

Information Science and Knowledge Management Maturity: A Case Study in a Public Pharmaceutical Laboratory




Sandro Bastos dos Santos

Oswaldo Cruz Foundation, Brazil

Adelaide Maria de Souza Antunes

National Institute of Industrial Property, Brazil

Jorge Lima de Magalhães

 <https://orcid.org/0000-0003-2219-5446>

FIOCRUZ Farmanguinhos, Brazil & Global Health and Tropical Medicine, Institute of Hygiene and Tropical Medicine, University NOVA of Lisbon, Portugal

INTRODUCTION

Technological advances and the resulting increase in access to information have provoked intense transformations in social and organizational relationships. The organizational environments provided the density in the flow of information, so that the search for improvement of resources to deal with the volume of informational and technological data is always constant.

The need to manage information, as well as the knowledge acquired through them, leads to a constant search to better manage Knowledge Management (KM) in organizations. Alvarenga Neto (2002) defines KM as:

The set of activities aimed at promoting organizational knowledge, enabling organizations and their employees to always use the best information and knowledge available, with a view to achieving organizational goals and maximizing competitiveness (Alvarenga Neto, 2002).

Starting from the premise that information science (IS) is dedicated to the problems of records of the effective communication of knowledge, there is a relationship between the application of KM and IS, in which, characterized by its interdisciplinarity, it demonstrates the need for knowledge and management of organizational information (Montanheiro, 2006).

However, when thinking about any initiative that involves the adoption or implementation of KM, there is a need to carry out a previous diagnosis, so that the strengths and weaknesses of the organization are known, and then direct more effective actions in relation to KM. In this sense, organizations are advised to assess their degree of maturity in KM, so that they can support the elaboration of a KM plan and justify the importance of KM practice. For this, they can make use of maturity models, which show the level of development and indicate points of improvement and assess the evolution and progress of organizations in relation to KM (Oliveira et al., 2011; Batista, 2012; Souza, n.d.; Helou, n.d.; Sonh, 2018).

DOI: 10.4018/978-1-6684-7366-5.ch021

This article, published as an Open Access article in the gold Open Access encyclopedia, Encyclopedia of Information Science and Technology, Sixth Edition, is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

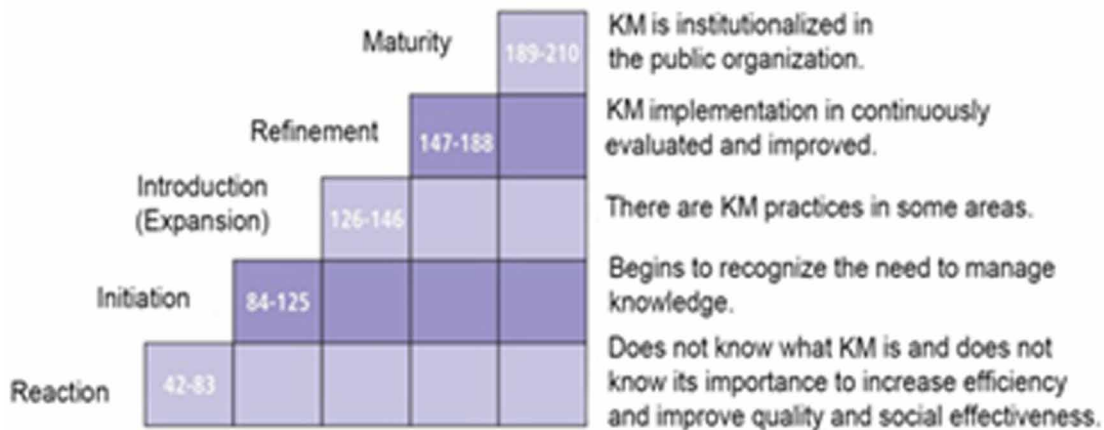
In this sense, this work used Information Technology to diagnose the level of maturity in KM in a Public Pharmaceutical Laboratory (PPL) that covers the activities of drug production, scientific research, technological development and education. A qualitative and quantitative approach was used, and the work is exploratory-descriptive and applied through a case study. Data were collected through interviews applied from senior management to the operational level of the institution. The results achieved demonstrate the degree of maturity of the PPL.

Considering the research universe to be a public organization, the model adopted as a reference was the Knowledge Management Model for the Brazilian Public Administration (MGCAPB - Brazilian term) (Batista, 2012). The model was adapted to the reality of the Brazilian public sector, which has its own instrument to assess the maturity of the KM.

This instrument makes it possible to identify the level of maturity in KM that the organization is and to assess the maturity in KM based on seven dimensions, namely: leadership in KM, processes, people, technology, knowledge processes, learning and innovation, and results of the KM, which are scored on a scale from 1 to 5, according to the real evidence of the actions described in the instrument itself. The model has five maturity levels, related to the score obtained, ranging from the “reaction” level (lowest) to the “maturity” level (highest), which show the result of the evaluation (Batista, 2012):

- I) Reaction: from 42 to 83 points - the organization does not know what KM is and does not know its importance to increase efficiency and improve quality and social effectiveness;
- II) Initiation: from 84 to 125 points – the organization begins to recognize the need to manage knowledge;
- III) Introduction (expansion): from 126 to 146 points – there are KM practices in some isolated areas of the organization;
- IV) Refinement: from 147 to 188 points – KM implementation is continuously evaluated and improved, for KM integration in all areas;
- V) Maturity: from 189 to 210 points - highest level of maturity assessment, where KM is institutionalized in the organization.

Figure 1. Level of Maturity in Knowledge Management
Source: Batista (2012).



18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/information-science-and-knowledge-management-maturity/319741

Related Content

Pharmaceutical Manufacturing and Health Information Technology: A Reflection About Lean Six Sigma and Industry 4.0

Beatriz Maria Simões Ramos da Silva, Vicente Aguilar Nepomuceno de Oliveira and Jorge Magalhães (2025). *Encyclopedia of Information Science and Technology, Sixth Edition* (pp. 1-21).

www.irma-international.org/chapter/pharmaceutical-manufacturing-and-health-information-technology/315811

IT Software Development Offshoring: A Multi-Level Theoretical Framework and Research Agenda

Fred Niederman, Sumit Kundu and Silvia Salas (2007). *Strategic Use of Information Technology for Global Organizations* (pp. 59-84).

www.irma-international.org/chapter/software-development-offshoring/29802

Library Networking of the Universidad de Oriente: A Case Study of Introduction of Information Technology

Abul K. Bashirullah (2006). *Cases on Information Technology and Organizational Politics & Culture* (pp. 399-405).

www.irma-international.org/chapter/library-networking-universidad-oriente/6322

Determinants of Online Purchasing Behaviour

Bill Doolin, Stuart Dillon and James L. Corner (2006). *Advanced Topics in Global Information Management, Volume 5* (pp. 199-225).

www.irma-international.org/chapter/determinants-online-purchasing-behaviour/4567

Influence of Mobile Technologies on Global Business Processes in Global Organizations

Dinesh Arunatileka, Abbass Ghanbary and Bhuvan Unhelkar (2008). *Handbook of Research on Global Information Technology Management in the Digital Economy* (pp. 519-534).

www.irma-international.org/chapter/influence-mobile-technologies-global-business/20501