Published online: 22/02/2015

Published print:02/2015

doi: 10.5455/aim.2015.23.57-59

ACTA INFORM MED. 2015 FEB 23(1): 57-59

Received: 11 December 2014 • Accepted: 12 February 2015

© 2015 Mahtab Karami, Mashallah Torabi

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/4.0/) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

PROFESSIONAL PAPER

Value Innovation in Hospital: Increase Organizational IQ by Managing Intellectual Capitals

Mahtab Karami¹, Mashallah Torabi²

¹Health Information Management Department, School of Allied Medical Sciences, Kashan University of Medical Sciences, Kashan ²Tehran University of Medical Sciences, Tehran, Iran

Corresponding author: Mashallah Torabi. Secretary of Innovation Initiative, PHD candidate of health information management, Tehran University of Medical Sciences, Tehran, Iran. Email:mtorabi@tums.ac.ir

ABSTRACT

Hospital is a complex organization rich in intellectual capitals. Effective management of these assets in line with innovating value to reach strategic goals and objectives can lead to increasing organizational IQ. In hospital with high organizational IQ, Increasing syntropy in intellectual capitals can convert it to an agile, learner, innovative, and smart organization.

Key words: Value Innovation; Hospital; Organizational IQ; Intellectual Capital

1. INTRODUCTION

Hospital is a complex ecosystem in terms of diversity of services, clients, personnel, equipment, technologies, data and information which are generated. Since the ultimate goal of a hospital is to improve quality of care along with reducing cost, managing of tangible and intangible assets is very important to create value innovation (VI). VI is defined as "a formalized business concept that is predicated on identifying, measuring, and then maximizing those attributes that create value and minimizing or deleting attributes that do not" (1). For healthcare organizations, intelligence is an essential value to pursue transformation in financial and clinical aspects (2).

In the past, health care management has been equated with financial management. But today, healthcare organizations should manage and assess intangible assets (3). Intangible assets consist of individuals, and their reciprocal interactions, knowledge, behaviors, cognitions, feelings, emotions, and functional cultures, information processing infrastructures, such as information technologies, and interpretive systems for environmental events (4). In fact, these are organizational capital, which is also termed intellectual capital (5). Intellectual capital (IC) is a collection of assets which can produce value (6).

Organizations today are seen as intelligent systems designed to manage knowledge and the knowledge is formed by technological interaction, technologies, and people within an organization (7, 8). The use of computer-assisted information storage, acquisition, and retrieval technologies lead to organizational IQ (4). Organizational IQ is conceptualized as an organization's capability to gather, process, interpret and communicate the information needed in decision-making processes (9).

The aim of article is how can increase organizational IQ in hospital by managing intellectual capitals.

2. WHAT IS INTELLECTUAL CAPITAL (IC)?

The term intellectual capital (IC) was first coined by Kenneth Galbraith in 1969 (6). IC includes processes, renewal capital, creativity and innovation, cultural capital, patent right and educational efforts (10). Different authors provide different definitions for IC. According to Cabrita and Bontis, IC means "the knowledge assets of an organization which can be turned into value and at the same time create a link between sets of expertise, experience and competencies inside and outside organization" (11). Hsu and Fang also believe that besides creating value and competitive advantages, IC can help organization to achieve its goals (12). Some authors divide IC into two forms; human capital and structural capital. Others add one more to this division which is relational capital(13).

Human capital includes knowledge, skill (14), educations, values, experience (11), innovation (15), creativity, problem solving capability (16), loyalty, flexibility(17), expertise, competence, motivation, commitment, attitude, and agility (18) that the personnel of an organization possess and when they leave the company, the human capital will leave consequently(19, 20).

Structural capital is the hardware, software, databases, organizational structure, patents, trademarks and everything else of organizational capability that support the productivity of the employee(15). *Hsieh and Tsai* also call it technological capital (21). On the other hand, *Hsu and Fang* believe that "the structural capital includes *process capital* which is defined as workflow, operation processes, specific methods, business development plans, information technology systems, and cooperative culture, etc. and *innovation capital* which is defined as intellectual property within an organization, including patents, copyrights, trademarks, and know how, etc" (12).

Relational capital is defined as the knowledge underlying the relationships with the outside environment(18); the relationships, according to *Martinez-Torres*, that an organization

has with its clients/customers and environment (14) which is also called customer capital (22).

3. WHAT IS ORGANIZATIONAL IQ?

The concept of Organizational IQ (Organizational Intelligence Quotient) was first coined by Haim Mendelson and other researches(9). The IQ describes the capability of either an organization or an individual to quickly process information, making effective decisions, and implement them. Organizational IQ is a quantitative measure of an organization's effectiveness in information distribution, decision making, and operation. A high Organizational IQ enables companies to react quickly to changes in the environment, and to adjust their operations accordingly. As a result, high-IQ companies actively monitor and improve the effectiveness of their performance and therefore detect the causes of problems. For organizations that operate in the same business environment, the higher the Organizational IQ, the more successful the organizations.

External Information Awareness – means the degree to which an organization has developed a deep and consistent understanding of its environment. This awareness is essential in creating a sense of urgency that increases the speed of core business processes.

Internal Knowledge Dissemination - Ensuring that each part of the organization knows what it needs to know when it needs to know it. This knowledge can be presented in key performance metrics format across three axes: horizontal, vertical, and time.

Effective Decision Architecture - Ensuring that decisions are made at the right level, by right person with the best knowledge and perspective. Effective decision architecture helps decision-makers to make critical strategic decisions, without overwhelming them with tactical decisions that can and should be made by contributors at a multiple level with a perspective more appropriate for those decisions.

Organizational Focus – avoiding from information overload and organizational complexity as well as aligning organizations along their strategy. Excessive useless information on marginal subjects or overly complex systems of communication reduces the system's ability to effectively focus on the key information and rapidly act on it. Therefore the development of a focused strategy, its communication, and the alignment of incentives with the strategic goals are critical to organizational performance.

Continuous Innovation - Reinventing products, services and processes is a key strength of leading organizations. They generate break-through ideas that turn into market successes by promoting creativity and innovation across all functions, hierarchies and boundaries of an organization. They also have strong actions that allow them to learn from and improve existing processes (23).

4. HOW CAN INCREASE ORGANIZATIONAL IQ IN HOSPITAL BY MANAGING INTELLECTUAL CAPITALS?

In smart organization, value creation culture is essential and means understanding what value the organization seeks and how they are motivated to pursue ways to create value. To achieve this goal it is necessary to understand its environment. Understanding of environment describes how the organization conceptualizes, engages, measures and understands potential threats and opportunities (24).

Hospital is rich in CI. Its specialists, technologies, data and customers are many and varied. Therefore in hospital, CI can be regarded as dimensions and levers of organizational IQ. Since, the proper management of these assets can lead to achieving organizational intelligence (refers to specialists), business intelligence (refers to all of data and technologies) and competitive intelligence (refers to continual relationship with customers, environment and competitive). By integrating organizational, business and competitive intelligence can be leverage IQ principles. This integration can be a powerful tool for the hospital to innovate value about:

- How can a hospital muster its resources?
- How can a hospital align and empower its decisions?
- How can a hospital compete in the changing world?
- How can a hospital dedicate to seeking new ideas and ways of fulfilling its purposes?
- How can a hospital embrace and profit from uncertainty?

5. CONCLUSION

High organizational IQ can convert hospital to an agile, learner, innovative, and smart organization by creating syntropy in intellectual capitals. Syntropy is defined as the coming together of people, ideas, resources, systems, and leadership in such a way as to fully capitalize on the possibilities of each.

CONFLICT OF INTEREST: NONE DECLARED.

REFERENCES

- Steele JR, Schomer DF. Continuous quality improvement programs provide new opportunities to drive value innovation initiatives in hospital-based radiology practices. J Am Coll Radiol. 2009 Jul; 6(7): 491-499.
- Karami M, Barzekar H. Clinical Data Warehouse: An Effective Tool to Create Intelligence in Disease Management. Health Informatics and Medical Research, 2014.
- Ondategui-Parra S, Bhagwat JG, Zou KH, Gogate A, Intriere LA, Kelly P. et al. Practice management performance indicators in academic radiology departments. Radiology. 2004 Dec; 233(3): 716-722.
- Akgun A, Lynn G, Byrne J, Keskin H. Organizational Intelligence: A Structuration View. Journal of Organizational Change Management. 2007; 20(3): 272-289.
- Karami M, Fatehi M, Torabi M, Langarizadeh M, Rahimi A, Safdari R. Enhance hospital performance from intellectual capital to business intelligence. Radiol Manage. 2013 Nov-Dec; 35(6): 30-35; quiz 6-7.
- Grantham CE, Nichols LD, Schonberner M. A framework for the management of intellectual capital in the health care industry. Journal of health care finance. 1997; 23(3): 1-19.
- Halal W. Organizational intelligence: what is it, and how can managers use it?. 1997 [cited 2012]; Available from: http:// www.strategy-business.com/article.
- 8. Bhatt GD. Knowledge management in organizations: Examining the interaction between technologies, techniques and people Journal of knowledge management. 2001; 34(4): 58-60.
- 9. Ruhan A, Iijima J, Sho H. A Study on Relationship between

- Organization Intelligence Quotient and Firm Performance: A comparison study between Japan and China The 8th Asian eBiz Workshop; Seuole, Korea, 2008.
- 10. Zangoueinezhad A, Moshabaki A. The role of structural capital on competitive intelligence. Industrial Management & Data Systems. 2009; 109(2): 262-280.
- 11. Cabrita MR, Bontis N. Intellectual Capital and Business Performance in the Portuguese Banking Industry. International Journal of Technology Management. 2008; 43: 212-227.
- 12. Hsu YH, Fang W. Intellectual Capital and New Product Development Performance: The Mediating Role of Organizational Learning Capability. Technological Forecasting and Social Change. 2009; 76(5): 664-677.
- 13. Martı'n-de-Castro G, Delgado-Verde M, Lopez-Saez P, Navas-Lopez J. Towards 'An Intellectual Capital-Based View of the Firm': Origins and Nature. Journal of Business Ethics. 2011; 98: 649-662.
- 14. Martinez-Torres A. Procedure to Design a Structural and Measurement Model of Intellectual Capital: An Exploratory Study. Information & Management. 2006; 43: 617-626.
- Edvinsson L, Malone M. Intellectual Capital. Realizing Your Company's True Value by Findings Its Hidden Brainpower. New York: Harper Collins Publishers, 1997.
- Brooking A. Intellectual Capital. Core Asset for the Third Millennium Enterprise London: International Thomson Business Press, 1996.
- 17. Alama EM. Capital intelectual y Resultados Empresariales en

- las Empresas de Servicios Profesionales de Españ. Madrid: Universidad Complutense de Madrid, 2008.
- Chang S, Chen S, Lai J. The Effect of Alliance Experience and Intellectual Capital on the Value Creation of International Strategic Alliances. Omega. 2008; 36: 298-316.
- Hamdam H, Vazifeh Damirchi G. Managing Intellectual Capital of Small and Medium Size Enterprises in Iran Case Study: Ardabil Province SMEs7. Interdisciplinary journal of contemporary research in business. 2011; 3(2): 233-340.
- Hsu HY. Knowledge management and intellectual capital [3215027]. United States - Illinois: Southern Illinois University at Carbondale, 2006.
- 21. Hsieh M, Tsai K. Technological Capability, Social Capital and the Launch Strategy for Innovative Products. Industrial Marketing Management. 2007; 36: 493-502.
- Wu W, Chang M, Chen C. Promoting Innovation through the Accumulation of Intellectual Capital, Social Capital, and Entrepreneurial Orientation. R&D Management. 2008; 38: 265-277.
- Hansen D. leveraging organizational IQ to improve management processes. 2003 [cited 2014]; Available from: http://www.innovatehealth.com/Leveraging%20Org%20IQ%20 for%20mgmt%20processes.pdf.
- 24. Matheson J. Measure your organizational IQ. 2012 [cited 2014]; Available from: http://smartorg.com/2012/03/value-point3/.

