

## Supply Chain Management (SCM) Revealing Quality Services in University Libraries: Experience and Realization

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### **Abstract:**

*University library's success depends on better services to the users of the right information at the right time. Moreover, library user's satisfaction depends on provide proper library resources as well as update information. Update information depends on triangular activities like suppliers, organizations and library personnel. The objective of supply chain management is to coordinate the focal library's processes and activities with those of its suppliers and customers, such that the library is provided resources and services meet or exceed user / customer requirements. The purpose of this study is to develop a serene environment for users and improves understanding of SCM to stimulate and facilitates researchers to undertake both theoretical and empirical investigation on the framework of SCM. This study also demonstrates that SCM functions, challenges and internal library services, library structure of SCM, elements of SCM. Researcher is mainly focused on triangular relationship among suppliers, library personnel and library authority (organization) to do job for fulfilling the user's needs of information to overcome the university library's goal.*

**Keyword:** *SCM, Quality Services, Realization and University Libraries.*

### **Introduction:**

Libraries are growing organism as well as users and resources enhancing day by day due to meet the needs of information and providing right information to the right users at the right time. Libraries have expanded their core services to include many things that might be better off in the hands of other organizations. Library suppliers, vendors, and publishers are increasingly driven by the bottom line for providing quality and proper services in the library. The library supply chain increases the ability to rely on partner organizations to supply those things to users which might be secondary to the mission of the library and create costly inefficiencies.

*Supply chain management of the libraries are the integration of key service processes from end user to vendors / suppliers that provide proper services to the right users at the right time as per needs of information that evaluate satisfaction from users and other community (Lambert, Cooper, and Pagh, 1998).*

Library success and viability also depend on management's to co-ordinate the network of relationships and processes linking the library's internal and external supply chain members to provide the desired services.

Management needs to understand what library users require, as well as the processes transforming information content into valued information resources and associated services. One strategy for improving library quality is the practice of supply chain management.

### **Literature Review**

Library success and viability also depend on administration's ability to coordinate the network or relationships and processes linking the library's internal and external supply chain members to provide the desired services to the users.

Ball and Wright (2000) and Ball (2004) also referred to the information supply chain, describing the primary library supply chain processes as creation, publication, aggregation, access and use. Libraries were identified as intermediaries, supporting the aggregation, access and use functions.

Smeltzer and Ogden (2002) found that complexity of purchasing services to be greater than that purchasing materials due to the intangibility of the services and the difficulty of assessing financial and other benefits of the purchase.

Krause and Scannell (2002) studied supplier development practices for manufacturers and service firms and concluded there were differences among the two types of firms. Service firms rated the importance of reduced cost, increased supplier responsiveness and improved delivery significantly higher. They also placed more emphasis on financial strength of suppliers when assessing their strategic goals.

Katsirikou (2003) proposed a library supply chain model considering of four integrated parts: (1) the first part were knowledge resources such as publishers and database providers, digital media and research providers; (2) the libraries' knowledge content and systems (3) distributed to the libraries' members who acted as wholesalers and (4) the library users.

Li (2006) studied that the application of the supply chain system for libraries are also very limited. He argued that libraries should do as any business does: satisfy its users as users' needs change, then library services must also evolve.

Curran and Porter (2007) tended technologies to play key roles in the library research. They described the use of radio frequency identification (RFID) tags and readers in library systems to reduce costs and improve library service quality. RFID and SCM are interrelated in library management system and achieve the organizational goal.

Cho (2010) recommended supply chain performance measures as an evaluation system for resources sharing in a Korean academic library. She noted that resource sharing and traditional supply chains were similar in their use of information technology, standardization, and integration of all participants. Performance could be optimized by emphasizing the importance of improving user satisfaction across all locations in the supply chain.

Pathak and Pathak (2010) applied Porter's value chain system to higher education as a service institution. They explained that shifts in higher education called for effective cost

control to maximize customer value. They identified several drivers for managing higher education as a business.

Meng-Xing, Chun-Xiao and Yong (2010) diagramed a supply chain for digital libraries composed of content suppliers, digital library alliances, content service providers, third party service contractors and finally the library users. The authors presented the system as a response to the challenges presented by the culture of Google-style search engines.

Heinrich and LaFollette (2010) described the use of an integrated library system at the California State University Northridge library and the impact of the system on vendor relations, workflows, customer service and costs.

### **Methodology of the study**

This study is exclusively a descriptive research and thus it is purely experience based on university library practical and policy for building a new perception in libraries. To obtain this objective of the present study, researcher mostly has used secondary data from different period of research papers. Secondary data have been collected from various relevant publications and books. It is mainly focused on supply chain management (SCM) interrelated with library different managerial and supply activities among suppliers as well as library personnel in collaboration with parent organizations.

### **Objectives of the Study**

1. To provide benefits to supply chain members by offering better service, pricing, and quality to users.
2. To provide quality services to the users by adopting supply chain management.
3. To increase better relation between suppliers and organizations / libraries

### **Significance of the Study**

Libraries have expanded their core services to include many things that might be better off in the hands of other organizations. The library supply chain increases the ability to rely on

partner organizations to supply those things to users which might be secondary to the mission of the library and create costly inefficiencies. Supply chain performance measures can bridge this gap by evaluating the ability of library products and services to meet the needs of its users. Usually, firms employing supply chain management use a suite of supplier, internal process, and customer / user oriented performance measures for assessment and improvement purpose. The primary purpose of SCM is to inform management of process performance, support strategic decision-making, identify problem areas, and set improvement targets. In a library context, the primary activities connected with the creation and delivery of information resources and related services within the library can be

considered the value steam associated with the library's internal supply chain.

## Experience and Realization of the Study

### i. Elements of SCM in Libraries

To facilitate the comprehension of the scope of SCM research and critical supply chain elements and activities examined in this research paper. The development and justification of the framework will be presented in university libraries. Libraries have since undertaken various initiatives and approaches and addressed an assortment of issue related to their supply chains. These approaches and initiatives are classified into four streams of research efforts.

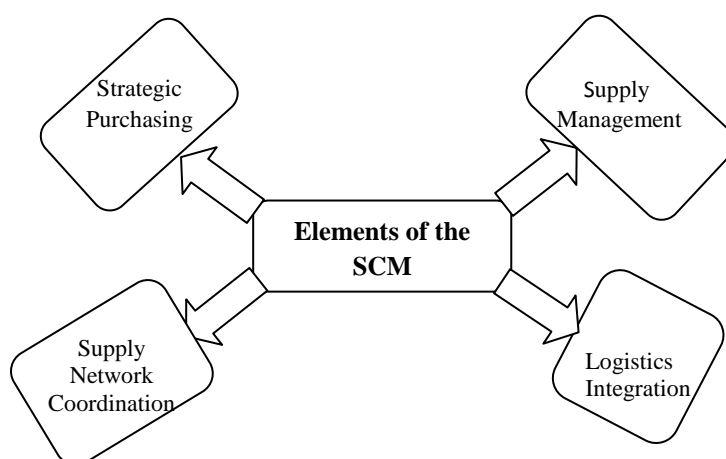


Figure: 1 Elements of supply chain management

**Strategic purchasing:** It is considered pertinent to supply base reduction since the later compromises the leverage ability of the buying firms and, therefore requires a totally different management style (Cousins, 1999). It is reducing the number of primary suppliers and allocating a majority of the purchasing to a single source. Strategy purchasing also has a proactive and long-term focus.

**Supply management:** Supply chain management emphasizes all aspects of delivering products and services to customers, whereas supply management emphasizes primarily the buyer-supplier relationship (Leenders et al., 2002). Suppliers have a profound and direct impact on cost, quality, time and responsiveness of the buying; the management of business maintains to make a

relationship with other members of the supply chain (i.e. buyer-supplier relationship) is increasingly being referred to as SCM.

**Logistics integration:** It is the process of planning, implementing and controlling the efficient flow and storage materials, services and related information as they travel from the point of origin to the point of consumption (Caputo, M., 1998).

**Supply network coordination:** It has adopted the mathematical modeling approach in their study of SCM. Under the approach, a common goal is to optimize the planning and coordination of the three fundamental supply chain stages: procurement, production, and distribution (Sahin and Robinson, 2002).

ii. **Structure for Supply Chain Management Research (Kress, N. and Wisner, J., 2012).**

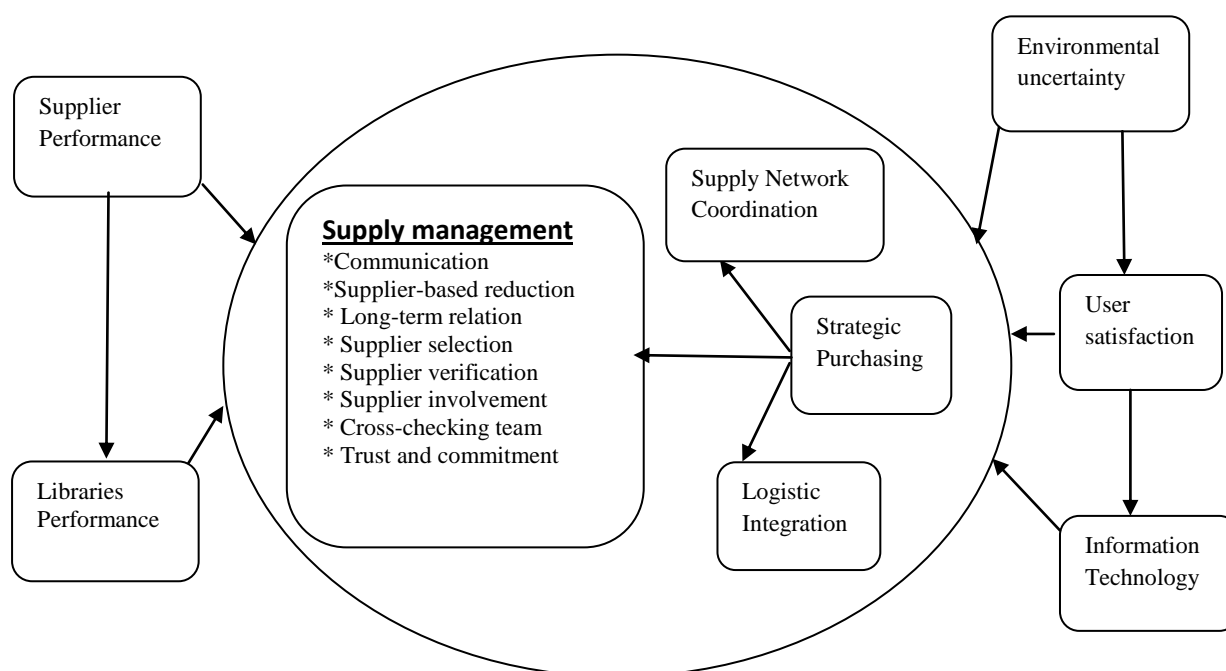


Figure: 2 Theoretical structures for supply chain management in libraries

This study is the most comprehensive analysis of the multidisciplinary, wide-ranging research on SCM. Researcher is trying to identify relevant findings and integrate them into an empirically tractable, meaningful research framework. The theoretical framework can help the librarians / managers to understand better the scope of both problems and opportunities associated with SCM. It shall also be of great value not only to readers, who have already investigated such type of research but in isolation or with limited scope.

The term supply chain management has not only been used to explain the logistics activities and the planning and control of materials and information flows internally within a library or externally between suppliers.

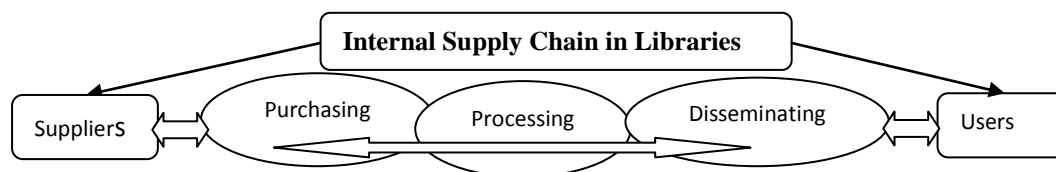
Libraries success depends on suppliers' performance and users' satisfaction. In this era, Information Technological (IT) is playing a vital role in the libraries due to processing of library materials and users can access into databases to finding their required resources. Libraries environment is changing dramatically with help of information technology. Libraries performance,

information technology and users satisfactions are interrelated to maintain chain management and correlated each and other in the libraries. University librarians should realize and maintain to coordinate supply network and to make purchasing strategy policy for the better of the organizations.

iii. **Internal Supply Chain in Libraries**

Library supply chain had to be identified before the information resources supply chain could be diagrammed. Analytically, a typical supply chain is simply a network of materials, information, services processing and dissemination links with the characteristics of supply, transformation and users' demand. Suppliers are supplied their ordered materials to the libraries and libraries are always processing through recognized order and ready to disseminate among the users.

It is internal chain activities of libraries to meet the users demand. Suppliers and users depend upon the activities of libraries to get their required right work order and right information at the right time accordingly.



**Figure: 3 Supply Chain in Libraries**

Users’ satisfaction depends upon the activities of libraries and suppliers consequently. From the myriad research, it can be seen that a great deal of progress has been made toward understanding the spirit of SCM.

**iii. Functions of Supply Chain in Libraries**

Figure-4 represents the basic library operational and functional activities, arranged in a general supply chain sequence.

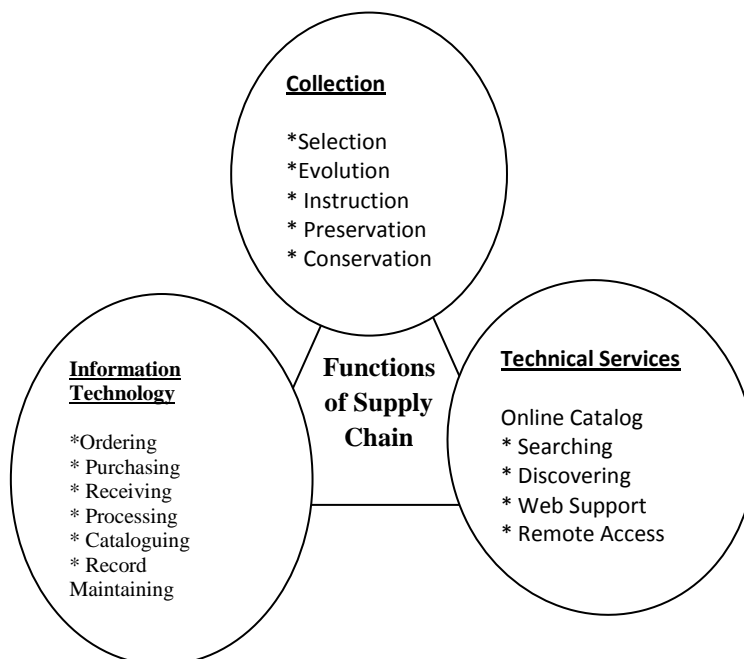
Libraries return is generated when users borrow physical materials from the library and then return them for re-shelving. Interlibrary loan and deselection activities can also be counted as returns. These activities include providing technology, human resources management, user support, collection management, preservation, and security. The basic functional areas of the university libraries and the units contained within are:

**Collections:** selection, evolution, instruction, preservation, and conservation. Collection development depends on selection, evolution and instruction to make a chain work in the libraries.

**Technical services:** acquisitions, cataloguing, ordering and receiving, electronic resource management.

**Access and user services:** circulation, interlibrary loan, reserve, and book stack.

**Information technology:** integrated library systems (ILS), online public access catalog (OPAC), web and digital library services.



**Figure: 4 Functions of supply chain in libraries (developed by the researcher)**

Supply chain performance measures can bridge this gap by evaluating the ability of library products and services to meet the needs of its users.

#### iv. Appropriate Library Services through SCM

University libraries are providing a multitude of services and products such as scholarly communications support like publishing, copyright, repository services; provision of collaborative work spaces; course content creation and embedded librarians; remote reference; technology infrastructure support and hosting; grant support; and information technology instruction and innovation.

The supply chain is dedicated to providing support for the development and distribution

of a specific product. To build efficiency in the workflow libraries need to:

- Clearly articulate a vision, mission, and purpose of the libraries.
- Adopt workflow which meets specific purposes of the users.
- Define the necessary inputs and outputs of the supply chain to create the right service, increasing efficiencies, and deliver to the right users.

#### v. Challenges Supply Chain in Libraries (Lambert, D., Cooper, M. & Pagh, J., 1998)

Globalization's impact on supply chains of the present and future cannot be underestimated. University librarians have seen increasing challenges to create, keep, efficient and effective supply chain methods. There are five major supply chain challenges in the libraries:

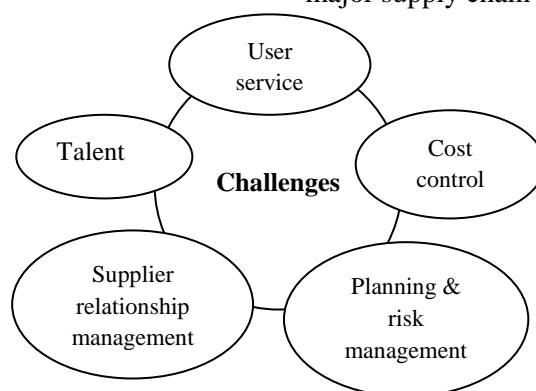


Figure: 5 Challenges supply chain in libraries

i. **Customer / user service:** Supply chain management is all about providing the right service to the users at the right time.

ii. **Cost control:** Operating costs are under extreme pressure by rising cost, greater number of global customers, technology, increasing labor rates and new regulations and rising commodity price.

iii. **Planning & risk management:** In order to stay as efficient and effective as possible, periodic assessments and redesigns are needed. These risks must be identified and quantified in order to control and mitigate.

iv. **Supplier relationship management:** It is important to create, understand and follow mutually agreed upon standards to better understand libraries current performance and opportunities for improvement. Having two methods for measuring and communicating performance and results and better wastes time and effort.

v. **Talent:** It is becoming increasingly more difficult to find qualified and interested talent. Supply chain leaders need an extensive understanding of the key competencies and duties needed for supply chain management roles and the ability to efficiently source specific skill sets and methods for developing future leaders.



## Conclusion

The growing of significance of SCM has engendered a framework of disjointed research dispersed across many disciplines. In this study has synthesized the large and fragmented body of knowledge into three streams of approach including (1) Strategic purchasing / Supply management (2) Logistics integration and (3) Supply network coordination. It is based on careful assessment that supply chain literature has focused on the importance of one or a limited few elements of supply chains.

University libraries are doing different activities to obtain user satisfaction through providing their desired resources. Supply chain management is one of the most activities of library for developing collection to meet the needs of information. University librarians should realize the acquisition and selection process to make relationship with suppliers so that they can supply selected resources without delay. User expectations are changing just as rapidly, and libraries need to ensure that a customer orientation drives all activities.

Library personnel are successfully evaluating its supply chain and its ability to provide value to its users in a scarce resources environment. Information providers have gained knowledge of the importance of supply chain management and library patrons are beginning to see some results. For the university libraries, future research activities include surveys of library users to more closely tie the library's improvement efforts to user assessments through better services with help of SCM.

## References

- Ball, D. & Wright, S.(2000). Procuring Electronic Information: New Business Models in the Counter of the Supply Chain. *Library Consortium Management*. Vol. 2, pp. 145-148.
- Caputo, M. and Mininno, V.(1998). Configurations for Logistics Co-ordination: A Survey of Italian Grocery Firms. *International Journal of Physical Distribution and Logistics Management*. Vol. 28, pp. 349-352.
- Chen, I.J. and Paulraj, A. (2004). Understanding Supply Chain Management: Critical Research and a Theoretical Framework. *International Journal of Production Research*. Vol. 42(11), pp. 131-133.
- Cho, J. (2010). Developing a SCM-based Evaluation System for the Korean Academic Library Consortium. *Libri*. Vol. 60, pp. 321-327.
- Cousins, P.D. (1992). Purchasing a Professional Approach. *Purchasing and Supply Management*. Pp. 20-23.
- Curran, K. and Porter, M. (2007). A Primer on Radio Frequency Identification for Libraries. *Library Hi Tech*. Vol. 25 (4), pp. 595-601.
- Heinrich, H. and Lafollette, D. (2010). The Archaeology of Habit: Excavating Past Practices in Technical Services: *The Bottom Line*. Vol. 23(10), pp. 18-22.
- Katsirkou, A. (2003). Consortia and Knowledge Management: The Functional Context and an Organizational Model. *Library Management*. Vol. 24 (7), pp. 337-342.
- Krause, D. and Scannell, T. (2002). Supplier Development Practices: Product and Service-based Comparisons. *Journal of Supply Chain Management*. Vol. 38 (2), pp. 13-16.
- Kress, N. and Wisner, J. (2012). A Supply Chain Model for Library Quality and Service Improvement. *Journal of Operation and Supply Chain Management*. Vol. 5(2), pp. 40-53.
- Lambert, D., Cooper, M. & Pagh, J. (1998). Supply Chain Management: Implementation Issues and Research Opportunities. *International Journal of Logistics Management*. Vol. 19(2), pp. 1-12.
- Leenders, M.R. et al. (2002). *Purchasing and Supply Management*. New York. McGraw-Hill.

Li, X. (2006). Library as Incubating Space for Innovations: Practices, Trends and Skill Sets. *Library Management*. Vol. 27(6), pp. 370-374.

Meng-Xing, H., Chun-Xiao, X. & Yong, Z.(2010). Supply Chain Management model for Digital Libraries. *The Electronic Library*. Vol. 28, pp. 29-37.

Pathak, V. and Pathak, K. (2010). Reconfiguring the Higher Education Value Chain. *Management in Education*. Vol. 24(4), pp. 166-173.

Sahin, F. and Robinsons, E. P.(2002). Flow Coordination and Information Sharing in

Supply Chains: Review, Implications, and Direction for Future Research. *Decision Science*. Vol. 33, pp. 505-516.

Smeltzer, L. and Ogden, J. (2002). Purchasing Professionals' Perceived Differences Between Purchasing Materials and Purchasing Services. *Journal of Supply Chain Management*. Vol. 38 (1), pp. 54-65.

Wathen, A. (2009). Delivering the Goods: Understanding the Academic Library Supply Chain. *Charleston Library Conference. Kansas State University*. pp.457.