Knowledge Sharing Architecture for UNDP Ethiopia

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Abstract

Knowledge sharing is a process of exchanging skills, experience, and understanding among people. This phenomenon is increasingly becoming critical within the United Nations Development Programmee (UNDP). UNDP had introduced its own motto of becoming a 'knowledge-based organization' has and since 2008 developed a comprehensive Knowledge Management Strategy (KMS). Part of this strategy is a web-based knowledge sharing tool called Teamworks (TWs) currently used in many of UNDP's Country Offices including in Ethiopia. The problem, however, is that staff often shy away from using TWs due to poor motivation, absence of proper understanding about the full benefits of the tool, as well as other technical problems.

Taking the experience of the Country Office (CO) in Ethiopia, this study presents information and discussion on the development and implementation of the UNDP's knowledge sharing practice. In conducting this brief research, wide literature review was carried out as well as data was gathered through a set of questionnaires presented to different group of staff. Information obtained through these methods was further supplemented by both desk study and authors' participatory observation. The objective of the research focused on identifying barriers and enablers in using TWs as a knowledge sharing tool within the CO in Ethiopia. The outcome of the study showed that despite the rhetoric, TWs is still only moderately used at the CO level and that its full utilization by staff is dependent on several factors. These factors included whether there exist personal benefits in choosing a particular platform, supervisors' recognition, impact on annual assessment of staff performance, and individual own awareness to certain aspects of social media interfaces. At the core of the finding was that the availability of any of the above factors could be an enabler while the absence becomes a barrier. On the basis of that, the research recommended both system level and technological solutions.

Keywords: Knowledge Management; Knowledge Sharing; Social Networking; Social Media, Teamworks; Knowledge Sharing Architecture; Barriers and Enablers

1. Introduction

In modern business operations organizations want to remain competitive and successful. To that end they must create, capture, keep, and share knowledge and expertise efficiently and effectively. According to Boer [1], this is the main reason why many organizations are increasingly showing interest in the field of managing and sharing knowledge. Alarbi *et al.* [2] argue that the continued advancement in the field of Information and Communication Technology (ICT) has further accelerated the chances for continued use of knowledge sharing practices in knowledge creation and acquisition. One such organization is UNDP.

As a global organization, UNDP works in 177 countries including Ethiopia with thousands of staff working with numerous partners and helping billions of people around the world. This organization possesses immense knowledge through its diverse staff whose experience have to be systematically captured, organized, and made accessible to all. On that basis, UNDP has globally positioned itself to become a knowledge-based organization. Since 2008 it has developed a new KMS aimed at creating human and technical infrastructure. Accordingly the UNDP's CO in Ethiopia has introduced a web-based

knowledge sharing and social networking platform known as TWs to its staff as well as partners. TWs is a secure, globally available Web 2.0 Extranet platform developed to enable UNDP to leverage the collective knowledge of communities, individuals, programmes and projects [3].

Within the forgoing context, the concept of knowledge sharing architecture depicts a design through the components of people, knowledge objects, technical infrastructure and knowledge management processes enabling the process of sharing knowledge [4]. For such architecture to establish a successful knowledge sharing design and to function properly, any organization need to fulfill four steps, namely, identifying the drivers for the knowledge sharing process; establish the knowledge sharing community; strategize to implement the initiatives; and to ensure sustainability [5]. This shows that the main components of knowledge sharing architecture include the knowledge components itself, the KM process, the IT and the organizational aspects.

At the UNDP Ethiopia, many aspects of the above components of the KS architecture are still evolving. As such the UNDP's KMS acknowledge that the introduction of knowledge sharing practice is a critical institutional success factor. One pillar of the strategy is, therefore, the consolidation of the organization's existing knowledge networks, including a particular emphasis on outward facing networks, into a unified global platform managed via the TWs networking system. However, the use of such system is rarely appreciated and staff still tends to use more of the previous email based knowledge sharing. Many shy away from using the new web-based system to share their knowledge, expertise and best practices with their colleagues, UN family and partners.

There are several factors that impede the utility of new initiatives, such as TWs. These factors, which we call in this paper as barriers and enablers, need closer scrutiny. Taking the TWs as a knowledge sharing platform within the UNDP CO in Ethiopia as an example, therefore, this study will explore these enabling and/or impeding factors. The authors presume that though the design of TWs embodies the approach required in mitigating wastage of knowledge and information within the organization under discussion, at the same time insufficient institutional motivation, lack in knowledge sharing culture, as well as technological barriers make the current knowledge sharing processes difficult. Consequently we try to recommend what should be done to enhance the organization's knowledge sharing practices.

2. Related Work

The concept of knowledge is far complex than the mere availability of information. Collison and Parcell [6] argue that knowledge is much richer than data or information not only in its content but also in aspects of its usefulness. According to them, knowledge exists in a hierarchy in which value is added as one progresses from capturing to creation to sharing and application of the concept. In the field of Computer Science, knowledge is often confused with other concepts such as data and information, which, in turn, are regarded as the basis of knowledge. Theirauf [7] delineates the three inter-related components as follows: data is the lowest point or an unstructured collection of facts and figures; information is the next level, and it is regarded as structured data; whereas knowledge is "information about information". Zins [8] claims that both the three elements are part of a sequential order. Data are therefore the raw material for information, and information is the raw material for knowledge thereby depicting that data through time evolves to information which sequentially transform to knowledge.

For the purpose of this study, the authors apply the definition stated by Davenport and Prusak [9] who depict knowledge as "a fluid mix of framed experience, contextual information, values and expert insight that provides a framework for evaluating and incorporating new experiences and information".

Such knowledge could exist in different formats: in documents or knowledge repositories as well as in human minds. According to Gamble and Blackwell [10] knowledge originates and is applied in the 'mind of the knowers'. When it comes to organizations, it often becomes embedded not only in documents or repositories, but also in organizational routines, practices and norms. From the KM perspectives, knowledge could be explicit often found in documents or tacit which is found in human minds as unwritten, unspoken or hidden knowledge. According to Nonaka and Takeuchi [11] these two forms of knowledge are strongly linked and cannot be managed independently.

Irrespective of in what form it exists, knowledge, in order to be useful, it should be properly managed, transmitted and expanded. Senge [12] contends that sharing knowledge is not simply about giving people something, or getting something from them. According to him, the concept also denotes helping to solve problems together. Hence, knowledge sharing takes place only "when people are genuinely interested in helping one another develop new capacities for action; it is about creating learning processes" [12]. The measure of knowledge value is, therefore, whether it is shared or made easily assessable to its users. Moreover, knowledge sharing needs time and a common point or a platform where people meet, connect and share.

Historically, the practice of sharing knowledge is as old as human existence while the management aspect that is very recent. Even though some literature uses these concepts interchangeably, the two are different. It is the advent of knowledge management field that has helped knowledge sharing in getting significant attention. Duhon [13] states that knowledge management is "a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets". Whereas for King [14] knowledge management is "the planning, organizing, motivating, and controlling of people, processes and systems in an organization to ensure that its knowledge-related assets are improved and effectively employed". Yet Awad and Ghaziri [15] try to depict that the concept of Knowledge Management as "a newly emerging, interdisciplinary business model that has knowledge within the framework of an organization as its focus".

Despite varying emphasis, all these actors feature the existence of key components in any KM discourse; which are: people, processes, and system. These components in turn form the KS architecture. In that context neither such literature nor the experience under discussion at the CO in Ethiopia level shows the lack of which specific factors enable or impede the organization's KS effort. Due to that gap both management and staff remain unable to clearly establish the usefulness and contribution of KS tools in general and TWs in particular, albeit only in very broad terms.

3. The Proposed Solution

This section proposes ways that help to enhance knowledge sharing architecture for the UNDP CO in Ethiopia. These recommendations are presented in the form of both system level and technological solutions based on the current research.

3.1 Structural Solutions

There are motivational methods to encourage staff's knowledge sharing behavior within a given organization. In such a situation, according to Bock *et al.* [16], however, the challenge is in keeping people motivated and interested in sharing what they know and experience. At the structural level, therefore, organizations like UNDP CO Ethiopia should consider the following approaches:

- Introduce structures and motivating methods to encourage staff not to keep their knowledge for themselves and refrain from sharing with others. To that goal, management could evaluate staff annual performance by recognizing individual contribution in knowledge sharing and include it in the RCA.

- Knowledge sharing success should be seen in its totality, not only in just setting up the various platforms but also whether such efforts involve appropriate knowledge exchange must be an equal concern.
- Conduct periodic knowledge audits, tailor-made trainings complemented by initiating of discussions on targeted thematic issues. That will further help to socialize the knowledge sharing among its staff, management and wide stakeholders.
- Aiming beyond the technical and operational aspects both management and staff must work in unison and commit themselves to the principle of 'Delivering as One'. That helps in bringing a comprehensive understanding of knowledge sharing as neither a onetime assignment nor an isolated activity.

3.2 Technological Solutions

The introduction of Web based technology and social networking platforms continue to play significant role not only in connecting people but also in empowering individuals in sharing their knowledge and experience. The following technological solutions are therefore recommended as enablers in the specific case of TWs' utilization for particular needs of the CO in Ethiopia:

- TWs should preferably be open like an outlook interface so that the logging is not required whenever staff look for or share for information/knowledge. To this end the application of Single Sign-On (SSO) which is a session/user authentication process that permits a user to enter one name and password in order to access multiple applications [16] is recommended. Then SSO can be synchronized with the existing UNDP's tools and systems such as e-mail, Intranet, and Atlas (UNDP's internal work-tool for finance, projects and HR matters). SSO encourages staff to use TWs more frequently than the current intermittent levels.
- Due to its collaborative environment, UNDP's working system requires teamworking which includes writing reports, concept notes, Terms of References (ToRs), etc. in groups. To facilitate this, the introduction of additional features such as Workflow technology would enhance the TWs platform as a knowledge sharing tool.
- TWs consumes high Internet bandwidth which otherwise constrains the long-term functioning of the KS system. This requires changing or transforming the existing TWs's design to have reduced page. Given the slow Internet connectivity speed in the host country (Ethiopia), optimizing the content of the pages should reduce the time that takes to open or download pages, making it efficient and more user-friendly. To resolve the connection/ bandwidth problem, adopting the use of a mirror server to the nearest place could be also helpful.
- Additional features such as Groupware or Instant Messaging could be added to the existing TWs's interface to show who is online so that users can communicate in a real time situation. This will increase TWs usefulness and familiarization by the general staff.
- Periodic Knowledge Audit (preferably once in two-years) is recommended to be explored by the TWs developer or staff at Headquarters to identify feasibility and suitability to the CO's available resources.

4. Discussion

A survey was conducted focusing on the various factors and circumstances that affect or simulate staff to participate in the knowledge sharing practice within the Country Office. Questions were posed on how efficiently staff used the different knowledge/ information sharing tools, such as Facebook, Twitter, LinkedIn, in the office. 57% said that they are extremely efficient while 28% are moderately efficient with the same method. Respondents said

they are comfortable and efficient in using the TWs for knowledge and information sharing and the response rate was 78% and out of these, 14% are extremely efficient while the rest (69%) are just efficient. The aggregated result showed that out of the total respondents exactly half (50%) of them preferred face to face discussion and the other half preferred a technologically assisted mechanism.

In another part of the survey participants were asked if they participate in one or more than one of the knowledge practice networks. The answers obtained were varied in which over 70% said that they have participated/contributed their knowledge, experiences and expertise to the UNDP community through several networks; while 28% of the respondents stated that they have never participated the E-discussions launched or query posed through these networks. Moreover, a particular question was raised to identify which specific factors discourage the respondents from participating in the current knowledge sharing practice. Majority of them (76%) said that lack of time was the most inhibiting factor while a lesser number (24%) said that fear of providing wrong or faulty information/knowledge prevents them from participation.

Regarding the question on how often respondents login to TWs, results show that 50% of them login at a moderate frequency level - that is few times per month while the remaining 36% and 14% login very infrequently and very frequently respectively. 57 % of respondents contribute to the knowledge sharing practice using TWs sometimes and 43% contribute hardly ever. No respondents were found contributing to the TWs on a daily basis. The top most frequently used among the four and popular knowledge sharing and social networking tools, is Facebook followed by Teamworks, Tweeter and LinkedIn.

Respondents were further asked to evaluate TWs as a knowledge sharing platform and its features. Analysis of the responses depicts that over 40 % of respondents rated as "good" for the specific arguments of "User friendliness of the features". 21% of the respondents rated the user friendliness of TWs as "Moderate". Only 7% of the respondents rated it as "excellent". Further, participants of the survey were requested if they have participated in any of the UNDP's series of the TWs training sessions organized during and after the TWs' prototype phase. Responding to that question, 62% of respondents said they attended the training and the remaining 38% didn't take part in any of the sessions.

Overall, the survey showed that majority of staff have a good knowledge and skill on how to use TWs and its various features. However staff participation in using TWs as a knowledge/information sharing and social networking platform are very low. It was found that there is a higher use of e-mail and other social networking tools for sharing knowledge and information than TWs. Face to face discussion is the most widely preferred type of knowledge sharing mechanism while TWs is the least preferred. This shows despite the high number of those who claim to have been participating, the level of activism or frequency still remained significantly low.

The above statement is supported by observations on the system carried out during of the span of the study time (June- –August 2013). The system dashboard being open and displaying all the global TWs users' contributions shows who has done what in terms of knowledge sharing. Constraints such as time and fear of providing wrong information or knowledge were the top most frequently cited barriers affecting respondents from engaging in knowledge sharing at their current position. Almost all respondents reported that they have access and are familiar with similar kinds of knowledge and social networking tools including TWs.

Analysis into available data further showed that though TWs utilization is very low, majority of respondents were found to be members of the global Practice/Knowledge networks. But their contributions to the E-discussion or query posed by these networks members and facilitators through TWs are almost zero or minimal. As indicated earlier, however, the knowledge sharing concept is beyond reading and viewing but helping,

collaborating, advising and sharing knowledge, experiences, expertise, ideas, etc. Hence, being a member to a given knowledge sharing platform does not necessarily mean someone is a contributor. Analysis on other data indicate that majority of respondents reported that their contributions will increase if knowledge sharing practice is highly linked with staff RCA and supervisors' recognition. As the researchers' participatory observation further supplemented, this practice is already in place but need to be further and applied at the CO level.

The authors made further investigation and empirical study to identify the reason why TWs is not highly utilized by its users for sharing knowledge/information and networking as well as documents and files repository. TWs were compared with other public domain social Media – such as Facebook, Tweeter, and LinkedIn. These three each has millions of users who are very much attached to them on a regular basis. So the researchers supplemented the study by login into the three public social media and UNDP's TWs simultaneously and tried to analyze the pros and cons of each and every feature in these tools in a real time evaluation/exercise.

The results of the investigation on the above showed that staff contributions to the knowledge sharing practice is dependent mainly on three factors: a) receiving personal benefits; b) recognizing that staff contribution is valued by colleagues; and c) noticing that knowledge sharing is reflected on staff job description as one of the competencies. Similar enquiries also showed where increased motivation came from staff to contribute to the knowledge sharing practice in the office namely supervisors giving positive feedback for contributing; seeing staff contributions reflected on staff annual performance Result Competency Assessment (RCA)and noticing that other staff as well as supervisors contributing to the knowledge sharing practice. On the other hand, lack of time and fear of sharing wrong information are the most inhibiting factors affecting respondents from participating.

5. Summary

This study was conducted on existing knowledge sharing practices at the UNDP CO in Ethiopia. Data have been obtained from a survey and these data were geared to answer the questions posed in the beginning. The analysis made on the available data served as a basis for drawing conclusions and subsequently to forward recommendations. To evaluate the recommendations the authors sent out formal request for a group of seven KM experts who shared their views. The problem with a knowledge management/knowledge sharing strategy for the UNDP Country Offices, including in that of the Ethiopia Office, is mainly tied to the business process. Ideally a knowledge management or knowledge sharing strategy should sit within a wider KM/KS framework and use common systems, tools, and protocols.

The easiest ways to get going in any business related knowledge management system or knowledge sharing practice including that of TWs require visioning from the management side and motivation from the part of general staff to make use of it.

Many validated the argument that people refrain from sharing their knowledge because they do not have motivation, lack time to do so or are unaware of the value of the knowledge they share. Moreover, people may not be conversant enough with the technology used. Hence the need to make the TWs more user-friendly lies on sharing the secret for the success of those social media like Facebook: simplicity.

As guiding principle, knowledge sharing should be user-based for the identification of needs to guide the processes and structures that will be required to its implementation. The answers why knowledge sharing becomes necessary lay in accountability, effectiveness and efficiency and enhance learning, evidence-based decision making, etc. Linkages to these objectives are essential.

Overall, some of the ideas raised here could be instrumental in provoking further similar undertakings (see below future works).

6. Conclusion and Future Work

6.1 Conclusion

UNDP's organizational productivity is closely tied with the production and dissemination of knowledge. The introduction of TWs as a knowledge sharing tool helps to fulfill this mission and becoming a knowledge-based entity. In this paper, the authors investigated existing knowledge sharing practice at UNDP taking the specific experience of the CO in Ethiopia. An understanding was drawn that people who share knowledge are more likely to solve problems and to collaborate for common purposes and interests. It is of the highest advantage for an organization to see its KS system and practice through its employees' ability helps to share knowledge, insights, ideas and solutions. In turn, this indicates that knowledge increases and becomes more useful when it is shared.

This paper has as its goal to explore and propose a structural level knowledge sharing architecture with the aim to improve utilization of TWs as a convenient knowledge sharing platform. Accordingly, to examine the various barriers and enablers, the authors presented information and discussion pertaining to the development and implementation of UNDP's KMS and within that the knowledge sharing practice. Using literature review together with information gathered from primary sources (questionnaires and participatory observation), the research examined into the practical experience at the Ethiopian CO level. In all that, Teamworks was particularly selected as a subject of closer scrutiny. The outcomes of the research showed that despite the rhetoric, TWs as a knowledge sharing tool is still only moderately used and that its full utilization by staff still faces several barriers.

It appears that expressed enthusiasm by management and staff within the organization towards the knowledge sharing initiative is not without challenges. Much depends on whether there exist personal benefits associated in choosing a particular platform, supervisors' recognition, impact on annual assessment of staff performance, and individual awareness to certain aspects of social media interfaces. The availability of each of these factors could be an enabler while their absence could be a barrier. In addition to the inconsistent motivational factors, fear not to make mistakes from the part of employees could further constrain the sharing of information. On the basis of that, the research was able to recommend both structural level and technological solutions. That requires commitment and the will to apply this enthusiasm in a day to day work environment.

In due course, though, it is reasonable to assume that TWs has the chance to succeed if the barriers identified are properly addressed and the enablers that exist at various levels are adequately exploited. At the same time, the indicators of success should go beyond simple sharing but also to include knowledge generation, storage and dissemination. The system must also be able to win the interest of all staff and involve those at the leadership level for TWs to modestly contribute to UNDP's motto of becoming a 'knowledge-based organization'. However, both the barriers and enablers identified here are neither exhaustive nor permanent. Thus, only the combination of efforts to lessen these bottlenecks and strengthen the good practices would make the knowledge sharing effort eventually a productive undertaking.

6.2 Future Work

Knowledge sharing is an ever expanding body of knowledge within the field of knowledge management. That implies the need for continued research and updating of the knowledge sharing practices. In light of this general observation and the limitations listed above, we would like to suggest the following key areas for future work:

a) Investigate what constitutes a fully developed knowledge sharing architecture? Does the

current practice at the UNDP CO level in Ethiopia meet those requirements? If not, anything missing need to be examined.

b) Evaluate and validate the recommendations suggested in this study; particularly the applicability of the technical solutions.

c) Further investigate would TWs utility continue, in an organizational setting, to be equally important like that of the other social media tools such as Facebook, Twitter, etc.?

Even after these works, however, one time research would not be adequate to fill the gaps in the above areas. Instead, it requires cumulating on the experiences gained by the Country Office in the process of knowledge sharing and improve the usage of the TWs platform in a step-by-step fashion.

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