conducted in conventional organization contexts because the nature of knowledge in Islamic banks is unique. Islamic bank possess conventional-based and Islamic-based knowledge which requires integration before it is stored, shared, used and improved within Islamic banks to support their business performance. Future research need to study how the integration process of all knowledge in Islamic banks should be managed in order to increase benefit and competitive advantage of the bank.

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