PERFORMANCE INDICATORS IN MEASURING ACADEMIC LIBRARY

[1] Mohd Dasuki Sahak and [2]Zoharah Omar, PhD
[1]Librarian
Perpustakaan Sultan Abdul Samad, Universiti Putra Malaysia
43400 Universiti Putra Malaysia, Serdang, Selangor, Malaysia
E-mail: [1] dasishak@gmail.com,
[2]Lecturer
Faculty of Educational Studies, Universiti Putra Malaysia
43400 Universiti Putra Malaysia, Serdang, Selangor, Malaysia
E-mail: zoharah@educ.upm.edu.my

ABSTRACT

The aim of this review paper is to explore the library performance indicator in the academic library. In the year of 2011, Malaysian Academic Library had decided to use British Standard International Organization for Standardization (ISO) 11620: 2008, Library performance indicators as a standard to measure library performance. Key Performance Indicators (KPIs) is defined as simple and effective measurement system that helps organization to explain and manage the service progress for customer, aligned with the vision and mission of the organization. A review of research articles will examine the theoretical framework, types of measures and performance indicators, studied by several authors. The indicators will be categorized into five areas of measurement, based on the British Standard categories. The categories are resources, access, infrastructure, use, efficiency, and lastly potentials and development. The findings of this study will become as an added value for the librarians to know what are the indicators and areas of measurement that are mostly used to measure the library effectiveness and how it can help to develop KPIs to be more practical, appropriate, informative and with valid measures.

KEYWORDS: academic library, ISO 11620: 2008, key performance indicators.

International Conference on Libraries: "Transformation to Humanize Libraries "
2nd - 4th July 2012, Renaissance Hotel Kota Bharu, Kelantan

1

INTRODUCTION

Nowadays, most of the organizations are concern on the high quality of product and services. Those who are interested with this issue are both from the commercial and non-commercial institutions around the world. As a result, a lot strategies to improve the quality of products and services have been developed. The strategy includes human resource development, performance measurement, quality improvement, process improvement, re-engineering, knowledge management and technology (Swanson, 2007). They are spending millions of dollars each year on development efforts aimed at their systems, employees and customers.

Performance measurement is one of the strategy that is commonly used to provide essential feedback to improve decision making in organizations at all levels such as strategic, operational and individual level. This system is not only concern with collecting data, but also associated with a predefined organization performance goal and standard (smartKPIs.com, 2012). Most of the organizations measure their performances to present the evidence of the cost effectiveness and achievements for their stakeholders and finance authorities for sustainability.

Libraries, as non-commercial institutions, are also concern on the quality of product and services. There can be a number of aspects of quality in the academic libraries due to the mission, strategies, performance goals and challenges (Poll and Boekhorst, 2007). There are many types of library. Academic library is one of the types of library that is an integral part of a college, university, or other institution of post-secondary education and administered (Reitz, 2004). They play a vital role to meet the information and research needs of students and academic staff.

According to Poll and Boekhorst (2007), performance measurements have been used for a long time in the libraries and have been described in the journals, books, handbooks, and International Standard Organization (ISO) standards in the Western world. Unfortunately, the problem of measuring performance is to find the consensus among the academic libraries on common set of indicators (Poll, 2007). In other hand,

International Conference on Libraries: "Transformation to Humanize Libraries "
2nd - 4th July 2012, Renaissance Hotel Kota Bharu, Kelantan

2

there are some resistance from the inside and outside of the library when implementing performance measurement system.

This paper intends to discuss the library performance indicator in the academic library by explaining the concept of performance measurement, key performance indicators (KPIs) in the academic libraries, stakeholders view on KPIs and some examples of KPIs.

CONCEPT OF PERFORMANCE MEASUREMENT

Performance management research is multidisciplinary, being informed by a varied group of complementary disciplines and corresponding theories. Strategic Management, Operations Management, Human Resources Management, Organizational Behaviour, Information Systems, Marketing, Management Accounting and Control are all contributing to the field of performance measurement (smartKPIs.com, 2012). Figure 1 below presents the System Model of Performance Improvement. This model will help us to understand the process of improving performance by visualizing the overall system, process, and context of performance improvement.
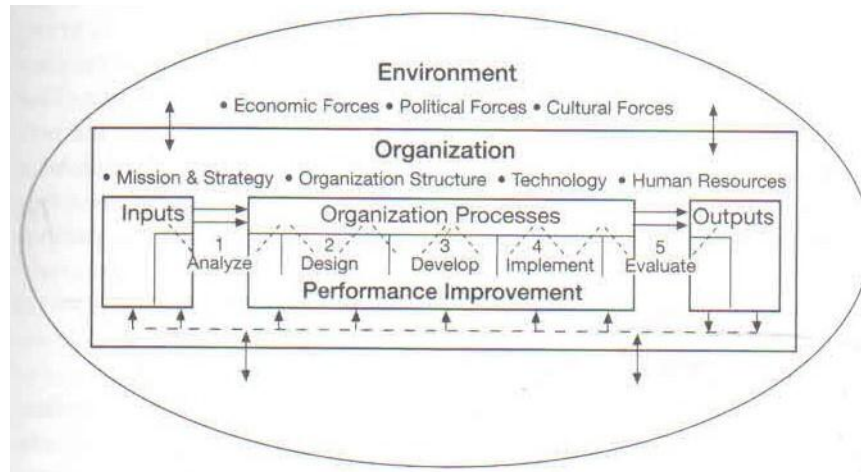
International Conference on Libraries: "Transformation to Humanize Libraries "
2nd - 4th July 2012, Renaissance Hotel Kota Bharu, Kelantan

3

Figure 1: Systems Model of Performance Improvement

This model indicates that performance improvements are influenced by the internal and external factors. Organization can be an internal factor that includes mission and strategy, structure, technology and human resource. While, external factors consist of environmental factors such as economics, political and cultural. The management of the organization needs to examine their critical success factors before implementing performance measurement systems (Parmenter, 2009).

For example, academic libraries can calculate the inputs (funding, staff, space, and collection), process (cataloging and classifications, Information and Communication Technology development) and output of product and services (loans, visits, downloads). However, these models do not include the impact or outcome of the performance measurement. Measuring impact or outcome means going a step further after output to assess the effect of services on users. There are two methods to measure the impact or outcomes by quantitative and qualitative methods. The simple way is by Customer Satisfaction Survey. This survey will help libraries to identify and detect which services are not usually being used and the reasons for non-use for certain services.

There are three types of performance measures that are used by many organization such as key result indicators (KRIs), performance indicators (PIs) and KPIs

as stated by Parmentar (2007). KRIs help organizations to determine what have been done in perspective, PIs tell what to do and KPIs guide on what to do to increase performance dramatically. Nowadays, KPI is one of the most popular management tools. The origins of the word "Key Performance Indicator" can be traced to 1976 in an article published by *BusinessWeek* (Sanchez & Robert, 2010).

Regarding the popularity of KPI terminology, as of May 8, 2012, www.google.com searches illustrated the following results:

"kpi"   = 4,950,000 results

"key performance indicators"   = 13,900,000 results

"performance indicators"   = 29,500,000 results

"libraries performance indicators" = 4,300,000 results

This result indicates that KPI is the most popular management tools nowadays. Research on the academic library quality and performance has been conducted for a long time. Many previous studies can be found in the literature. At present, most of the studies are focusing on the perceived quality by the library users. They use service quality models such as SERVQUAL, LIBQUAL and ACRL and service ISO 1162 to measure the academic library quality. This model is widely accepted around the world and is being used as instruments for Academic libraries to conduct the survey on their performance and service quality, as a requirement of the ISO Standards. The purpose of the survey is to collect customer feedback on their services.

Study by Babalhavaeji et.all (2009) and Roslah Johari and Zainab Awang Ngah (2007) assess the performance of academic libraries by measuring services satisfaction. They used customer satisfaction model to measure the perceived quality by the library users. Crawford, Pickering and Mclelland (1998) measured the effectiveness of library performance by using stakeholder method, while Cullen and Calvert (1995) used Model of Organizational Effectiveness. Most of the findings indicate that ranked lists and correlations between indicators that are chosen by different groups of stakeholder have shown similarities. They preferred good library collections, staff

helpfulness, and operations hours. However, the finding also confirms that stakeholder groups have different perspectives on the library performance. Each stakeholder group has their own perception on how important of libraries are for them based on their interest and intentions.

KEY PERFORMANCE INDICATORS IN THE MALAYSIAN ACADEMIC LIBRARIES

The concept of KPIs in Malaysia began as early as 2005 when Manpower and Planning Unit (MAMPU) circulate government circular "Pekeliling Kemajuan Pentadbiran Awam Bilangan 2 Tahun 2005 - Garis Panduan Bagi Mewujudkan Petunjuk-Petunjuk Prestasi Utama atau *key performance indicators* (KPI) dan melaksanakan pengukuran prestasi di agensi kerajaan. These circulars enforced all government agencies to create and implement KPIs in the organizations. Later on, Dato' Sri Mohd Najib Tun Abdul Razak also used KPIs in his administration when he became the sixth Prime Minister of Malaysia in the 2009.

In the year of 2011, Conferences of University Libraries Malaysia (PERPUN) set up a Special Interest Group on KPI. For the first meeting, the group had decided to use British Standard International Organization for Standardization (ISO) 11620: 2008 as a standard to measure academic libraries performance.

Bellini (2004) declares that there are three main reasons for academic libraries to prefer use ISO 11620 as their standard as below:
1. ISO is a highly authoritative body and is internationally well known even outside the library sector. Consequently, the results yielded by an ISO standard enjoy more credence outside the restricted domain of the library
2. ISO 11620 offers greater guarantees as regards development and updating
3. The ISO standard comprises a larger number of indicators.

International Conference on Libraries: "Transformation to Humanize Libraries "
2nd - 4th July 2012, Renaissance Hotel Kota Bharu, Kelantan

6

Meanwhile, according to Poll and Boekhorst (2007), there are other standards that have been described in handbooks and standards in the western world to measure academic library performance such as below:

1. BIX-Library Index for academic libraries (2002)
2. Bertelsmann Foundation and the German Library Association, Swedish Quality Handbook (2004)
3. HELMS 1998 (UK Higher Education Library Management Statistics)
4. UK Higher Education Library Management Statistics; Benchmarking of the Netherlands University Libraries (1999)
5. Norwegian Indicators (2007)
6. Measuring Quality Performance Measurement in Libraries (2007), International Federation of Library Associations and Institutions.

STAKEHOLDERS VIEW ON KEY PERFORMANCE INDICATORS

Stakeholders are groups of people that have interest in the functioning of institutions. They have direct or indirect stake in an organization because it can affect or be affected by the organization's actions, objectives, and policies (Businessdictionary, 2012). The main stakeholder for academic libraries is University Management. Academic libraries are considered as key factor in determining the quality of university. In Malaysia, academic libraries are recognized as key factor in determining quality of higher educational institutions by Ministry of Higher Education. Academic libraries performance was also assessed by the Self-accrediting Institution, Academic Performance Audit and University Research Evaluation System (Ministry of Higher Education, 2011).

According to the Poll and Boekhorst (2007), they are three types of stakeholders in the academic libraries with their view and interest such as below:

International Conference on Libraries: "Transformation to Humanize Libraries "
2nd - 4th July 2012, Renaissance Hotel Kota Bharu, Kelantan

7

Table 1: Stakeholders View on Key Performance Indicators

No.	Stakeholders		Stakeholders View
1.	Users (actual and potential)	I.	Access to information worldwide
		II.	Delivery of information to the desktop
		III.	Speed and accuracy of delivery
		IV.	Good in library working conditions
		V.	Responsiveness of staff
		VI.	Reliability of services
2.	Funding institutions	I.	Cost-effectiveness
		II.	Clear planning, effective organization
		III.	Positive outcome on users
		IV.	Benefits for the institutions goals
		V.	Effective cooperation with other institutions
		VI.	High reputations of the library
3.	Library staff	I.	Good working conditions
		II.	Clear planning, straight process
		III.	Systematic staff development
		IV.	High reputation of the library

ISO 11620:2008

In the ISO 11620 (2008), performance indicator is defined as expression (which may be numeric, symbolic or verbal) used to characterize activities (events, objects, and person) both in quantitative and qualitative terms in order to assess the value of the activities characterized, and the associated method. There are 48 indicators in this standard. However, not all of the indicators are suitable to choose. Only certain indicators can be chosen to demonstrate their effectiveness for stakeholders (Babalhavaeji, 2009).

The first step to choose a set of library performance indicators must be based on the mission and goal. On the other hand, the indicators also need to be aligned with the stakeholders goals. Staffs also must involve in determining and selecting performance indicators, especially those people who are involved for the item that is measured. They need to inform the reason for measuring and the expectation gains (Poll, & Boekhorst, 2007). This standard follows the Balanced Scorecard approach to create the four major performance measurements such as below:

1. Resources, Access, and Infrastructure
    Presents performance indicators that measure the adequacy and availability of library resources and services

2. Use
    Presents performance indicators that measure the usage of library resources and services

3. Efficiency
    Presents performance indicators that measure resource and service efficiency

4. Potentials & Development
    Provides performance indicators that measure the library's input into emerging service and resource areas and its ability to gain sufficient funding for development

Based on Systems Model of Performance Improvement, library performance indicator in the ISO 11620 (2008) can be described in the figure 2. Academic libraries can evaluate the inputs (percentage of required titles in the collection), process (speed

of inter-library lending), output of product and services (loans per capita) and impact/outcomes (user satisfaction). Each performance indicators were described clearly in this standard with unique titles, objective, scope, definition, method, interpretation and factors affecting, source and related performance indicators.
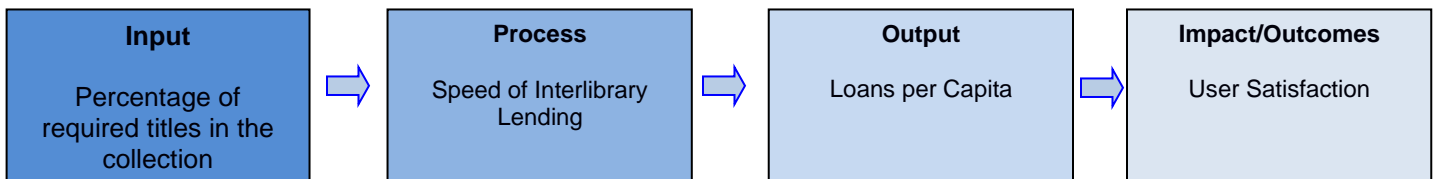
Input	Process	Output	Impact/Outcomes
Percentage of required titles in the collection	Speed of Interlibrary Lending	Loans per Capita	User Satisfaction

Figure 2. Examples of Library Performance Indicator

CONCLUSION

As a conclusion, academic libraries has already recognized key factors in determining quality of higher educational institutions. KPIs can be the key for libraries' success to achieve the vision, mission, business strategy, objectives and targets. Discussion in this paper will help libraries to understand the concept of performance measurement and KPIs. Library performance is nothing more or less than the sum total of its individual staff. All of them will add value to the KPIs. They need to understand about KPIs to ensure all of them will go hand-in-hand in contributing to the process of achieving the KPIs. This paper focus to review ISO 11620, further review should extent to others performance indicators standard.

REFERENCES

Amberg, M., Fischl, F., & Wiener, M. (2005). Background of critical success factor research. *Friedrich-Alexander-Universität Erlangen-Nürnberg. Retrieved from http://www.international-outsourcing.de/CSF-Tool/docs/WorkingPaper_BackgroundCSF_Ambergetal._FINAL.pdf*.

Babalhavaeji, F., Isfandyari-Moghaddam, A., Aqili, S. V., & Shakooii, A. (2009). Quality assessment of academic library performance: The case of an iranian academic library. *Malaysian Journal of Library & Information Science, 14*(2), 51-81.

Bellini, P. 2004. The trial application of the IS0 11620: Library performance indicators at the Library of the University of Trento, Italy. *Fifth Northumbria*: 48-57.

Businessdictionary.(2012). Retrieved at May 10, 2012. from http://www.businessdictionary.com/definition/stakeholder.html#ixzz1u GeMHpE4.

Crawford, J., Pickering, H., & McLelland, D. (1998). The stakeholder approach to the construction of performance measures. *Journal of Librarianship and Information Science, 30*(2), 87-112.

Cullen, R. J., & Calvert, P. J. (1995). Stakeholder perceptions of university library effectiveness. *The Journal of Academic Librarianship, 21*(6), 438-448.

ISO 11620 .(2008). Information and documentation. Library performance indicators.

Ishak, M., Hussain, A., & Sahak, M. D. (2011). Discovering the right key performance indicators in libraries: A review of literatures

Johari, R., & Zainab, A. (2007). Identifying what services need to be improved by measuring the library's performance. *Malaysian Journal of Library and Information Science, 12*(1), 35.

Ministry of Higher Education. (2011). *University Act.* Retrieved May 10, 2012 from http://www.portal.mohe.gov.my/portal/page/portal/ExtPortal/MOHE_MAIN_PAGE/Information/University

Parmenter, D. (2009). *Key performance indicators (KPIS) developing, implementing, and using winning KPIs.*

Pekeliling Kemajuan Pentadbiran Awam Bilangan 2 Tahun 2005. Garis Panduan Bagi Mewujudkan Petunjuk-Petunjuk Prestasi Utama Atau *Key Performance Indicators* (KPIS) Dan Melaksanakan Pengukuran Prestasi Di Agensi 18 Kerajaan, (2005). Retrieved from http://docs.google.com/viewer?a=v&q=cache:0hbDCtU8Qw4J:e-maik.my

Poll, R., & Boekhorst, P. (2007). Measuring Quality Performance Measurement in Libraries 2nd revised edition. *IFLA Publications, 127.*

International Conference on Libraries: "Transformation to Humanize Libraries "
2nd - 4th July 2012, Renaissance Hotel Kota Bharu, Kelantan

11

Reitz, J. M. (2004). *Dictionary for library and information science*. Westport, Conn: Libraries Unlimited.

Roswitha Poll, (2007) "Benchmarking with quality indicators: national projects", *Performance Measurement and Metrics*, Vol. 8 Iss: 1, pp.41 - 53

Rockart, J. (1979, March-April). Chief executives define their own data needs. *Harvard Business Review*, 81-93.

Sanchez, H., & Robert, B. (2010). Measuring portfolio strategic performance using key performance indicators. *Project Management Journal, 41*(5), 64-73.

smartKPIs.com.(2012). Retrieved at May 10, 2012.
From http://www.smartkpis.com.

Swanson, R. A. (2007). *Analysis for Improving Performance*. San Francisco: Berrett-Koehler Publishers.

Tiemensma, L. (2010). Quality metrics in academic libraries: Striving for excellence. *Qualitative and Quantitative Methods in Libraries: Theory and Applications: Proceedings of the International Conference on QQML2009,* pp. 219.

Zeithaml, Valarie A., Parasuraman, A. & Berry, Leonard L. (1990). Delivering quality service: Balancing customer perceptions and expectations. NewYork: Free Press
ISO 9000. (2005). Quality management systems, fundamentals and vocabulary. Geneva: International Organization for Standardization.

International Conference on Libraries: "Transformation to Humanize Libraries "
2ⁿᵈ - 4ᵗʰ July 2012, Renaissance Hotel Kota Bharu, Kelantan

12