



Managing knowledge capital in public libraries for a knowledge-driven socioeconomic environment

P.A. Kostagiolas

Lecturer,
Ionian University
Department of Archive and Library Sciences
Corfu, Greece

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Abstract:

Intellectual capital and public libraries are closely related in our experiences and in our minds. In this viewpoint, the libraries and the information professionals, consciously or unconsciously, have been deeply involved in the management of library's knowledge capital resources. Understanding and managing the public libraries' knowledge capital is essential since conventional capital alone is no longer a sufficient condition for success. This paper initially provides the fundamentals of intellectual capital and knowledge assets management for public libraries. Thereafter, a number of more intricate management issues are discussed including social value creation and intellectual capital, library goodwill, cooperation and competition (co-opetition) dynamics within library networks and the physical location effect on library knowledge capital.

Keywords: *knowledge capital, intellectual capital, value, goodwill, co-opetition, library management.*

1. Introduction

Societies and economies can be viewed as living entities that are constantly changing and developing new cultural and socioeconomic requirements throughout the different periods in time. Over the years, many changes have taken place and the certainties of each period were replaced by new ones leading to new structures, relations and communication means. In the new knowledge-based socioeconomic

environment, a novel management paradigm is required (Drucker, 2008). There is no doubt that intellectual capital and knowledge assets have become vital for organizations and enterprises in our days. Indeed, the management of information and knowledge, knowledge sharing as well as the management of intellectual capital become rather important issues. Intellectual capital includes the total of knowledge (or intangible) assets (and resources), that is to say, the invisible, non-monetary assets held by organizations which can be identified and analysed individually. These assets and/or resources need to be properly identified and measured in order to fully understand their possible uses, structure, production and value.

The wider observed changes can also be witnessed within public libraries. Although, the public libraries keep their strong foundations, they are constantly changing through the introduction of new operations and services. Within this changing environment the public libraries, as part of societies and economies, can be viewed in two ways (Kostagiolas, 2012):

- Public libraries are significant intellectual capital “creators” within the society and economy as a whole.
- Public libraries utilize intellectual capital and heavily rely upon knowledge assets for their operations and services.

We ascertain that intellectual capital and knowledge assets have become a crucial element for public libraries, fostering innovation and genuine improvements in library operations and services. The novel complicated and knowledge-based library environment makes many conventional management perspectives inappropriate for decision making, since expenditures and investments in intellectual capital are either mis-measured or not measured at all.

This paper initially provides a definition and a classification of intellectual capital and knowledge assets/resources as well as a discussion of issues concerning the management of intellectual capital in public libraries and information services. Thereafter, a number of rather innovative and interrelated matters are discussed including the relationship between intellectual capital management and social value creation, intellectual capital versus access rights, library goodwill, cooperation and competition (co-opetition) dynamics within library networks and the physical location effect on library’s intellectual capital. Although it is beyond the scope of this work to review in depth all the above, each of these issues may provide an excellent motive for further research on the subject leading to additional theoretical and practical results.

Table 1: Explanatory phrases for the classification of Intellectual Capital (modified from Kostagiolas, 2012)

Categories of Intellectual Capital	Explanatory phrases
Human Capital, HC	<ul style="list-style-type: none"> • Includes the knowledge, experiences, competencies and creativity of the library staff; • Knowledge that employees take with them when they leave the library; • It is the knowledge between their ears, and it is a totally portable and an enormous capital asset; • Constitutes the talent base of the library personnel; • Related to how effectively an organization uses its human resources, measured through creativity and innovation; • Human capability for resolving business problems; • Related to individuals and cannot be replaced by machines.
Structural or Organization Capital, SC/OC	<ul style="list-style-type: none"> • Infrastructure, processes and databases of a public library that enable the work of the human capital e.g. the library collection and stocks; the organizational philosophy and structure; management systems (quality and safety management systems); automation and other information systems; patents; copyrights etc; • Knowledge that stays within the public library at the end of the working day; • “Storehouses” of information;
Relational Capital, RC	<ul style="list-style-type: none"> • Relationship with the external environment and more specifically with stakeholders and creditors; • Resources linked to the external relationships of the public library; • Public library networks; • Public library’s reputation.

2. Library’s intellectual capital fundaments and a review of the literature

The term intellectual capital has received different interpretations (Kaufman and Schneider, 2004) and is defined as the total of intangible/knowledge assets/resources held by an organization that are amassed over time, not included in the balance sheet and can be identified and analysed separately. The terms “knowledge asset” and “intangible asset” in management and economics are equivalent and can be used interchangeably (Lev, 2001). Intellectual capital has always been present in libraries and the majority of library professionals always were

and still are, one way or another, aware of the significance of library's intellectual capital. In fact, it seems that a library culture for intellectual capital utilization and/or creation was diachronically present (Kostagiolas, 2012).

In order to better understand and recognize the intellectual capital of a library, a decomposition of the definition provided above is quite useful and leads to a quite popular intellectual capital classification (e.g. MERITUM, 2002; Bontis, 2002; Gallego & Rodríguez, 2005; Choong, 2008; Sveiby, 2010 etc):

- 1) Human capital,
- 2) Organizational (or structural) capital and
- 3) Relational capital.

An extensive analysis of the literature based on the classification presented above is provided by Choong (2008). Here, instead of providing further definitions for each category, a synthesis of explanatory phrases is modified from Kostagiolas (2012) and provided in Table 1. Moreover, a set of indicative knowledge assets for each of the three categories is provided in Table 2.

Table 2 Indicative intangible assets for libraries and information services (modified from Kostagiolas, 2012)

Intellectual Capital Category	Indicative Intangible Assets
Human Capital (HC)	Staff training / education Staff quality / competence / skills / experiences Attributes / culture
Organizational /Structural Capital (OC/SC)	Contracts Intellectual property / copyrights Digitized collections Access view policies Quality and safety assurance/certifications Branding Knowledge based teams Learning culture Information about the staff Remote information services Systems for accessing databases Systems for network development User surveys
Relational Capital (RC)	User relationship Networking and cooperation among libraries Participation in innovation networks Personnel networks Cooperation Trust/ loyalty User training

Although the literature is vast for the individual knowledge assets/resources of Table 2, and a comprehensive review is far beyond the scope of this work, only a few papers focus on intellectual capital in libraries and in particular in public libraries. Some time ago Barron (1995) suggested the need for intellectual capital investments in public libraries through their staff development; Koeing (1997) argued that

intellectual capital should be turned into a comparative advantage by librarians and pointed out the significance of measuring and reporting the status of library's intellectual capital annually. For instance, within the relational capital category the loyalty of library users can be considered as an important intangible asset and may be expressed through an indicator of the percentage of active library users over a time period (Kostagiolas, 2012). On the other hand, Dakers (1998) studied the importance of intellectual asset audits for British Library personnel skills, *as opposed to "...the intellectual capital produced by the British Library's own staff and that much greater part of it which is contained within its stock"*, i.e. the human and the structural capital of the British Library. Rowley (1999) has early identified the potential of intellectual capital within libraries and studied "typical" knowledge assets that have a potential value or assets such as user databases and detailed parts catalogues to which value can be assigned. Portugal (2000) includes an extensive analysis of the significance of intellectual capital for libraries and reviews four library measurement methods. A link between innovation and intellectual or social capital development through proper library services has been identified by Bryson (2001), together with new skills for information professionals (Broady-Preston, 2010).

A library's value can be expressed as a financial value (in monetary terms) and can be based on the concept of ROI (Return on Investment) and the contingent valuation method (e.g. Usherwood, 2002). ROI measures the net benefit/loss generated by a monetary unit invested in a public library and is calculated as the percentage of the ratio between the net profit/loss and the relative amount of the investment. The contingent valuation method (Missingham, 2005) is a quantitative economic methodology, supported by a panel of scientists including Nobel Prize winners Kenneth Arrow and Robert Solow, which estimates the total benefit of a non-market good derived by publicly funded organizations or programs. Missingham (2005) supports that a library's contribution to the knowledge economy can be measured by the Australian Bureau of statistics metrics related to: a. innovation and entrepreneurship, b. human capital and c. information and communications technology (ICT) employment.

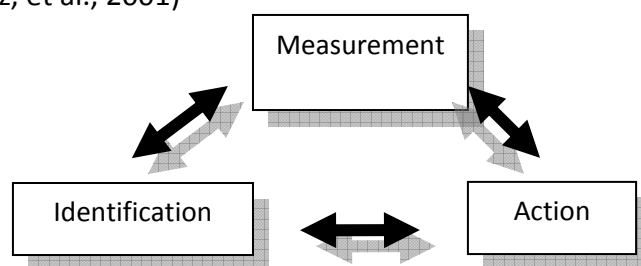
Sheng and Sun (2007) analysed library's organizational structure knowledge resources and suggested that trust and cooperation among library professionals are important knowledge assets which contribute to an *"improvement of the library's intellectual capital and staff capacity of solving problems and doing knowledge creation"*. Kostagiolas and Asonitis (2009) have discussed intellectual capital management for academic libraries; while Kostagiolas and Asonitis (2011) extended their analysis for all types of libraries and proposed a methodological framework based on the Analytic Hierarchy Process (AHP) method for establishing a hierarchy among the three main categories of intellectual capital (human, organizational and relational). The criterion applied to this hierarchy is the actual contribution of each of the intellectual capital categories to improving the library's performance. Garnes (2007), through a case study of Bergen university library in Norway suggested that the library manages the institution's entire intellectual capital; while a framework for a values scorecard which includes intellectual capital is provided by Town and Kyrillidou (2011).

Broady-Preston and Felice (2006) research for Malta University library suggested that user loyalty can be met by assuming actions such as improving its technological infrastructure, staff and user training (students and academics), enriching its collection and promoting the cooperation of academics and specialists. These actions include both tangible and intellectual resources utilization. Indeed, knowledge resources should not be viewed separately from other tangible assets/resources, that is, traditional library resources (Kostagiolas, 2012). For example, the advent of web 2.0 and other innovative information technologies provide an opportunity to incorporate intellectual capital into traditional library resources and practices. In fact, the adoption of clear and effective policies related to the identification, development and measurement of intellectual capital, as well as the study of intangible resources and the impact of the investments made in them is essential in order to attain the library's economic goals and meet user requirements (Kostagiolas, 2012).

3. Defining intellectual capital management in public libraries

Intellectual capital management has been defined by Roos, et al (2005) as *“Intellectual capital management is the deployment and management of intellectual capital resources and their transformations (into intellectual capital resources or into traditional capital resources) to maximize the present value of the organization's value creation in the eyes of its stakeholders”*. Hence, the main goal of the intellectual capital management in public libraries is the appropriate utilization of the knowledge assets in order to add value to the public library's operations and services and indeed increase the overall library value to the community. Hence, the library's management team should regard intangibles as critical assets/resources that need to be managed, i.e. identified, measured and eventually valued.

Figure 1: Stages for the development of a knowledge asset management system (source: Sánchez, et al., 2001)



Proper management actions and activities are aiming at identifying and measuring a set of important knowledge public library assets. One way to move forward would

be to adopt the methodological framework similar to the one proposed by the MERITUM¹ project which comprises of three successive steps (Figure 1):

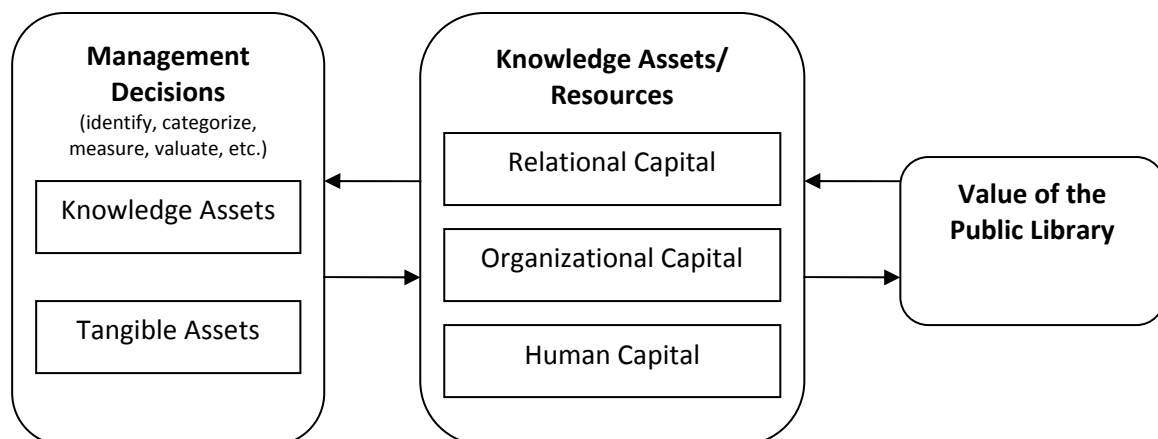
1. Identify knowledge assets/resources and intangible investments.
2. Determine specific indexes for their measurement.
3. Monitor the effects of management investments on their development and then assume actions for their mobilization for value creation.

The framework is based on measurements using indexes linked to knowledge assets and aims at public library's strategic goals. Hence, it is actually a scorecard type method with the knowledge assets categorized (see for example Table 2) into human capital, information/technology capital and organizational capital. White (2007) identified at least three benefits for the management team from the management of knowledge assets/resources:

- a. the ability to present a realistic report to stakeholders;
- b. the ability to unify the library's tangible and intangible resources and
- c. the ability to utilize the library's knowledge assets in order to achieve its strategic objectives.

The author concludes that "a library has multiple intangible assets, resources, and efforts that are not generally accounted for in traditional tangible assessments, accountability reporting, or budget planning." In like manner, Livonen and Huotari (2007) analyzed the same three categories of intellectual capital (human, structural and relational) within the context of an academic library.

Figure 2: Library knowledge asset management framework (modified from Kostagiolas & Asonitis, 2011)



An overall management strategy for a public library should include both tangible and intangible assets/resources and aim at increasing the overall value, as presented in Figure 2. Management decisions include actions for both tangible and intangible assets (left part of the Figure 2), utilizing knowledge assets/resources from all three categories (middle part of Figure 2); while, as shown in the right part of Figure 2,

¹ The MERITUM (MEasuRing Intangibles to Understand and improve innovation Management) project is being funded by the TSER project (Targeted Socio-Economic Research) of the European Union.

should aim at increasing the value of the public library. Therefore, management should further take into consideration three interrelated aspects of particular knowledge assets a. their significance in value creation; b. the quality held by the knowledge asset as compared to the ideal quality; c. the quantity of current resources as compared to an ideal situation. The above mentioned issues constitute a rather interesting challenge for the management of public libraries.

As can be seen from the Figure 2, a first step towards managing intellectual capital would be to identify the intangible assets that have the highest positive effect on library stakeholder viewpoints. Vasconcelos (2008) recommended for non for profit organizations, focusing on non financial issues based on the unique features of each organization or enterprise where most of its value lies. Furthermore, Roos et al (2005) suggest five criteria for the identification of the significance of the knowledge assets/resources:

- i. To be valuable, in the sense that they are able to support the public library's strategic goals.
- ii. To be durable, in the sense that they preserve their attributes over time.
- iii. To be scarce, in the sense that they are not easily accessible by potential competitors.
- iv. To be inimitable, in the sense that a potential imitator will experience significant costs for their duplication.
- v. To be unsubstitutable, in the sense that a substitute is difficult, if not impossible, to develop.

A similar approach for assessing knowledge assets/resources was suggested by Andreou et al (2007) as well as by Green and Ryan (2005) and includes the following value drivers: customers, competitors, employees, information, partners, processes, products/ services and technology. The value drivers mentioned above may be in turn linked to four specific administrative goals which are significant for public libraries, i.e. innovation, organization, socialization and culture. Moreover, the identification of significant knowledge assets is based on two parameters: a. the added value generated by each knowledge asset and b. the critical indicators of success/ performance (CFS Critical Success Factors) related to the useful life of each knowledge asset. As a matter of fact, the value of a library is a complex combination of the economic, cultural, social and intellectual contribution to those who directly use the library's services or indirectly obtain benefits from the existence of the library itself and the services it provides (British Library, 2004). In order to evaluate the intellectual capital of an organization, Vasconcelos et al (2001) proposed the so-called relationship to knowledge asset/resource versus their context dilemma: the authors expressed the uncertainty that characterises any estimation or measurement of the intellectual capital and suggested that the value of a knowledge asset further depends upon the context of its deployment. Furthermore, Vasconcelos (2008) suggested that the value of a knowledge asset/resource is often subjective, i.e. it *"lies in the eye of the beholder"*.

4. Discussing knowledge assets management implications

4.1 Social value creation by public libraries

Public libraries may be considered as a component of the public structural capital according to the Intellectual Capital General Model for the public sector proposed by Bueno et al. (2003). The social capital developed by libraries (e.g. Bryson, 2001; Varheim, 2009) may relate to programs for preventative healthcare, fostering innovation and sustainability, improving environmental management, more efficient transport systems, the utilization of renewable energy sources, understanding climate change etc. In fact, the aforementioned model for the public sector illustrated also in Kostagiolas (2012) includes the three main components of intellectual capital, i.e. public human capital, public structural capital and public relational capital. Public structural capital is being further divided into three components the public organizational capital, the public social capital and the public technological capital. In this line, Town (2010) discuss the concept of a transcendent library in which "...the value can be judged beyond immediate needs and demands, through contribution to less concrete aspects of institutional or societal intent". Thus, a model is suggested for understanding and studying library as a value contributor of organizational and social values.

4.2 Intellectual capital versus intellectual capital access rights

Intellectual capital management philosophy requires libraries to create value by "making everything available", digitizing their collections so as to make them both electronically and physically available and providing a broad range of information beyond local holdings (Kostagiolas, 2012). Intellectual property rights –including copyrights, trademarks, patents, industrial design rights, trade secrets– are knowledge asset generators but represent only a portion of the overall intellectual capital of a modern library. Moreover, exceptions and harmonization of intellectual property rights legislation is discussed for libraries and archives in a globalized manner (Fernandez-Molina & Guimaraes, 2009). At the same time, the digitization of out of copyright material is gradually undertaken by public libraries so as to preserve old, brittle and crumbling documents for their communities. As stated by the Library Copyright Alliance (LCA), which includes members such as the American Library Association, the Association of Research Libraries and the Association of College and Research Libraries, "Intellectual property laws are currently undergoing major changes in response to the growth in the use of digital formats for works" and the library community should make efforts so that these changes "enhance, rather than harm, the ability of libraries and information professionals to serve the needs of the general public." At the same time, the Open Access and Open Source movement include a wide number of resources for knowledge assets generation and creative common licenses provide simple, globally consistent alternatives to the "all rights reserved" paradigm of the traditional copyright approach.

4.3. Library goodwill as a knowledge asset

The library's goodwill is related in a number of different ways to intellectual capital (Kostagiolas, 2012). Reilly & Schweih's (1998) identify three different viewpoints that may be employed in order to form the library's goodwill or may explain why goodwill exists as a knowledge asset in a public library. The first viewpoint has to do with the library's collection, staff, equipment, capital etc. as a functional, operational and physical goodwill synthesis which increases the value of the library. The second viewpoint is the excess of cost over the assets acquired and liabilities assumed. The third viewpoint of goodwill is the expectation of future events that are not directly related to the current operation of a public library. In this perspective, goodwill is developed by investor expectations regarding the future value of the staff, services, relations with customers, etc (Kostagiolas, 2012). The three distinct perspectives of goodwill are combined to a single public library's asset including reputation, longevity, image, services and organizational culture etc. As Germano (2011) suggests the development of a more active culture for intellectual capital management actions will lead library administrations "to actively convert goodwill to stated value for users that can be established, confirmed and by extension, self-replicating." The same author characteristically states that "libraries need to adopt an ideological shift that moves away from suppositions regarding libraries as inherently valuable". This is certainly the case for the analysis of public library knowledge asset management, which in our view is providing facts to support the beliefs of societal, cultural and educational value of public libraries.

4.4. Cooperation and competition (co-opetition) dynamics for knowledge resources within public library networks

Co-opetition arises when libraries and/or other information providers at both dyadic and/or network levels cooperate with each other in creating or exploring markets, but compete in gaining user demand or in resource utilization (Kostagiolas, 2012). Although during the past 15 years scholars recognized and studied co-opetition in certain industries, little has been said for public library networks. We ascertain that co-opetition is an important issue for the knowledge assets/resources management within the growing number of library networks. These networks are created through formal or informal agreements of two or more libraries and/or other organizations coming together in order to share common resources (e.g., materials, information, interlibrary lending, equipment, staff with special skills, collection development, cooperative purchasing, etc.) or aid each other so as to satisfy the information needs of their users, beyond the limits of traditional interlibrary loan services.

In such complicated situations, the rights of the various parties involved should clearly include the intellectual capital utilized and/or produced. Interesting questions on the utilization of each library's intangible resources may include the following (Kostagiolas, 2012): Under which circumstances should public libraries collaborate with their competitors? How can the co-opetitive characteristics of public libraries and information providers, such as publishers, are modelled in terms of the

intellectual capital utilized/produced? Which knowledge assets/resources from each of the three categories are required within this type of collaborative relationship? Which are the suitable managerial solutions in order to regulate intellectual capital sharing within co-opetitive networks for network coordinators or members? As regards long term results, one can identify intellectual capital issues for both the overall network administration of a library network programme and the intellectual capital of individual libraries (and the other participating organizations). Enser (2001) suggests the 5 Cs for libraries within networks: continuity, culture, competition, cooperation and convergence. By analyzing convergence, the author provides another important co-opetition aspect for extending the availability of digitally, organizationally and operationally integrated cultural artefacts within memory organizations/institutions or within memory networks combining librarianship and other subject disciplines. Co-opetition for intellectual capital creation/utilization in memory institutions comprising libraries, archives and museums is another quite interesting viewpoint.

Among other interesting points, the issues examined above provide an extended view of co-opetition related to both tangible and intangible assets/resources produced/utilized within a library network. This is called library co-opetitive dynamics which is different for tangible and intangible resources (Kostagiolas, 2012). Mutually beneficial co-opetition situations are generally characterized by a balance among competition and cooperation. According to the analysis provided by Bengtsson et al (2010) on the different tensions resulting from different types of co-opetition in tangible and intangible resources, without the necessary provisions libraries might be pushed towards situations of overembeddedness or distance, or even of destructive competition or collusion. Overall library network management and long term strategies should not allow the existence of tension among competition or cooperation regions, striking a balance in co-opetition dynamics for both tangible and knowledge assets/resources (Kostagiolas, 2012).

4.5 Physical location effect on library's intellectual capital

The physical location of a public library also effects the way intellectual capital is accumulated and indeed utilized (Kostagiolas, 2012). Indeed, one may erroneously imply that investments in knowledge assets would have the same value, regardless of the library's location (building and surrounding area). Nevertheless, as it is suggested by Kostagiolas (2012), it would be rather unrealistic to examine the utilization of intellectual capital for a specific public library, without considering the library's location. For instance, the utilization of human capital might be significantly influenced by cultural characteristics, active social networks and different higher education systems (Kostagiolas, 2012). Neighbouring scientific and/or academic institutions as well as an urban or a rural location may influence staff quality and the availability of training programs. Organizational and relational capital may be significantly influenced by infrastructure availability or regulations and laws that are specific to a particular country and therefore may or may not foster the exploitation of certain intangible assets. The utilization of organizational patterns of

communication, norms, values and generally all aspects of library and information theory and practice take different forms within different cultural settings (Pors, 2007).

5. Summary

The new economic environment which is unfolding and evolving is bringing about further changes in public libraries' management. Investments in intellectual capital provide the library with a competitive advantage, which is shared among its stakeholders, and increase the overall library value. Generally speaking, an increase in the amount of knowledge assets/resources within a library will diversify library outputs and strengthen the library against competition. The intricacy is that within the current library management paradigms the entire significance of knowledge assets/resources to the existing services and operations is not completely recognized. This can be explained due to the fact that although information and knowledge in many cases is being considered as a source of power, they are not yet being linked to specific management decisions. Gradually however in the maturing knowledge-based library management era, the knowledge assets/resources should be considered as more important than the actual physical capital.

In this paper a significant number of issues related to the management of intellectual capital in libraries have been identified, along with the role that public libraries can play within a new knowledge-based economic environment. Like every innovative concept, intellectual capital has created dilemmas and uncertainties, since we can only approximate the degree to which we gain advantage from any intellectual capital management activity (Kostagiolas, 2012). In addition, increased competition and pressure from global economic threats may also force public libraries to further utilize all their available resources. Managing knowledge assets/resources allows the library's administration to identify its core assets and evaluate the effectiveness of the investments made in them. The results of intellectual capital management should be presented and used complementary to annual financial reports. This would provide library stakeholders with all the necessary information in order to keep track of all the steps taken so that the public library can assume a prominent role within future economic and social realities.

References

- Andreou, A.N., Green, A. & Stankosky, M. (2007), A framework of intangible valuation areas and antecedents, *Journal of Intellectual Capital*, 8(1): 52-75
- Barron, D.D. (1995), Staffing Rural Public Libraries: The Need to Invest in Intellectual Capital, *Library Trends*, 44(1): 77-87
- Bengtsson, M., Eriksson, J. & Wincent, J. (2010), Co-opetition dynamics – an outline for further inquiry, *Journal of Global Competitiveness*, 20(2): 194-214
- Bontis, N. (2002), *World Congress on Intellectual Capital Reading*, Butterworth-Heinemann: Boston
- British Library (2004), *Measuring our value*, available at: www.bl.uk/pdf/measuring.pdf.
- Broady-Preston, J., & Felice, J. (2006), Customers, relationships and libraries: University of Matla—a case study. *Aslib Proceedings: New Information Perspectives*, 58(6): 525-536
- Broady-Preston, J. (2010) "The information professional of the future: polymath or dinosaur?", *Library Management*, 31(1/2): 66 – 78
- Bryson, J. (2001), Measuring the Performance of Libraries in the Knowledge Economy and Society, *Australian Academic & Research Libraries*, 32(4), available at: <http://alia.org.au/publishing/aarl/32.4/full.text/bryson.html>
- Bueno, E., Merino, C. & Salmador, M.P. (2003), Towards a model of intellectual capital in public administrations, *presented at 3rd International Conference of Iberoamerican Academy of Management*, 7-10 December, Sao Paulo.
- Choong, K.K. (2008), Intellectual capital: Definitions, categorization and reporting models. *Journal of Intellectual Capital*, 9(4): 609-638
- Dakers, H. (1998), Intellectual Capital: Auditing the people assets, *INSPEL*, 32(4): 234-242
- Drucker, P. (2008), *Management, The Revised Edition*, New York: Harper & Row
- Enser, P. (2001), On continuity, culture, competition –cooperation and convergence too, *New Library World*, 102(1170/1171): 423-428
- Fernandez-Molina, J.C. & Guimaraes, J.A.C. (2009), The WIPO development agenda and the contribution of the international library community, *The Electronic Library*, 27(6): 1010-1025
- Gallego, I. & Rodríguez, L. (2005), Situation of intangible assets in Spanish firms: an empirical analysis, *Journal of Intellectual Capital*, 6 (1): 105-126
- Garnes, K. (2007), Library in the digital age: experiences and challenges from the university of Bergen library, Norway, available at https://bora.uib.no/bitstream/1956/2459/1/LUCRARIBIBLIO_2007_Garnes.pdf
- Germano, M. (2011), The library value deficit, *Bottom Line: Managing Library Finances*, 24(2): 100–106
- Green, A. & Ryan, J. (2005), A framework of intangible valuation areas, *Journal of Intellectual Capital*, 6 (1): 43-52
- Kaufmann, L. & Schneider, Y. (2004), Intangibles A synthesis of current research, *Journal of Intellectual Capital*, 5 (3): 366-388
- Koenig, M. (1997), Intellectual capital and how to leverage it. *The Bottom Line: Managing Library Finances*, 10(3): 112-118

- Kostagiolas, P.A. & Asonitis, St. (2009), Intangible assets for the academic libraries: definitions, categorization and an exploration of management issues, *Library Management*, 30(6/7): 419-429
- Kostagiolas, P.A. & Asonitis St. (2011), Managing Intellectual Capital in Libraries and Information Services, *Advances in Librarianship*, 33: 31-50
- Kostagiolas, P.A. (2012), *Managing Intellectual Capital in Libraries: beyond the balance sheet*, CHANDOS Publishing, Information Professional Series, Oxford, U.K.
- Lev, B. (2001), *Intangibles: management, measurement and reporting*, Washington, DC: The Brookings Institution
- Livonen, M., & Huotari, M. (2007), The university library's intellectual capital, *Advances in Library Administration and Organization*, 25: 83-96
- MERITUM (2002), *MERITUM Guidelines for Managing & Reporting on Intangibles*, Measuring Intangibles to Understand and Improve Innovation Management—MERITUM. Madrid, Spain
- Missingham, R. (2005), Libraries and economic value: a review of recent studies, *Performance measurements and metrics*, 6(3): 142-158
- Pors, N.O. (2007), Globalisation, culture and social capital: library professionals on the move, *Library Management*, 28(4/5): 181-190
- Portugal, FH (2000), *Valuating information intangibles: measuring the bottom line contribution of librarians and information professionals*, Washington, DC: Special Libraries Association
- Reilly, R.F. & Schweihs, R.P. (1998), *Valuing Intangible assets*, New York: McGraw-Hill
- Roos, G, Pike, S. & Fernström, L. (2005), *Managing Intellectual Capital in Practice*, Oxford: Butterworth-Heinemann, Elsevier
- Rowley, J. (1999), What is Knowledge Management?, *Library Management*, 20(8): 416-419
- Sanchez, P., Elena, S. & Castrillo R. (2009), Intellectual capital dynamics in universities: a reporting model, *Journal of Intellectual Capital*, 10 (2): 307 - 324
- Sheng, X. & Sun, L. (2007), Developing knowledge innovation culture of libraries, *Library Management*, 28(1/2): 36-52
- Sveiby, K.-E. (2010), *Methods for Measuring Intangible Assets*, available at <http://www.sveiby.com/articles/IntangibleMethods.htm>
- Town, J.S. (2010), Value, Impact and the Transcendent Library: Progress and Pressures in Performance Measurement and Evaluation, *Keynote speaker of 2010 Library Assessment Conference: Building Effective, Sustainable, Practical Assessment*, Baltimore, USA
- Town, S.J. & Kyrillidou, M. (2011), *Developing a values scorecard*, 9th Northumbria Conference, Proving value in challenging times, available at: <http://www.york.ac.uk/about/departments/support-and-admin/information-directorate/events/performance-conference-2011/presentations/>
- Usherwood, B. (2002) "Demonstrating impact through qualitative research", *Performance Measurement and Metrics*, 3 (3): 117 - 122
- Varheim, A. (2009), Public libraries: places creating social capital? *Library Hi Tech*, 27(3): 372-381
- Vasconcelos, A.C. (2008), Dilemmas in knowledge management, *Library Management*, 29(4/5): 422-443

Vasconcelos, A., Ellis, D., Pieter, L., & Chavda, A. (2001), Problems in the measurement of intellectual assets, in *Proceedings of the Second European Conference on Knowledge Management*, pp. 705-720, Bled, Slovenia: Bled School of Management

White, L.N. (2007a), Unseen_measures: the need to account for intangibles. *The Bottom Line: Managing Library Finances*, 20(2): 77-84

Dr. P.A. Kostagiolas, Lecturer,
Ionian University
Department of Archive and Library Sciences
Ioannou Theotoki 72, GR-CORFU 49100
Tel. +30 2661087402 & Fax. +30 2661087433
Email: pkostagiolas[at]ionio.gr