Review

Toward Somali Indigenous Knowledge Management: Hybrid Framework for Sustaining and Managing Somali Indigenous Knowledge

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Toward Somali Indigenous Knowledge Management: Hybrid Framework for Sustaining and Managing Somali Indigenous Knowledge

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Abstract: This chapter presents how social media platforms and their components could be integrated into the KMS for the purpose of managing and sustaining Somali Indigenous knowledge (IK). The discovery of knowledge and its utilization is now fuelled by the advancement of technology, which connects users to external sources through using different platforms. The rapidly increasing use of SM and mobile technologies create opportunities to form knowledge networks that can facilitate the process of creating, preserving, and sharing knowledge and skills that are unique to communities in the Somali context. Somali society being an oral society with rich IK and other cultural practices lacked a framework in place to organize the existing knowledge in various methods. The chapter refers to existing methodology E-learning and KM functions. This method first identifies functional similarities between SM, E-Learning, and KM systems and their interactions if they are properly integrated. The proposed framework consists of two functional parts; KM and SM. The KM part involves knowledge capturing, validation, formatting, storing, and distribution. SM part of the framework involves knowledge presentation, sharing, and application. Since the Somalis are said to be an oral society, this framework helps to capture and disseminate IK residing in knowledge holders.

Keywords: knowledge management; social media; tacit knowledge; indigenous knowledge

1. Introduction

This chapter explores the integration of social media (SM) systems and knowledge management (KM) technology to improve, capture, organize and deliver large amounts of indigenous knowledge (IK). In recent dates, the development of new technologies has enabled users to retrieve a huge amount of information using advanced tools. Due to the advancement of social media (SM), blogs, wiki, Facebook, Instagram, Twitter, Youtube, and others are being used extensively in our daily life. These technologies are being used by academia and business institutions to create and disseminate knowledge to learners and employees (Fullwood, Rowley, & Delbridge, 2013). Still the process and methods for retrieving information have limitations and are not valuable to some extent. Many similarities exist between SM, E-learning, and KM platforms and previous generations of information and communication technologies (González-Valiente, Costas, Noyons, Steinerová, & Šušol, 2021). Knowledge management (KM) is a field that is designated to create, store, transfer, disseminate and utilize knowledge for different purposes (Ahmed, Khan, & Ahmed, 2014).Managing knowledge in general and indigenous knowledge in particular has become an important and valuable input in the management of sustainable development programmes (Lwoga, Ngulube, & Stilwell, 2011).

1.1. social media and Knowledge Management

SM is the current driving force of the new Internet revolution; it plays a significant role in information dissemination among people. By effectively utilizing SM, the sharing of IK and Somali

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traditions could also be an innovative strategy to sustain this type of knowledge for the present generation, and the future generations to come. However, the natural relationship between SM and KMS cannot be denied and overemphasized, since they are compatible, complements each other(Jiang & Gao, 2010).

Indigenous Knowledge IK is the local knowledge that is unique to a given culture or society. IK differs from formal knowledge work systems produced by education institutions, research centres, business firms, and other professional bodies (Fullwood et al., 2013). IK is the basis for local-level decision-making in agriculture, healthcare, food preparation, education, natural resource management, and a host of other activities in rural communities(Warren, 1991).Even with the advance of Western education (print media) and, increasingly, electronic media, IK is still widely used in East Africa/Somali context for agricultural production, animal husbandry, health care, and conservation of natural resources. Although IK is widely used in rural communities, IK has not been adequately documented or validated and is not readily available outside these communities.

IK is defined as a systematic body of knowledge acquired by local people through the accumulation of experiences, informal experiments, and intimate understanding of the environment in a given culture,(Owiny, Mehta, & Maretzki, 2014).Explicit knowledge refers to the expression of words, numbers, images, numbers audio, video, or computer programs. While tacit knowledge includes insight, intuition, or a feeling of someone who is usually difficult to express (Schoenherr, Griffith, & Chandra, 2014). As such, Sustaining, retrieving and sharing IK using collaborative approaches are becoming more important today.

This chapter, however, proposes a new complete application of KMS with functions of SM as complementary support for sustaining and managing the IK. The current pattern of SM development is indicating that it will transform the traditional KM into richer and more accessible. Since the Somali community is said to be an oral society, a hybrid KM would help to access, preserve, and utilize the IK domains residing in the knowledge holders (tacit knowledge).

It can't be ignored that SM has transformed and influenced the knowledge ecosystems amongst various institutions; the re-examination of the key concepts about knowledge work systems will take a new path. All of these SM platforms work together to create a rich set of tools that allows users to find information and stay continuously connected to friends, families, and people with whom they share interests(J. Hemsley & R. M. Mason, 2012). Based on the principles of KM, people with the same interest or in the same knowledge domain tend to be connected and establish a community of practices (CoPs). Since SM enables KMs to be more collaborative, interconnected and it increases chances to preserve and share it among the users would be significant. As such, due to the way SM platform function, they might smooth the progress of making IK, information, and ancient events viral, such as viral tweets, or viral videos, in ways that were not possible before.

Despite the fact that SM supports knowledge distribution and creation, this chapter wants to support the existing works of literature that claim KM and SM could be integrated. Whereas, the Internet has drastically increased easy access and circulation of information, and knowledge across different channels (Tranos, 2020).

However, to successfully implement a knowledge management system (KMS), a technology readiness, especially information-communication-technology (ICT) maturity, is a requisite. Furthermore, a suitable technical platform is also necessary for integrating various technologies for KMS and supporting KM processes. This chapter wants to answer two questions pertaining to effective and efficient ways of integrating KM into SM in order to overcome existing barriers within knowledge ecosystem. How to sustain, preserve, and effectively manage IK is another question that this chapter wants to address?

Finally, this proposed framework was designed not only to remove existing barriers among SM users, knowledge holders, and knowledge users but also to enrich and enhance IK through liking KM and SM.

1.2. Problem Statement

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Somali society being an oral community in which transmission of knowledge, wisdoms and other cultural practices relay on traditional mechanisms including; storytelling, Agora discussions and informal gatherings. The advancement of technology disrupted the traditional knowledge management practices that Somalis had been using to pass knowledge and wisdom to the present generations and the future generations to come. Therefore, there is a pressing need to devise a hybrid KMS that compromises SM and KM functions that could be used to sustain and revive the indigenous Somali knowledge. Other challenges facing oral cultures are the disappearance of traditional knowledge and skills due to memory loss or the death of elders and the deliberate or inadvertent destruction of IK.

2. Functions of social media and Knowledge Management Systems

SM encompasses a set of platforms that enable "people to network, share information, and collaborate" (Hemsley & Mason, 2013). SM is a new paradigm that spreads fast in society, organizations, and academia and is used for different purposes. SM is employed in the institutions to support a new communication model by substituting one-way communication into multi-way communication. According to the literature reviews, there have been various perspectives of integrating SM and KM; E-learning with KM functions, KMS with SM functions are the most common architecture. The following diagram represents the architecture of KMS based on SM (Quoc, 2013).

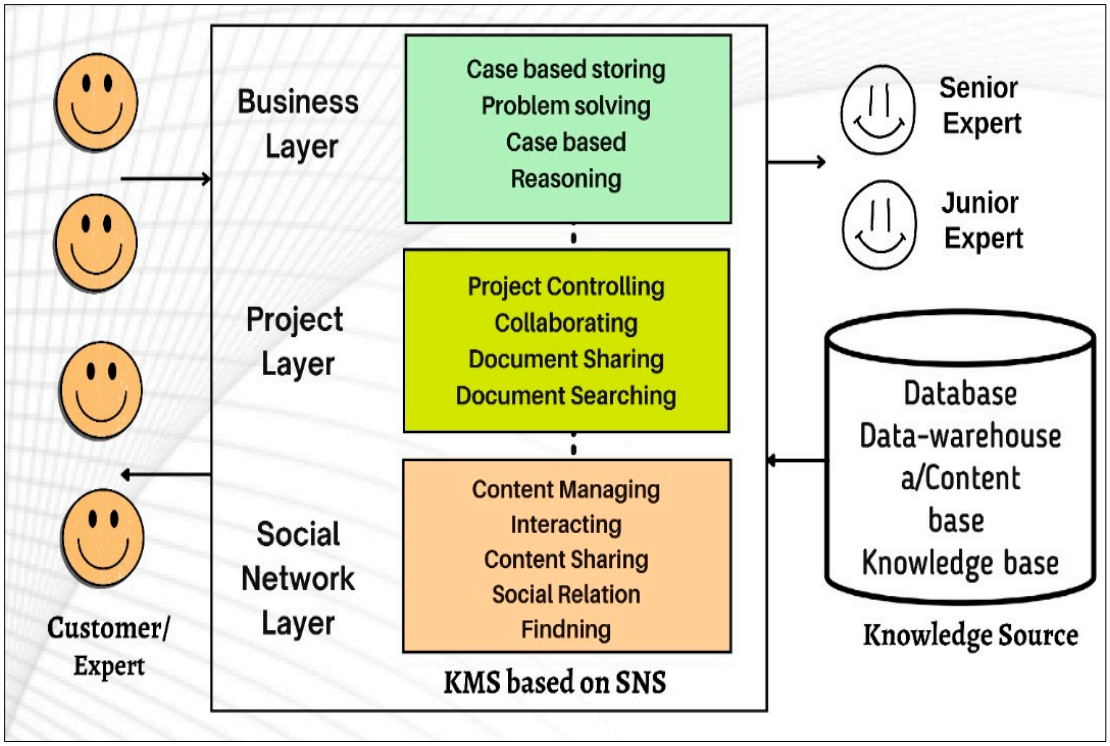

Figure 1. Architecture of KMS based on SNS (Quoc, 2013).

Through the demo KMS based on SNS, one of the most significant advantages of KMS based on SNS is to improve knowledge flow (relational capital) and ease its retention and dissemination.

Similarly, KM, LMS, and E-learning are compatible platforms; this is another approach to enhance teaching and learning activities if they are properly integrated.

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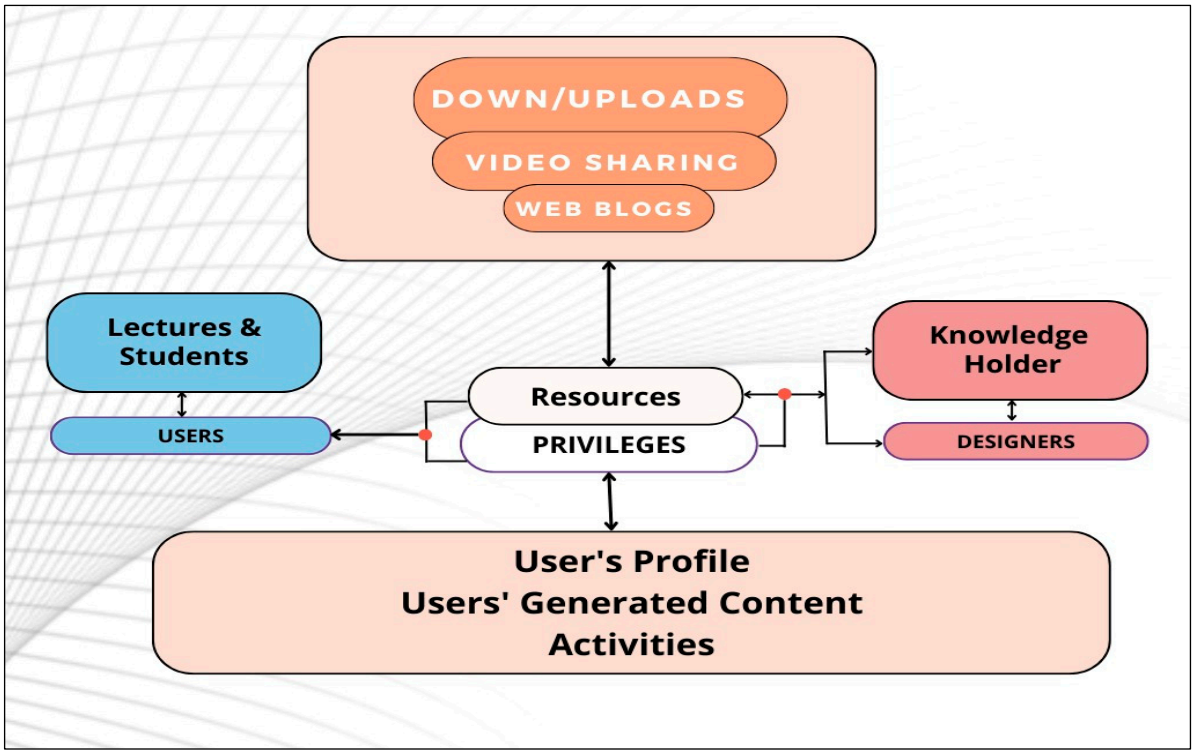

Figure 2. Hybrid Model of KM and E-learning (Madar, 2014).

The above figure shows the combination of KM and E-learning functional features to form a hybrid KM framework. This hybrid model supports both knowledge holders, learners, and instructional leaders (Madar, 2014).

SM such as wikis; blogs, Facebook, academia, research gates, and others allow collaborative working. Their integration into KM enriches the teaching and learning process if they are properly planned, configured, and integrated. Furthermore, they offer an effortless method for people to communicate, collaborate and consequently support the creation and dissemination of knowledge(J. Hemsley & R. Mason, 2012). Similarly, SM could also be used as an effective and accessible way of transmitting and sustaining the Somali IK across the loops of the SM. Aforementioned, storytelling is one of the mechanisms that adults transfer wisdom, and traditions to the younger generations, and using SM would allow future generation access to the Somali IK.

Knowledge creation and transfer processes have a strong social underpinning as they are dependent on interpersonal networks (Crevoisier & Jeannerat, 2009). Research on individualinteractions has exposed how actors and community-level attributes facilitate knowledge creation and mobilization (Allard & Ferris, 2015). Knowledge is a collective activity embedded in social interactions within both economic and social contexts (Antonelli, 2006). In recent years, there are many organizations that put into practice SM such as blogs, wiki, internal networks, and so on as communication tools to facilitate knowledge sharing between the knowledge holders and users across the society (Panahi, Watson, & Partridge, 2013).

Several studies have indicated a positive impact on the application of SM to knowledge sharing. As such, SM can be handy and would make easy knowledge sharing activities within and across knowledge holders, users, and contributors (Zaffar & Ghazawneh, 2012).

Likewise, SM would be useful tool for Somali knowledge holders and users use it to present and share IK in more accessible ways. KM and SM if they are properly integrated would enhance and improve management of the ingenious knowledge, which may be difficult to capture and disseminate across different channels. Linking SM to KM would again increase access to IK and accelerate its dissemination activities through various SM channels (Antonelli, 2006). Building strong IK

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community of practice (CoP) through incorporating SM functions into KM functions KMS would play a crucial role in sustaining the IK.

On contemporary social networking sites, participation rates are "astounding", since "huge information and data are freely revealed by the user. Similarly, the number and type of knowledge sharing on Web 2.0 platforms including profiling, blogging, posting, tagging, and reviews is incremental and continues to increase (Paroutis & Al Saleh, 2009).

People are liberally contributing to online knowledge communities of all kinds, even when the benefits go directly to different purposes, let it business or education matters(Allen, 2008). This same applies to knowledge holders if they are given to a platform that connects them to knowledge users and contributors, and then both tacit and explicit knowledge holders can freely contribute to knowledge communities.

3. The Proposed Integrated Framework of KM and SM

The proposed framework consists of two functional parts; KM and SM. The KM part involves in knowledge capturing, creation, validation, profiling, formatting, storing, and distribution. SM part of the framework involves in knowledge presentation, sharing, and application. Knowledge presentation refers to the ways knowledge is displayed to the organizational members. While other existing KM models illustrate three concentric circles interacting directly to one another; creation and sensing, organizing and capture, sharing, and dissemination. The proposed framework shows a process in which KM and SM are integrated to make KM richer and more accessible. This framework was designed to sustain the IK by establishing interaction among the holders, contributors, and users of IK. This framework has a central repository that stores knowledge. Knowledge profiling and validation are other functional features that verify the authentic sources of different knowledge domains. The validation mechanisms have a role to prevent knowledge manipulation and information distortion, which may infringe intellectual property rights.

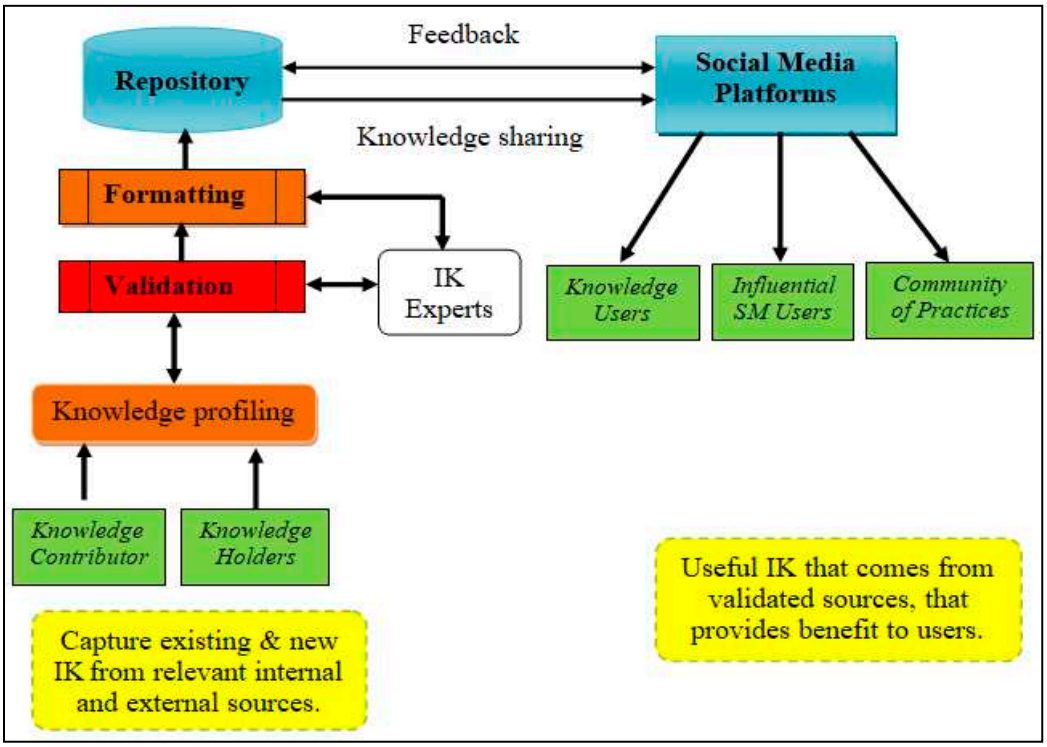

Figure 3. Madar's Indigenous Knowledge Management Framework.

The major challenges to the management and preservation of IK are issues relating to collection development, intellectual property rights, access and the preservation media. In this regard, this framework is designed to support different forms of knowledge, and disseminate them through

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different channels of the SM. Most importantly, the proposed framework captures tacit IK from external sources, and converts it into explicit IK. In this framework, the components and functions of the SM and KM system are integrated into two different levels by considering their similarities. This framework illustrates that the function of SM is to ease sharing and utilization. In contrast, KM's role is to capture and transfer both explicit and implicit knowledge. Knowledge profiling and validation is also core functions designated to ensure quality information provided to different levels of users.

Additionally, this framework has IK experts, whose function is to validate and verify content and quality of knowledge domains. Knowledge validation is a painstaking process of continually monitoring, testing, and refining the knowledge base to suit the existing or potential realities. Experts in the validation process review, test, and validate their knowledge base to keep up with the latest knowledge in the discipline and discard the outdated knowledge. The KM design perspective is an alternative that relates to holders, users, contributors of knowledge and sharing it with SMs users.

In this framework, holders are reflective tacit and explicit knowledge holders in this case are said to be IK holders, who struggle to share their knowledge with knowledge users. The SM perspective is a supportive function that complements with functions of the KM; it relates to knowledge users, CoP, and influential SM users for dissemination purposes. This perspective has two essential aspects. According to the perspective, this chapter incorporates each element into a new conceptual framework that integrates the significant component of KM and SM frameworks.

Similarly, this framework supports reluctant knowledge contributors who like to share knowledge with their groups through using collaborative SM features including Google community and similar technologies. These technologies would help reluctant knowledge contributors establish their own knowledge networks. Open knowledge contributors could use both layers of the proposed framework in different capacities; they can join to specific CoP, or they could be contributors, and users.

4. Conclusion

This chapter explores effective and efficient approaches to integrating KMS into SM, and how they support knowledge transfer and creation. Basic functions of KM and SM components are discussed and their common features are investigated. The proposed integrated framework has two layers that are interconnected, and interactive, which allows KM layer and SM layer to establish collaborations within the knowledge ecosystem.

The use of social networking tools will help more holders, users, and contributors of IK to connect and form huge knowledge networks.

This framework will also improve the process of knowledge discovery and knowledge sharing across virtual communities and indigenous knowledge holders. Transfer between tacit and explicit knowledge in both directions would enrich the existing IK through profiling and validating potential knowledge sources.

Through analysing the main functions of KM and SM, this chapter proposed a hybrid KMS framework that contains the two functions to conserve the IK. This pattern is adaptable to learning society, which can create a flexible environment for the development of IK.

This chapter addresses the above gaps and contributes to this literature by offering an IK perspective of how these processes vary across space and whether they follow or challenge established geographies of knowledge.

Using this integrated framework would help Somalis to preserve and sustain IK, and overcome difficulties in practicing their traditions.

Future research should focus on other factors or see the impact of virtual communities on IK, especially those related to conflict management and peace building.

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