



Knowledge Management Perceptions in Academic Libraries

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ABSTRACT

Despite the increasing interest taken in knowledge management (KM) by a wide range of practitioners as well as the library and information science (LIS) community, knowledge management is not systematically applied in libraries. Due to the complexity of knowledge, as well as the multifaceted nature of knowledge management, there is no consensus among LIS professionals regarding its relation to information management. In this context, the current study aims at exploring how library employees perceive knowledge management, as well as which KM tools and techniques are adopted by academic libraries. The results indicate that although practitioners are aware of knowledge management and appreciative of its benefits not only for library performance but also for LIS professionals' future career options, there is a lack of clarity on fundamental KM issues. Finally, academic libraries take steps towards capturing the knowledge of their users and internal explicit knowledge; however, social practices such as communities of practice, which facilitate tacit knowledge and expertise sharing, are not adopted.

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INTRODUCTION

Knowledge management (KM) is a relatively new scientific field, formally established in the late 1980s (Dalkir, 2011). However, being a multidisciplinary field (Dalkir, 2011), KM lacks a universally acknowledged definition. This obscurity contributed to KM receiving substantial criticism, to the point to it being characterized as 'a management fad' (Wilson, 2002). In response to criticism, Ponzi and Koenig (2002) and Grant (2011), employing bibliometric and content analysis techniques, provided evidence that unlike other 'management fads', KM has survived. As Koenig (2005, p. 2) asserts, "knowledge management is here to stay".

In the library environment, it is widely acknowledged that the application of KM improves library operational effectiveness, such as improved access to information resources (Islam, Siddike, Nowrin, & Naznin, 2015), and facilitates services innovation (Islam, Agarwal, & Ikeda, 2015b) through the enhancement of internal and external knowledge sharing (Islam, Siddike, et al., 2015) and the creation of new knowledge (Wen, 2005). Although "knowledge management has much to offer to the management of libraries and advancement of the LIS professions" (Martin, Hazeri, & Sarrafzadeh, 2006, p. 24), the adoption of KM by library and information science (LIS) professionals is very slow (Roknuzzaman & Umamoto, 2009). The ambiguity of the terminology, on the one hand, and the disagreement among LIS professionals regarding its relation to information management (IM), on the

other, constitute significant barriers for their involvement in KM (Kebede, 2010; Roknuzzaman & Umamoto, 2009).

The controversy results from the complex nature of knowledge, which is often used interchangeably with information, wrongly assuming that it purely refers to explicit knowledge (Jashapara, 2005). Nonaka (1994, p. 15) explains that "information is a flow of messages, while knowledge is created and organized by the very flow of information, anchored on the commitment and beliefs of its holder. This understanding emphasizes an essential aspect of knowledge that relates to human action". He also stresses the importance of distinguishing between explicit knowledge and tacit knowledge – based on Polanyi's (1966) classification. Explicit knowledge refers to the knowledge "that is transmittable in formal and systematic language ... [and] is captured in records of the past, such as libraries, archives, and databases" (Nonaka, 1994, pp. 16–17), while tacit knowledge "has a personal quality, which makes it hard to formalize and communicate ... [and] is deeply rooted in action, commitment, and involvement in a specific context. In Polanyi's (1966) words, it 'indwells' in a comprehensive cognizance of the human mind and body" (Nonaka, 1994, p. 16).

In this context, the primary purpose of the study is to examine how Greek academic library employees perceive KM. That is, it attempts to explore if library practitioners are aware of the term 'knowledge management', how they perceive the KM concept and how they assess the potential implications, applications, benefits, and opportunities offered by KM to library operations. Furthermore, it aims at identifying the KM tools and techniques adopted by libraries. Consequently, the current research would not only allow us to understand how library practitioners perceive KM and which KM tools adopt, but most importantly, if they consciously and systematically practice KM initiatives.

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LITERATURE REVIEW

KM has attracted the interest of the LIS literature since the early 1990s; there is, however, a dispute as to whether LIS and KM are distinct fields of specialization. According to the first school of thought, KM "is a new name for what librarians have been doing for years" (Gorman, 2004; quoted in Sarrafzadeh, 2008, p. 30) or as otherwise put, "new wine in old bottles" and "librarianship in new clothes" (Sarrafzadeh, Martin, & Hazeri, 2010, p. 201). Proponents of this view consciously avoid getting involved in KM programs (Kebede, 2010) and thus, LIS fails to play the influential role it could play in knowledge management (Martin et al., 2006). Koenig (1997, 2005) strongly supports this perspective, arguing that KM not only greatly overlaps with LIS but also much of the KM terminology, such as taxonomy, classification, and knowledge maps, has been borrowed from both IM and LIS. According to Davenport and Cronin (2000, p. 296), "where [this] position prevails, valuable knowledge assets may be overlooked and more thoughtful analysts advocate a broadening of the field of vision".

The other viewpoint sees KM distinct from IM, as it focuses on the management of human expertise, in contrast to LIS and IM, which mainly concentrate on the management of information resources (Blair, 2002; Broadbent, 1998). As Broadbent (1998) states, KM "is a form of expertise-centered management focusing on using human expertise for business advantage ... Knowledge management practices aim to draw out the tacit knowledge people have, what they carry around with them, what they observe and learn from experience, rather than what is usually explicitly stated". In a similar vein, Middleton (1999, p. 2) describes KM as "a combination of information management (IM) for managing the documentary form, and HRM for managing the expression of knowledge". In this respect, LIS constitutes an essential component of KM (Owen, 1999), in which LIS professionals can only contribute through their information management skills (Bouthillier & Shearer, 2002).

A debate also exists as to whether KM is a threat to the status and future of LIS professionals or if it can provide new career options. KM has both been seen as "the biggest thing to hit the information profession since the internet" (Infield, 1997; quoted in Sarrafzadeh et al., 2010, p. 200) and as "a vehicle for enhancing the professional image and role of the information professional" (Southon & Todd, 2001, p. 260). In the latter perspective, LIS professionals should rise to the challenge and expand their traditional roles by actively engaging in organizations' KM initiatives (Branin, 2003; Butler, 2000; Jain, 2007; Koenig, 2005). Moreover, they should oriented towards capturing and managing internal tacit knowledge (Al-Hawamdeh, 2005; Jantz, 2001), and facilitating knowledge sharing among employees and between employees and library users (Shanhong, 2000). "Librarians in the new millennium organizations will be knowledge managers and information analysts. They will perform a range of business roles. They will work as integral members of the business teams that need these roles, and many will work with those teams rather than in the library" (Klobas, 1997; quoted in Yaacob, Jamaluddin, & Jusoff, 2010, p. 18). However, LIS professionals have to change their mindset if they want to move to KM-related positions (Abell & Oxbrow, 2001). As Abell and Oxbrow (2001, p. 151) explain, "the change information professionals have to make is to think of themselves as part of the core business – not as a service to those who do the business. To understand the way that corporate information is created and used, and the crucial information flows, requires an understanding of the business process and an ability to map the knowledge processes that support it".

RESEARCH METHODOLOGY

SAMPLING AND DATA COLLECTION

The target population of the study consists of all personnel working in Greek academic libraries. The survey was conducted in November–

December 2015. A web-based structured questionnaire, developed and administered via LimeSurvey®, was used for the collection of primary data. A total of 590 questionnaires were distributed; of these, 318 suitable for analysis were returned (53.9% response rate). The demographic characteristics of the final study sample are presented in Table 1.

RESEARCH INSTRUMENT

A structured questionnaire – consisted of simple-dichotomy, determinant-choice, checklist, and Likert-type questions – was used as the research instrument for the collection of the necessary data. The questions developed for the research based on previous studies (see Table 2), while adjustments were made to some response alternatives to fit the current research context. All questions were translated from the English language into Greek. A pre-testing process, in which three academics and five LIS professionals were asked to comment on question wording in terms of clarity and readability, was performed to establish the instrument's content validity.

RESULTS & DISCUSSION

KM AWARENESS

Initially, participants were asked if they are familiar with the term 'knowledge management'. The 264 (out of 318) of the respondents that gave an affirmative reply were asked how they came to know about KM. 35.6% indicated learning about KM during their studies, suggesting that KM has become part of LIS curricula. Equal percentage of from 'the literature' (22%) and from 'conferences, workshops, and seminars' (22%) follow, while from 'work experience' was the least popular response (3.8%). Finally, 2 respondents stated that they do not remember.

KM DEFINITION

As many diverse definitions of KM can be found in the literature, participants were asked to either choose the one of the three definitions

Table 1
Profile of respondents.

Measure	Items	Frequency	Percentage
Gender	Male	76	23.9
	Female	242	76.1
Age		Mean: 43.85/SD: 5.87	
Education	PhD in LIS	9	2.8
	PhD in other disciplines	3	0.9
	Master degree in LIS	36	11.3
	Master degree in other disciplines	46	14.5
	Undergraduate degree	213	67
Specialty	High school degree	11	3.5
	LIS professionals	289	90.9
	IT professionals	17	5.3
Position	Other	12	3.8
	Library Director	9	2.8
	Head of Department	23	7.2
Employment status	Cataloguing Department	120	37.7
	Acquisitions	88	27.7
	Loan/interlibrary loan	148	46.5
	Reference services	160	50.3
	Digital services	24	7.5
	Technical support	21	6.6
	Other services (secretariat etc.)	41	12.9
	Permanent employee	98	30.8
	Permanent contract	186	58.5
	Fixed-term contract	12	3.8
Experience (years)	Independent contractor	22	6.9
	Organizational tenure		Mean: 13.26/SD: 7.93
	Job tenure		Mean: 17.96/SD: 6.39

Table 2
Questions source.

Questions	References
KM awareness	Ajiferuke (2003)
KM definition	Nazim and Mukherjee (2013), Sarrafzadeh (2008)
KM perceptions	Ajiferuke (2003), Mavodza (2010), Sarrafzadeh (2008)
Department responsible for KM	Sarrafzadeh (2008)
Potential areas of KM application in academic libraries	Nazim and Mukherjee (2013)
Methods of applying KM in academic libraries	Nazim and Mukherjee (2013)
KM benefits for academic libraries	Nazim and Mukherjee (2013)
Libraries' involvement in KM projects	Sarrafzadeh (2008)
KM tools and techniques	Jain (2013), Islam, Siddike, et al. (2015)

that best fits their perception of KM, or offer their own (Table 3). Almost half of the respondents chose [Abell and Oxbrow's \(2001\)](#) definition, which focuses on the creation and management of an organizational environment that is conducive of all knowledge processes (creation, sharing, use, etc.) with the ultimate goal of creating business value. [Skyrme's \(1999\)](#) definition, which emphasizes the systematic management of knowledge processes, was chosen by 34.6% of the respondents. Finally, the IT perspective, represented by [Krandsdorff \(2006\)](#) definition, which emphasizes technological tools, overlooking the human factor, received the least number of responses. It is worth mentioning that no participant suggested another definition.

KM PERCEPTIONS

Participants were asked to indicate their level of agreement with twelve Likert type items – using five ordered response levels – regarding KM and its relation with IM, the role of LIS professionals in KM and the potential benefits of KM for libraries and LIS professionals. Table 4 presents the results in terms of frequencies, median (Mdn), and interquartile range (IQR), as they constitute the most appropriate tools to analyze and interpret ordinal data ([Boone & Boone, 2012](#); [Stefens, 1946](#)).

The majority of the respondents (62.8%) – in accordance with prior studies (e.g. [Nazim & Mukherjee, 2011](#); [Sarrafzadeh, 2008](#)) – agreed or strongly agreed that KM is a new term for what LIS professionals have always been doing. The finding is not, however, surprising since the LIS literature abounds in supporters of KM being synonymous or at least an extension of LIS ([Davenport & Cronin, 2000](#); [Koenig, 2005](#)). Similarly, almost half of the participants (49.1%) also agreed or strongly agreed that 'KM is the same as IM'. They, however, seem to be more confused regarding the differences between KM and IM; 37.7% of the respondents agreed that it is hard to differentiate one from the other, but a roughly equal number (34%) neither agree nor disagree if it is difficult to make a distinction between KM and IM. According to

[Sarrafzadeh \(2008\)](#), the lack of awareness of LIS professionals regarding the differences between KM and IM could inhibit them from being involved in KM programs.

As regards the debate on whether KM constitutes a threat or an opportunity for LIS professionals, most respondents (Mdn = 4, IQR = 1) agreed with the idea that KM can provide new career options for LIS professionals. Similarly, over half of the respondents are against the view (Mdn = 1, IQR = 2) that KM is a threat to the status and future of LIS professionals. As [Abell and Oxbrow \(2001\)](#) argue, LIS professionals can take on new roles if they work across organizational boundaries to manage to communicate the value of their skills. Even so, there is not much evidence from the literature that they are engaged in inter-organizational KM initiatives or that they have grasped the opportunity to expand their traditional roles ([Sarrafzadeh, 2008](#)).

The majority of respondents (84.9%) also agreed or strongly agreed that KM can encourage LIS professionals to gain new skills, while most respondents disapprove of the idea that LIS professionals should ignore KM and focus on the core competencies of LIS (Mdn = 1, IQR = 1). Interestingly, most respondents expressed strong agreement (Mdn = 5, IQR = 1) with the statement that KM can contribute libraries' overall performance. Thus, employees of Greek academic libraries seem to have a rather positive stance towards the challenges and opportunities offered by KM.

Furthermore, most respondents agreed (Mdn = 4, IQR = 1) that the major contribution LIS professionals can make to KM is through their IM skills. However, LIS professionals' current skills and competencies are not sufficient to play a significant role in KM ([Roknuzzaman & Umamoto, 2009](#)) and thus, they need to acquire new ones ([Sarrafzadeh, 2008](#)). [Sarrafzadeh \(2008\)](#) and [Tiwari \(2013\)](#) suggest that LIS schools can conduct to the development of these competencies expanding their curricula to include courses in business and management. [Husain and Nazim \(2013\)](#) classifies the required KM skills for LIS professionals into people-centered skills (communication, facilitation, coaching, mentoring, networking, negotiating, consensus building and team working skills), skills related to the management of the organization (cultural, leadership, strategic, and restructuring skills), IM skills, and IT skills.

As regards the criticism that KM is just another management fad, the vast majority of the participants (73.6%) – in line with prior studies (e.g. [Ajiferuke, 2003](#); [Sarrafzadeh, 2008](#)) – expressed disagreement or strong disagreement. Most respondents also disagreed (Mdn = 2, IQR = 1) that KM should be left to managers, while many respondents (42.1%) disapprove of the idea that KM is essentially a managerial concern. The latter findings could be interpreted in two ways; it can either indicate respondents' willingness to participate in KM programs, or it may signal their lack of interest in acquiring managerial skills. It is worth noting at this point that these results come into conflict with participants' view on the nature of KM, who seem to favor the managerial perspective of KM, judging from the definition they selected (see Table 3).

Table 3
KM definition.

	Frequency	Percentage
The creation and subsequent management of an environment that encourages knowledge to be created, shared, learnt, enhanced, organized and utilized for the benefit of the organization and its customers (Abell & Oxbrow, 2001, p. 267).	154	48.4
The explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, diffusion, use and exploitation (Skyrme, 1999, p. 59).	110	34.6
The process of capturing value, knowledge and understanding of corporate information using IT systems in order to maintain, re-use and re-deploy that knowledge (Krandsdorff, 2006, p. 193).	54	17
Total	318	100

DEPARTMENT RESPONSIBLE FOR KM

Participants were also asked to determine which department in an organization should be responsible for KM. As presented in Table 5, the majority of respondents believe that the Library and Information Centre should be in charge of KM. The finding is not surprising, since the vast majority of the study participants (90.9%) are LIS professionals. On the contrary, the Information Technology (IT) Department was the least preferred option (1.9%). This could indicate that although respondents acknowledge the role that IT plays in KM, it cannot be regarded as its sole driver. Interestingly, the Human Resource Management (HRM) department also received a relatively small percentage (15.7%). Finally, it is worth noting that 10 respondents (out of the 16 who chose to provide their own option) stated that KM requires the collaboration of all

Table 4

Perceptions towards KM.

	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mdn	IQR
KM is a new term for what LIS professionals had always been doing	1.9	11.9	23.3	35.8	27	4.0	2
KM is the same as IM	8.8	13.8	28.3	34	15.1	3.0	1
It is hard to tell the difference between IM and KM	8.8	18.9	34.6	27	10.7	3.0	2
KM can provide new career options for LIS professionals	–	2.5	17	45.3	35.2	4.0	1
KM is a threat to the status and future of LIS professionals	51.6	22	11.3	8.8	6.3	1.0	2
KM can encourage LIS professionals to gain new skills	3.1	1.9	10.1	37.7	47.2	4.0	1
LIS professionals should focus on their own competencies and ignore KM	61	20.1	10.1	5.7	3.1	1.0	1
KM can contribute to the improvement of library effectiveness and future prospects	0.6	1.3	8.2	39.6	50.3	5.0	1
The major contribution that LIS professionals can make to KM is through their IM skills	0.6	6.3	28.9	40.3	23.9	4.0	1
KM is essentially a managerial concern	20.1	22	28.3	18.9	10.7	3.0	2
KM should be left to managers	32.7	25.8	23.3	10.1	8.2	2.0	2
KM is just another management fad	49.1	24.5	17.6	6.9	1.9	2.0	2

the aforementioned departments, i.e. HRM, library, and IT. The remainder 6 suggested a combination of two units or gave no response.

POTENTIAL AREAS OF KM APPLICATION IN ACADEMIC LIBRARIES

Participants were asked to indicate the library operations and services to which KM initiatives can be applied to improve effectiveness. As it is observed in Table 6, 86.2% agreed that KM may be incorporated in reference and information services; similar results were obtained by the Nazim and Mukherjee (2011) study. The importance of KM applications for reference and information services has been emphasized by many authors because it is impossible for reference librarians to remember the great variety of library resources, which are appropriate for answering each specific question (Gandhi, 2004). Thus, according to surveys conducted in public and academic libraries in the United States, England, Australia, Canada, New Zealand, and Germany, they manage to answer correctly only 50–60% of the thousands of the daily users' questions (Gandhi, 2004). Consequently, a number of KM applications, such as web-based knowledge databases, electronic listservs, newsgroups, collaborative reference, data mining and data warehousing applications, adopted by reference librarians (Gandhi, 2004; Markgren, Ascher, Crow, & Lougee-Heimer, 2004). These efforts aim at capturing internal knowledge (Jantz, 2001) and converting tacit knowledge to explicit knowledge (Stover, 2004). However, although they are in the right direction, very few focus on managing knowledge as an asset (Gandhi, 2004). As Gandhi (2004) suggests, KM initiatives must be integrated into the library strategy.

The planning of information services as well as policy and decision making were also two other popular responses. Yi (2008) stresses the importance of KM in numerous areas of library strategic planning, including information services planning, strategic thinking, policy, and decision making. Arguably, "it is no longer enough for library leaders to make intuitive decisions ... these decisions must be based on organizational knowledge and made collaboratively" (Townley, 2001, p. 50). As policy and decision making are critical for all library operations and services, they must constitute the starting point of KM initiatives. Finally, many respondents indicated that KM can also be applied in technical (43.4%) and administration services (40.9%), as also supported by Townley (2001).

Table 5

Department in organizations responsible for KM.

	Frequency	Percentage
Human Resource Management	50	15.7
Library and Information Centre	246	77.4
Information Technology Department	6	1.9
Other	16	5
Total	318	100

It is worth mentioning at this point that practically, in order to manage knowledge, a framework is needed to deal with the different types of knowledge-related activities and functions within and between organizations. Thus, Dalkir (2011) developed an integrated KM cycle, in which the KM strategy is necessary to identify and prioritize KM initiatives, tools, and approaches to support long-term business objectives. This KM cycle consists of three major phases: first, tacit knowledge must be captured and explicit knowledge must be organized; second, knowledge needs to be shared and disseminated throughout the organization; and finally, knowledge must be put to actual use. Unless the final step is accomplished successfully, all of the KM efforts will be fruitless. For that reason, it is also important to assess the value of KM initiatives. There are a variety of KM metrics, such as benchmarking, the balanced scorecard method, the house of quality, and the results-based assessment metric; however, each KM measurement strategy must answer the following five basic questions: i) Why are we measuring? ii) What are we measuring? iii) For whom are we measuring? iv) When are we measuring? v) How are we measuring? (Dalkir, 2011).

METHODS OF APPLYING KM IN ACADEMIC LIBRARIES

Participants were asked to indicate the methods of applying KM initiatives in academic libraries. As it is presented in Table 7, the majority of respondents (81.8%) agreed that KM can be applied through the provision of training and learning opportunities to employees, so as they acquire new knowledge and develop new skills. It is widely acknowledged that employees are the core of KM for knowledge innovation and work effectiveness to be achieved. Libraries should, therefore, focus on the training and lifelong education of their employees (Shanhong, 2000). Lee (2005) stresses mentoring, as well as informal seminars for exchanging best practices and lessons learned as important methods of employees' training.

Access to external information/knowledge resources through library networks or partnership with other libraries was also indicated by the respondents as an important method of applying KM in academic libraries (73%). This is a rather expected find, considering it is a common practice for Greek academic libraries to participate in networks and consortia. Shanhong (2000) suggests that KM can promote library

Table 6

Potential areas of KM application.

	Frequency	Percentage ^a
Reference and information services	274	86.2
Technical services	138	43.4
Planning of information services	268	84.3
Administration services	130	40.9
Policy and decision making	224	70.4
Not applied in libraries	–	–
Other	–	–

^a Overall percentage is greater than 100 since multiple answers were allowed.

Table 7
Methods of applying KM.

	Frequency	Percentage ^a
Providing training and learning opportunities to the employees for acquiring new knowledge and developing competencies (i.e. through training programs, participation in communities of practice, formal/informal meetings, e-learning, workshops, seminars, etc.)	260	81.8
Encouraging staff to share their knowledge through the provision of rewards/incentives, trust, team work, etc.	142	44.7
Using ICT to support internal knowledge creation and access (e.g. creation of internal knowledge – lessons learned and best practices – repositories)	218	68.6
Extending access to external information/knowledge resources through library networks or partnership with other libraries	232	73
Not applied in libraries	–	–
Other	–	–

^a Overall percentage is greater than 100 since multiple answers were allowed.

collaboration and partnerships, facilitating the sharing of knowledge resources (Lee, 2005) and expertise (Gandhi, 2004).

68.6% of respondents also agreed that the use of ICT for supporting internal knowledge access and creation is a method through which KM can be applied in academic libraries. The role of ICT as a KM enabler is extensively advocated in the LIS literature, as it facilitates the capturing, storing, sharing, and retrieving of both explicit and tacit knowledge (Gandhi, 2004; Roknuzzaman, Kanai, & Umemoto, 2009), and improves communication (Jantz, 2001). Some of the ICT tools that are discussed in the library context are virtual reference desks, intranets, wikis, and external or internal knowledge repositories (Jantz, 2001; Kille, 2006; Mphidi & Snyman, 2004; Townley, 2001; Wen, 2005).

Finally, it is noteworthy that the promotion of a culture that enhances employee commitment to sharing their knowledge received only 44.7% of the responses. The latter finding indicates that library practitioners are not fully cognizant of knowledge sharing. There is strong argument in the literature that internal knowledge sharing is a key driver in KM implementation success (Jantz, 2001; Townley, 2001; Wen, 2005) since knowledge resides in the minds of individuals (Davenport & Prusak, 1998). Thus, library employees should be motivated – through reward systems and the inclusion of knowledge sharing in performance evaluations – to share their knowledge (Wen, 2005).

KM BENEFITS FOR ACADEMIC LIBRARIES

Respondents were also asked to indicate the potential benefits of KM for libraries. As it is observed in Table 8, 81.1% of participants agreed that KM implementation in academic libraries can add value to library operations and services; while 79.9% also expressed their agreement that KM can improve library's overall performance and future prospect. By incorporating initiatives to effectively manage internal tacit knowledge (Jantz, 2001), knowledge of their users (Islam, Agarwal, & Ikeda, 2015a),

Table 8
Potential benefits of KM practice in academic libraries.

	Frequency	Percentage ^a
KM can add value to the library operations and services	258	81.1
KM can reduce duplication of work	118	37.1
KM can improve library's overall performance and future prospects	254	79.9
KM can help to transform academic library into a learning organization	202	63.5
KM can make academic libraries more relevant to their universities	232	73
No benefits for libraries	–	–
Other	–	–

^a Overall percentage is greater than 100 since multiple answers were allowed.

as well as knowledge of other information centers/organizations (Massis, 2014), libraries can improve the efficiency and effectiveness of their services, such as improved access to information resources (Islam, Siddike, et al., 2015).

Furthermore, a large majority of respondents (73%) indicated that KM can make academic libraries more relevant to their parent organizations. As libraries depend on their parent institutions (Wen, 2005), academic librarians must enhance their visibility within the organization by undertaking an institution-wide role in managing organizational knowledge (Lee, 2005; Townley, 2001). This way, libraries can strengthen their partnerships with the other units and achieve better funding (Townley, 2001).

Shanhong (2000) also suggests that KM can reshape libraries into learning organizations. KM tools either IT-based, such as e-learning and knowledge repositories (Joshi & Bhat, 2015), or social practices, such as communities of practice and mentoring, provide training and lifelong learning opportunities, i.e. facilitate both learning organization and organizational learning. 63.5% of the current study's respondents agreed with this viewpoint, as well. In addition, 118 respondents believe that KM can reduce duplication of work, as also indicated by the studies of Jain (2007) and Yi (2008).

LIBRARIES' INVOLVEMENT IN KM PROJECTS

Further, the current study aimed at exploring if Greek libraries were somehow involved in KM projects and what the nature of the project was. Only 17% of the respondents reported being aware of a KM project, in which a library had participated. This finding is disappointing; however, it is quite similar to a prior worldwide research conducted by Sarrafzadeh (2008).

As regards KM project type, respondents indicated the creation of knowledge repositories and the improvement of knowledge access, mainly including the creation of institutional repositories, which constitutes a rather common service offered by academic libraries. The development of intranets and wikis for internal knowledge sharing, as well as information literacy were also mentioned, followed by e-help desk applications and knowledge databases, which contain previously asked and answered questions. It is worth mentioning at this point that one respondent revealed insignificant use of knowledge database and stated that "management did not really support the project". The latter finding is also in accordance with prior results, in which lack of top management support, organizational culture and lack of incentives were pointed out by librarians as the most important factors responsible for the insignificant use of QuestionPoint Knowledge Base¹ (Ralph & Ellis, 2009); although OCLC offered reduced cost for increased use of the database, management failed to encourage its usage (Ralph & Ellis, 2009). Finally, portals, groupware products (such as Lotus notes), essay writing seminars, and participation in forums have been mentioned by respondents of the current study as KM projects.

KM TOOLS AND TECHNIQUES

The extent to which various KM tools, techniques, and practices are adopted by academic libraries is presented in Table 9. As it is observed, the most widely used are external knowledge repositories (61%), which were also emphasized in the previous question, and help-desk applications (59.7%). Furthermore, academic libraries seem to encourage the use of mentoring (42.1%), internal knowledge repositories (39%), blogs (37.1%), and intranet (31.4%). The adoption of wikis (26.4%), best practices (26.4%), RSS feeds (23.3%), groupware products (20.1%), and document management systems (19.5%) have also been indicated,

¹ QuestionPoint is a collaborative virtual reference service, offered by OCLC, which allows librarians to respond to, track, and manage reference questions from patrons via the Web. QuestionPoint Knowledge Base is the database that contains previously asked and answered questions.

Table 9
KM tools, techniques and practices.

	Frequency	Percentage ^a
Folksonomies	16	5
Tags	38	11.9
Wikis	84	26.4
Blog	118	37.1
RSS feeds	72	22.6
Help-desk application	190	59.7
Brainstorming applications	12	3.8
Data mining tools	36	11.3
Groupware products	64	20.1
Document management systems	62	19.5
Intranet	100	31.4
Communities of practice	8	2.5
Mentoring	134	42.1
Knowledge maps	4	1.3
External knowledge repositories: e.g. journal articles	194	61
Internal knowledge repositories: e.g. research reports	124	39
Informal internal knowledge repositories: e.g. lessons learned	28	8.8
Best practices	74	23.3

^a Overall percentage is greater than 100 since multiple answers were allowed.

but to a smaller extent. However, informal knowledge repositories (8.8%), as well as communities of practice (2.5%) are rarely adopted. As indicated by previous research, although Greek academic libraries make wide use of technology tools (Koloniari, Vraimaki, Fassoulis, Zenelaj, & Kourniotis, 2015), their efforts are mainly focused on managing explicit knowledge rather than internal tacit knowledge.

Gandhi (2004) also supports that KM initiatives in libraries have mainly focused on creating repositories and improving access to information, i.e. they are IT-based. However, as humans are the only source of knowledge (Davenport & Prusak, 1998) and tacit knowledge is hard to formalize and communicate (Nonaka & Takeuchi, 1995), social practices, which facilitate face-to-face interactions, are of vital importance. Communities of practice and mentoring provide the necessary social context for rich tacit knowledge sharing and creation to be achieved.

It is also worth noting that some of the aforementioned applications, such as blogs, wikis, and RSS, are already known to the LIS community as Web 2.0 or Library 2.0 functionalities; thus, they are incorporated by libraries even if they do not constitute KM-conscious practices. However, "in the age of Library 2.0 the question we should be concerned with is how libraries create, acquire, and transfer knowledge that has been augmented through users interactions afforded by Web 2.0 and Library 2.0 applications" (Kim & Abbas, 2010, p. 212). Moreover, applications, such as intranets, blogs, wikis, RSS, and social media, are considered valuable KM tools for libraries, facilitating communication and knowledge sharing (Bejune, 2007; Chu, 2009; Kim & Abbas, 2010; Mphidi & Snyman, 2004; Tripathi & Kumar, 2010), if optimally used. Mphidi and Snyman (2004), for example, argue that "the content of an intranet is the engine that drives the intranet as a knowledge management tool" (p. 399), meaning that the content must be managed carefully, must be up to date and valid, and relevant to the interests and needs of employees.

CONCLUSIONS

Almost unanimous agreement (for example, Islam, Agarwal, et al., 2015b; Massis, 2014; Porumbeanu, 2010; Sarrafzadeh et al., 2010) exists in the literature that libraries are in danger. That is, the rapid development of IT (Wang, 2006), the escalating cost of information resources (Troll, 2002) in addition to budget and personnel cuts, as well as the dramatic change in user requirements (Johnson, 2014), threaten the existence of libraries. In this challenging environment, the adoption of KM initiatives is even more urgent for libraries (Porumbeanu, 2010; Sarrafzadeh et al., 2010) so as to provide innovative services (Islam, Agarwal, et al., 2015b; Jain, 2007) and transform their status from

'service-oriented' to 'value-oriented' organizations (Corrall, 1998; Jain, 2007). In this respect, "knowledge management has been seen as a survival factor for libraries" (Sarrafzadeh et al., 2010, p. 203). However, KM projects are not implemented in libraries due to the misinterpretation of the concept, ignorance of KM benefits, and lack of skills related to KM (Nazim & Mukherjee, 2013; Roknuzzaman & Umemoto, 2009). Thus, the purpose of the current study was to investigate how library practitioners assess the potential implications, applications, benefits, and opportunities offered by KM to library management, as well as its incorporation into library practice.

The research findings indicate a general healthy state of KM awareness and perceptions among library practitioners. They seem to have a positive attitude towards KM and acknowledge its potential benefits. However, the real picture is not so ideal. Fundamental issues, such as the multifaceted nature of KM and the importance of nurturing a knowledge-sharing culture, are not widely recognized by library practitioners. As Sinotte (2004, p. 194) argues, knowledge "will not be effectively managed without integrated teams and approaches" and thus, "professionals of different provenance must recognize each other's roles" (Davenport & Cronin, 2000; quoted in Davenport, 2004, p. 82). Furthermore, KM is not identified as a managerial concern, which may lead to LIS professionals' reluctance in acquiring managerial skills and competencies. Consequently, if library practitioners want to face the present challenges, they need to clarify KM and broaden their understanding of KM issues. They should change their traditional mindset and acquire new skills to reshape the existing library environment by fostering a knowledge-sharing culture. In view of the aforementioned results, library leaders should encourage practitioners to participate in KM programs and courses offered by academic institutions and professional associations. Moreover, appropriate organizational training programs could also be developed. A wide variety of teaching approaches, such as e-learning, are offered in support of the aforementioned training methods. Finally, participation in conferences, workshops, and seminars offers significant learning opportunities.

The above findings should also be seriously considered by LIS schools, since the way KM is approached in the curricula not only affects LIS professionals' understanding and stance towards KM but also contributes to the development of their KM-related skills. Although the results of the current study clearly indicate that KM has become an integral part of LIS curricula, the design and contents of the course seem to not have fully succeeded in providing library practitioners with a clear view of the 'true KM'. As regards European LIS programs, Loring (2007, p. 20) supports that "knowledge management as a curricular concept seems to cover nearly everything or nothing. But it is, or was, a 'cool' word with a modern sound or touch added to it". Moreover, a worldwide research (Roknuzzaman & Umemoto, 2013) indicated that, in practice, KM has been incorporated into LIS curricula mainly from the IM or IT perspective.

Finally, the results indicate that although academic libraries take steps towards capturing knowledge of their users and internal explicit knowledge, little effort is made at capturing and sharing internal tacit knowledge, thus facilitating knowledge creation. IT-based tools, such as external knowledge repositories, are widely adopted in contrast to social practices, such as communities of practice. Moreover, Library 2.0 functionalities are also applied to a small extent. However, if libraries want to reap the benefits of KM, they should consciously put in practice the systematic application of initiatives mainly related to the management of internal and external tacit knowledge.

The findings of the current research may not be generalizable in other contexts. First, the study sample was restricted to libraries of Greek public universities. Due to their special structure, the results may differ from private sector libraries. Therefore, the research should be expanded to include private sector library practitioners. Second, the Greek economic crisis may have affected the outcomes of the study. Thus, an international replication study would allow us to examine if there are differences between the countries. Further research should

also be carried out to investigate the extent to which KM perceptions affect knowledge creation and innovation, which constitute significant factors for academic libraries to better serve the needs of their patrons.

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