



Knowledge Management at the NATO Defense College: Restructuring the Library for an Enlarged Mission

Giuseppe Vitiello¹
Library & Knowledge Center
NATO Defense College,
Rome, ITALY

Introduction

Knowledge Management (KM) has been implemented in a variety of organizations, both public and private. In this article, we shall mainly focus on the restructuring of the NATO Defense College (NDC) Library as a result of the application of knowledge-based services. In order to set this reorganization in the appropriate context, we shall first describe the workflows and the actors involved in the activities of the NDC, together with the overall course format and the communities of practice for whom didactic and research material is provided.

The NDC: educational programme and structure

The NDC is a military-academic structure that offers a variety of subject-specific programmes.² The NDC's flagship course, and largest academic undertaking in terms of time to completion and scope, is the Senior Course. This 5-month programme is run twice a year, with each edition usually catering for about 70 participants. It prepares officers with a rank of Colonel or higher, together with equivalent-ranking civilian officials, diplomats and civil servants, for senior appointments in NATO or NATO-related duties. Course Members are divided into Committees, each with about 10 participants, within which they prepare for lectures, discuss course material and work on their Study Projects. The course is organized in six distinct Study Periods, lasting a total of 23 weeks, during which lectures are given by visiting experts on specific topics.

In their short stay at the College, Course Members carry out independent research to identify, locate and consult readings useful for individual and Committee-based work. Course Members' working practices are thus strictly regulated in a tight agenda of lecture attendance, individual work, presentations, and collective work on Study Projects.

The NDC is a specialized, well informed and highly professional environment, with clear constraints related to the tightly structured course schedule. In such a setting, it is the task of the Library not only to provide just-in-time, just-in-place information, but also to be constantly updated on and, when possible, anticipate the information needs of its users. In addition, the Library's mission has expanded in recent years – both as an *institution* with its in-house needs to

¹ The author wishes to thank Brittany Trafford and Ari Weitzman, who interned at the NATO Defense College respectively from February to July 2011 and from August 2011 to January 2012, as well as Peter Mead, Senior Interpreter at NDC.

² <http://www.ndc.nato.int/>

address, and as a *provider* with challenges of managing knowledge flows to users (including the need to incentivize knowledge-sharing among persons with different educational backgrounds and cultural perceptions). Overall, KM activities have triggered an extensive reshuffle of tasks and functions within the Library, and an essential rethink regarding its role within the College.

Communities of practice at the NDC

Communities of practice are “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and their expertise by interacting on an ongoing basis.”³ Two central, and interrelated, communities of practice at the NDC will now be described in detail: Faculty Advisers and Course Members.

Faculty Advisers are sent by national governments to work for a period of approximately three years before leaving the College for further appointments. Unlike other colleges and academic institutions, the NDC does not have tenured teaching staff: the Faculty Advisers are facilitators in charge of ensuring that the right inputs are provided for the smooth, effective running of the Senior Course and of the other courses at the College. They are responsible for organizing theme-based Study Periods, inviting lecturers, facilitating discussion within Committees, as well as for running occasional inter-Committee debates and exchanges. Rotation may create differences among Faculty Advisers in the rate at which they organize course topics and update resources, or their approach to these tasks. It is very rare that an incoming Faculty Adviser would slavishly follow in the footsteps of his/her predecessor. To become fully autonomous and proficient in organizing didactic materials and providing the appropriate educational setting, Faculty Advisers must absorb in a very short period of time a multitude of articles, books, working papers and other sources dealing with the topics for which they are responsible.

Attendance at the Senior Course affords Course Members the opportunity to develop critical thinking skills at the strategic level, and develop their knowledge and understanding of current and prospective political-military issues facing the Alliance. This is achieved through direct participation in a broad spectrum of activities, ranging from Committee and inter-Committee debates to field studies, simulation exercises and a variety of other course components. The Senior Course culminates with a Study Project, which should be pertinent to NATO’s mission and activities, covering a range of subjects such as international or regional security, missile defence, strategy and global partnerships. For this project, Course Members work in collaboration within their respective Committees, each of which produces a consensus-based paper and presentation.

When embarking upon the implementation of KM-based activities, the Library identified these two communities – Faculty Advisers and Course Members – as both targets and providers of services. In order to serve their needs, a profound overhaul of its structure was deemed necessary.

Organizational changes

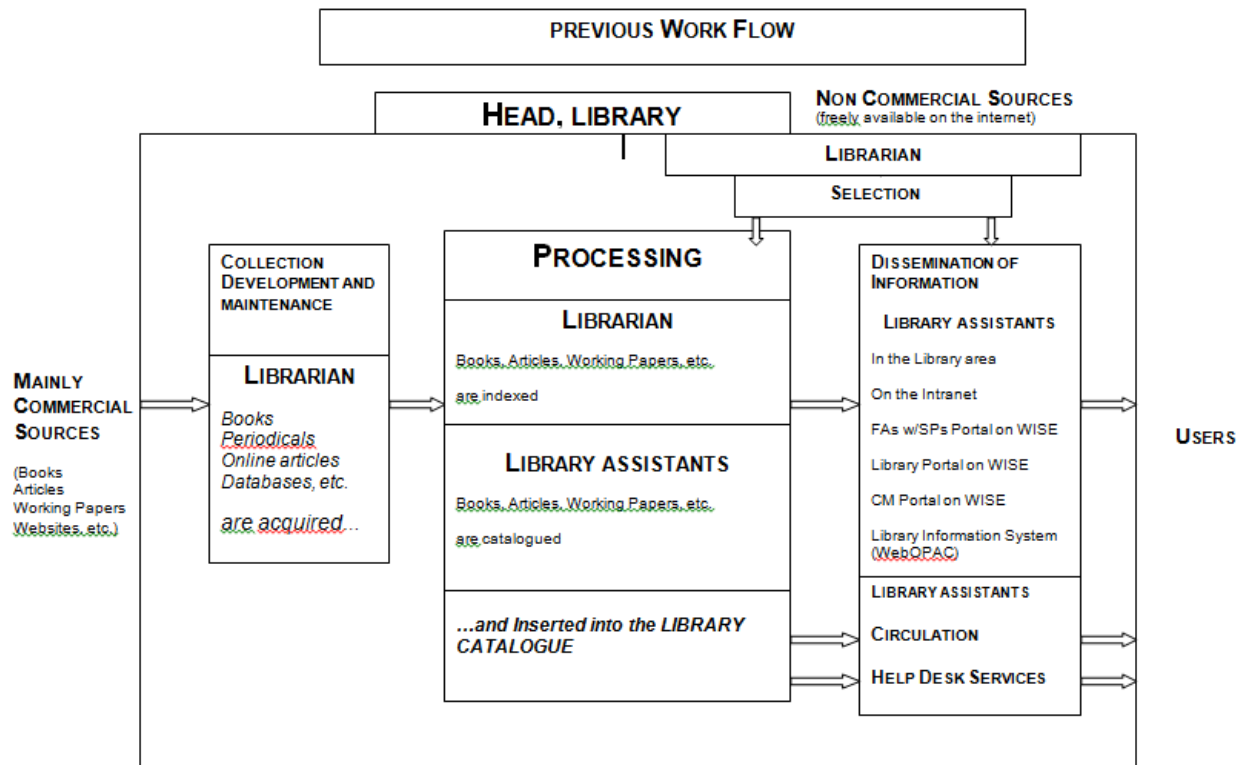
The new organizational chart of the NDC Library – now known as the Library and Knowledge

³ Etienne Wenger – Richard McDermott – William M. Snyder. *Cultivating Communities of Practice*. Boston (MA): Harvard Business School Press, 2002, p. 4.

Centre (LKC) – is perhaps the accomplishment that can be most easily transferred to other libraries within the IFLA 2012 Satellite meeting on “Knowledge Management theory in action: how to plan, apply and assess Knowledge Management in libraries”. This is the reason why I am going to expand now on how KM has impacted the Library’s internal structure, staff profiles and scope of activity, and how its organizational set-up was changed accordingly.

Created in 1951 with the foundation of the College, the NDC Library has progressively absorbed electronic information to become a hybrid infrastructure in terms of content dealt with. Yet the injection of electronic resources into the Library was not accompanied by any change in its organization, still dominated by a logic of exclusion – within the NDC, the Library has the monopoly of documentation – and self-containment – make or buy, with knowledge-sharing as a mere option. This mindset led to a constant decline in the number of users and transactions. As has been the case in many specialist libraries, a growing number of scholars came to routinely bypass library catalogues in favor of other discovery tools.

At the end of the first decade of the new Millennium, the operating structure at the NDC was still the classic three-fold service model, in which communication, command and control work around three poles: acquisitions, processing and dissemination. The Library was a repository designed to be generally of interest to all library users, either making information available to them via their own discernment or selecting resources for them via Faculty Advisers or researchers acting as intermediaries. This model can be readily illustrated in a simple flowchart based on a three-stage sequence: selection, storage, and usage.



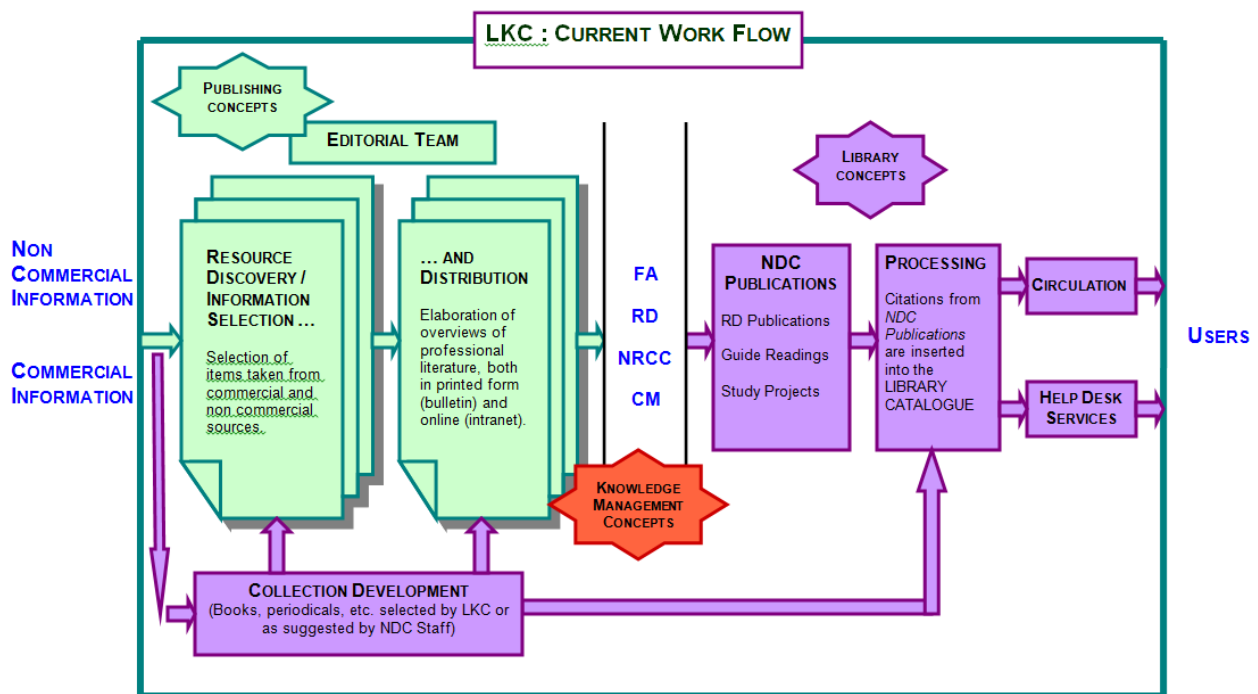
This model is appealing in its simplicity, but fails to account for several important aspects of the Library’s operation. These are the process of collection-building, the explicit creation of Study

Period reading materials, provision of research tools, task specialization by Library staff and, most importantly, provision of lost implicit knowledge in an institution which by its very nature has a high turnover rate among staff and – above all – users (twice yearly).

By complete restructuring and by redesigning our services, we made clear to the NDC top management that, with the advent of Web-based resources, the NDC Library was facing the following dilemma:

- either it would drop its documentary function to manage commercial resources already selected by search engines and databases; or,
- it would reinforce its documentary function, by acting as a “first dyke” against the information “flood”. To this end, information reservoirs would have to be created for, accessed by, and shared among Faculty Advisers, Course Members and Researchers.

The Library’s restructuring was formalized through interdepartmental rebalancing of roles and through its official reconstitution as the LKC. The resulting organizational structure reflects this conversion: the LKC acts as a manager and “first” selector of information created by external producers, or aggregated in databases, as well as an engine for sharing and circulating knowledge created within the NDC. This has meant a reorganization of work flows in the LKC, as shown in the following flowchart.



Project implementation

With the new organizational structure, areas of deficiency in the old model were addressed by foregrounding KM principles. Such principles were categorized into four different overarching patterns: a) tacit and explicit knowledge within the knowledge cycle, b) knowledge flow structures, c) knowledge codification as information management, and d) the design and the marketing of formatted knowledge objects.

To conceptualize the necessary adjustments, the LKC has made use of several tenets of KM theory according to the classic SECI model. This posits knowledge conversion as operational within four possible modes: Socialization (from tacit knowledge to tacit knowledge), Externalization (from tacit to explicit knowledge), Combination (from explicit to explicit knowledge) and Internalization (from explicit to tacit knowledge).⁴

On the basis of careful investigation and needs analysis, it emerged clearly that socialization was the most usual channel of communication among Faculty Advisers, both internally and externally. In relation to the services provided to Faculty Advisers, the LKC set as its main goal the conversion into externalized modes of some of the socialized practices. It has already been mentioned that Faculty Advisers work at the College for a limited amount of time. Though not necessarily experts in the fields they are assigned to cover, they must be timely in acquiring detailed knowledge of these topics in the very limited preparation time they have before their respective Study Periods. Normally, they gain an expert understanding of the specific discipline or NATO-related issue concerned by studying a considerable amount of specialized literature. Building up this know-how requires a “learning time”: this largely rests with the skills and talents of individual Faculty Advisers, who store such knowledge in a tacit way and usually do not (or have no time to) formalize it in such a way that it can be easily and intuitively transferred as an intellectual legacy to their successors.

To address this issue, the LKC endeavoured to reinforce the Faculty Advisers’ community of practice by reconstructing their individual know-how and identifying the know-what, know-how, and know-when linked to each of the Study Periods. This was done through systematic monitoring of previous selected readings, up to a period of three-five years depending on the topic. A Study Period-related “core literature” was established, with separate lists of books, articles and working papers. Resources taken from the NDC digital library were included as soon as Faculty Advisers started selecting them. These operations were made transparent through a portal in which each Faculty Adviser would establish his or her own library, ready to be passed on to their successor.

A similar problem was addressed among Course Members, with specific reference to their interaction with the LKC. It was for the final activity in the curriculum – the Study Project – that the need was felt for enhancement of work flows through KM practices. As a rule, Course Members work in collaboration and produce outputs based on the consensus gained within the individual Committees. Actually, each Course Member may have personal experience of the thematic or regional issues that are part of the syllabus. For example, they may have been sent on a mission or into theatres of war and have first-hand personal knowledge that can (and should) be transferred to their colleagues. In other words, each individual concerned should be considered, literally, as their own distinct body of knowledge.

⁴ I. Nonaka. *The Knowledge Creating Company* Boston (MA): Harvard Business Press, 2008, especially pp. 16-19 (previously published in *Harvard Business Review*, 1991 and 2007); also I. Nonaka – R. Toyama and N. Konno. *SECI, Ba and Leadership: a unified model of dynamic knowledge creation*. In Stephen Little – Tim Ray. *Managing Knowledge. An Essential Reader*. The Open University – Sage, 2005, pp. 23-49 (previously published in *Long Range Planning*, 33 (1), pp. 5-34).

Investigation of Course Members' practices showed that, while transfer of information was formalized at the Committee level, interaction between Committees was spontaneous and sporadic. An inter-Committee, and not intra-Committee, gap had to be filled by externalizing as much knowledge as possible from the socialized practices of Course Members.

To make such operations more effective, working methods were reinforced through a variety of techniques taken from the publishing, KM and library areas, as the need arose. The communication of tailored information in appropriate formats and in due time now takes the form of "collections", where articles, working papers and other useful documents similar in format and focused on the same subjects are aggregated in an attractive way for specific categories of users. Not all channels of dissemination are yet in place, but the criteria defining such "collections" – article length, timeliness in release, distinctive focus and thematic approach (analytical vs. synthetic) – "brand" them in such a way that the practices of the communities involved are made explicit and easily recognizable.

A cursory glance at the new organizational structure also shows how extensively work flows and processes internal to the LKC have been affected. In the past, collection development was kept separate from, and only indirectly linked to, reference services. Both are now unified in a resource discovery process involving Faculty Advisers and Course Members, who are involved in the regrouping by format and subject of the content offered by the LKC.

The organizational chart also shows where KM-based operations end and information management comes in. Resource discovery and KM-based operations are preliminary to information management. Only after having gone through the assessment of Faculty Advisers is content formatted into a bibliographic record and stored in the library catalogue for future research and didactic purposes.

Technologies at work?

Many success stories are told about KM, but harshly dismissive comments also thrive. One of these describes KM as pouring the old tenets of organizational theory and scientific management into a new SharePoint bottle. As long as KM has an organizational, and not a technological foundation, this statement does not hold true.

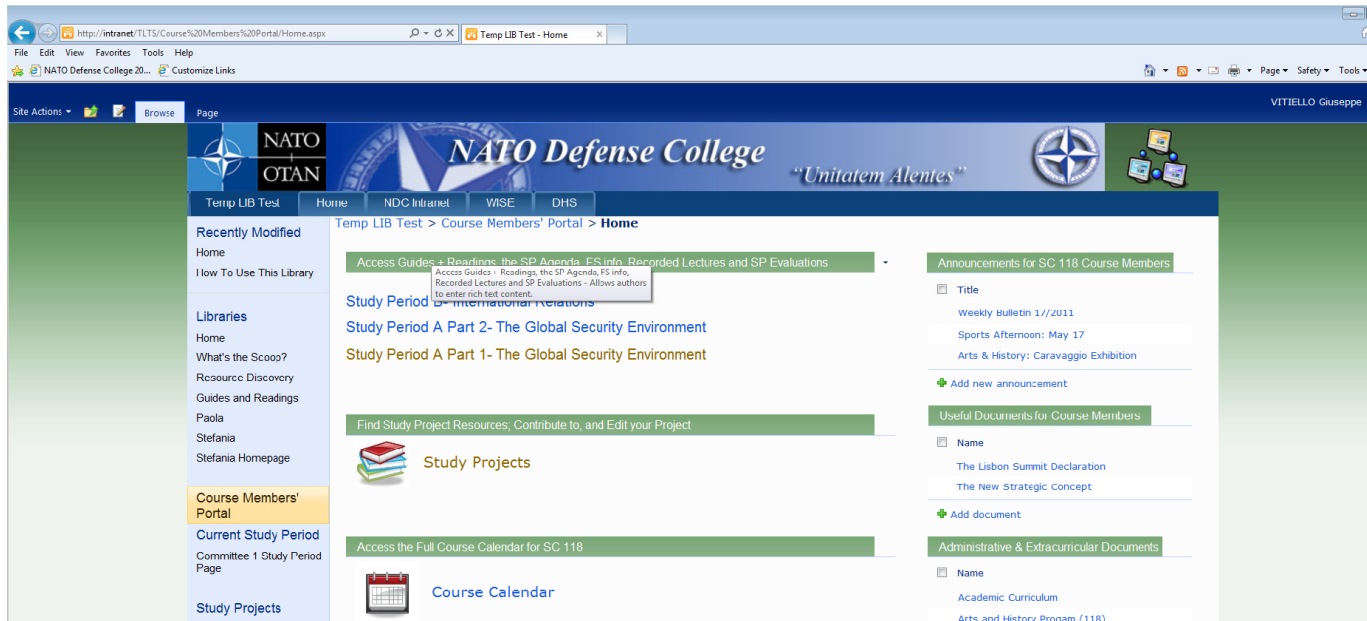
In his seminal book on innovation, Rogers identifies two broad activities for the innovation process in organizations. First is the initiation phase, consisting in setting the agenda for innovation and matching it with the organization's own agenda. Second is the implementation phase, consisting in a) redefining / restructuring the organizational structures, b) clarifying the implementation process to all interested parties and c) routinizing it.⁵

The LKC was not familiar with Rogers' views, but followed the pattern he describes almost literally. The agenda for innovation in LKC practices was set up to match the NDC's technological agenda, even though the Intranet platform that was used did not allow for advanced KM applications. Awareness-raising activities consolidated the implementation, so that the system could then be routinized among the two communities of practice.

The time thus seemed ripe to migrate data and operation to a SharePoint platform. A prototype model was designed as a possible KM tool; in addition, web pages were created to respond to the requirements of users, and to further their ability to share and manage information. The demo Course Member's Portal was separated into two segments, based on knowledge objects: Study

⁵ Everett M. Rogers. *Diffusion of Innovations* (5th edition). New York: Free Press, 2003, p. 420.

Projects, developed by the CMs, and Study Periods, assigned to Faculty Advisers. These distinct groups of pages reflect the NDC curriculum and pedagogy. Each portal (Study Projects and Study Periods) included tools for monitoring progress and working collaboratively. To maintain consistency, the portals both flowed from a monitoring display page to working pages, where Committee members were encouraged to collaborate. The demo product is represented in the diagram below:



Unfortunately, this development never took off. The organizational agenda shifted, or better added a distance-learning component as a requirement for any internal technological development. The LKC was thus trapped in step 2 of the initiation phase described by Rogers, with an internal agenda mismatching that of the organization. Plans had to be revised accordingly. The old system was, however, still in use and KM-based services were regularly supplied. In this way, the LKC did not lose its grasp of the two communities' requirements and resources.

Conclusion

The professional literature is unanimous in promoting the idea that KM initiatives should be applied organization-wide, with an enlightened management and a fully committed staff so involved in KM progress that they have no hesitation in taking a large part of their time to discuss the best ways of adjusting/enhancing workflows and communication among people.⁶ The underlying philosophy is that of an organization able to associate, evaluate and eventually decide

⁶ See the first part of Michael E.D. Koenig – T. Kanti Srikantaiah (eds.). *Knowledge Management. Lessons learned. What works and what doesn't*. Medford (NJ): Information Today, 2007, pp. 29-120.

– a self-learning and “truly innovative organization [with] an ethos and holographic spirit where the innovative attitudes and abilities designed of the whole are enfolded in the parts”.⁷

Reality tells a different story. Innovation may spread from distinctive cells within an organization and expand at a different pace, with constant gaps to be filled. As Morgan says: “unless an organization is able to change itself to accommodate the idea it produces and values, it is likely eventually to block its own innovation”.⁸

In spite of occasional mismatching with the organizational agenda, there is a proven advantage in undertaking KM operations. The most tangible result is a sense of belonging, a feeling that the organizational cell designated to implement knowledge creation and sharing is moving closer than other units also involved in knowledge production to the imperatives linked with the organization’s ultimate goal. It is the feeling that meaning is constructed as a collective undertaking,⁹ and that the somewhat abstract mission statement routinely presented by an organization is embodied into cohesive operations and shared-by-all practical procedures.

⁷ G. Morgan. *Images of Organisation*, Sage, 1986, p. 105.

⁸ *Ibidem*.

⁹ Chun Wei Choo. *The Knowing Organization: How Organizations Use Information to Construct Meaning, Create Knowledge and Make Decisions*. New York – Oxford: Oxford University Press, 2006.