
**SEMANTIC WEB LIBRARY SERVICES: SCIENTOMETRIC
STUDY BASED ON LIBRARY AND INFORMATION SCIENCE
ABSTRACTS (LISA)**

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Abstract: *This paper discusses about the concept of semantic web, the technology, web content writing, and necessity for the development of web 3.0. The various components of semantic web technology such as HTTP, URI, RDF, XML, Ontology, W3C. The benefits of implementing semantic web in the Library functions to provide effective information services and for optimum use of the Library collection are illustrated here. Described here, is to investigate how the semantic web technologies being researched and developed functionality of a digital library.*

Keywords: *Semantic Web, Library Services, Scientometric*

Introduction:

World Wide Web is the first source of information for everyone viz., students, research scholars, faculty, practitioners, Information Officers, etc. The Information Resources on the web are in the form of Uniform Resource Identifiers (URI) and the information in them is not machine-readable. People search for the Information on a particular topic via a web portal by typing in the key words. The retrieved list display has few relevant ones. The search is done by using statistical methods such as most occurrences of words, co-occurrence of words, etc. The keyword search displays only the matching links.

The keyword index is completely incapable of presenting relational information between concepts and. The information professionals are advocating for more advanced technology search engines which have deductive reasoning like human beings. To achieve such a system the metadata and ontologies have to be developed and are embedded into the web pages.

The current web is a collection of static web documents mostly written in HTML, and are either generated dynamically from databases or by user interaction. Hypertext Markup Language (HTML) is a markup convention that is used for coding a body of text such as reports, brochures, data like calendars, address books, playlists, and spreadsheets which are presented using an application program, interspersed with multimedia objects

such as images and interactive forms. These web pages can be viewed, searched and combined in different ways and are human readable only but not machine. Semantic HTML and Micro formats are the extensions of HTML where intension of the content is defined and machine-readable markup semantic objects are crated. The machines cannot read, understand the WebPages like human beings, and perform the work without the human involvement.

Thus need has arisen for the current web, which can enable the machines to find, combine and act upon the information by interpreting the data. If the information sources are semantically structured, this enables the machines to understand and respond to complex human requests based on their meaning. The Metadata tags provide a method by which computers can categorise the content on the web pages.

Many cognitive scientists have worked earlier on how to structure the knowledge semantically and enable the automated agents to access the web more intelligently and perform the work of the users on their behalf. Descriptive technologies such as XML, RDF, and OWL have been developed to address the limitations in using HTML. XML (Extensible Markup Language) provides a method for transmitting structured documents. It do not impose any semantic constraints or meaning on the data it carries. RDF (Resource Descriptive Framework) is a simple framework / data model to refer the content in the object.

RDF is often represented in XML format. RSS is an RDF object. The concept of Semantic Web was first coined by Tim Berners-Lee, [1] who had also developed Hyper Text Markup Language (HTML), Hyper Text Transfer Protocol (HTTP), Uniform Resource Identifiers (URI) and World Wide Web (WWW). He visualized Semantic Web as a platform where the intelligent software agents will analyze a particular given situation and present with the best possible alternatives to the users.

Tim Berners-Lee has shown how the Semantic Web would work technically and explained about ontologies and as well as their importance in constructing the Semantic Web Companion Web site He told that Semantic Web will act as an integrator across different applications and content in publishing, blogging and other areas, information applications and systems.

1.1 Semantic Web:

The word 'Semantics' has been derived from Greek word 's_mantiká' (neuter plural of s_mantikós) which means the study of meaning. The study focuses on the relation between signifiers, such as words, phrases, signs, and symbols, and what they stand for, their denotation. Linguistic semantics deals with the study of meaning that is used to understand human expression through language. Other forms of semantics include the semantics of programming languages, formal logics, and semiotics.

The terms semantics, metadata and ontologies are used synonymously to refer to Semantic Web. The Semantic Web provides a common framework that allows data to be

shared and reused across applications, enterprise, and community boundaries. It is a collaborative effort led by W3C with participation from a large number of researchers and industrial partners. Its objective is to convert all the unstructured documents on the web into a web data. It is based on the Resource Description Framework (RDF). *"a web of data that can be processed directly and indirectly by machines."* W3C looks after the development of such Semantic Web standards¹. In their Semantic Web Activity Page W3C states: *"the idea of having data on the Web defined and linked in such a way that it can be used by machines not just for display purposes, but for automation, integration and reuse of data across various applications."*

1.2 Goals of Semantic Web:

The primary goal of the Semantic Web is to realize the full potential of the Web, making it cost effective for people, effectively record the knowledge by giving maximum impetus on machine consumption by designing and adopting the technologies which support such machine facilitated global knowledge exchange. *"The Semantic Web is an extension of the current web in which information is given well-defined meaning, better enabling computers and people to work in cooperation* Resource Description Framework, Web Ontology Language and Extensible Markup Language (XML) will enable in providing machine-readable descriptions which append meaning to the content on the web documents.

In Semantic Web the machines performs automated information gathering and analysis similar to that of human beings which results in retrieval of more relevant & meaningful results. Tim Berners-Lee has called this linked data network as the Giant Global Graph

1.3 Components:

The term Semantic Web is used to refer to the technologies and standards used for structuring and linking of data by providing a proper description of concepts, terms, and their associations within a given knowledge domain. Such standards and technologies included under W3C [7] are:

- a) Resource Description Framework (RDF)
- b) RDF Schema (RDFS)
- c) Simple Knowledge Organization System (SKOS)
- d) SPARQL, which is a RDF query language
- e) Notation3 (N3)
- f) N-Triples, is a format for storing and transmitting data
- g) Turtle (Terse RDF Triple Language)
- h) Web Ontology Language (OWL)

1.4 Development Of A Semantic Library:

The Semantic Web comes in handy for the Librarians in providing effective

library services. Using the experiences and knowledge of the Librarians the appropriate metadata can be embedded into the existing collections. As the Libraries are information gatekeepers they should bring information and people together. Semantic Web is a remarkable tool for Libraries where it protects proprietary information, and helps in sharing the wealth of knowledge. The Semantic Web has emerged to address the shortcomings of HTML web pages by developing IT tools which are machine driven and required for integrated access across heterogeneous resources. The explicit meanings are given to the information which enables the machines to process without human intervention and put together it. *“The Semantic Web is not a separate web but an extension of the current one, in which information is given well-defined meaning, better enabling computers and people to work in cooperation”* [2] The vision, goals, and mission of both the libraries and the Semantic web are similar.

Both of these have been developed for accessing information available in abundance and discovering the knowledge through cooperation and collaboration for the advancement of society. The applicability of library functions for developing semantic library is discussed in the following sections.

1.5 Library Portals:

The Library portals provide a gateway to information, services from multiple sources and access to the organization’s resources. The use of Semantic Web technologies in developing Library portals facilitates users’ search, access, and retrieval of learning resources. The portal should aim to provide access to a coalition of learning repositories with learning resources available in different formats. The implementation of Library portals with Semantic Web services will fulfill the vision of Libraries. The large collections of learning resources are semantically annotated adopting various technologies that facilitate user’s access to the content in one or more learning repositories.

Ontologies are used for annotating information to the web content and expressing its semantics in a machine-readable manner. The Ontology schema will be able to give more flexibility in providing semantic description to the content in learning object repositories and, at the same time, it facilitates automated functions and task delegation to intelligent agents. The library portals search interface should have the capabilities for searching across the heterogeneous resources.

The Semantic Library portal should have automated interaction with a search engine at the resource, combined with web ontologies, and the content is tagged with information. The adoption and implementation of technologies will enable ontology-facilitated sharing and reuse of learning resources. Such a portal will allow the library to provide best services.

Effective sharing and reuse of selected high quality data is necessary for providing best services. The linked data will help in select and sharing these complex

metadata document resources. The approaches for selecting the documents are

- a) Taking semantic similarity as metadata analysis to support the user comparison for resources
- b) Development of huge amount of ontology driven metadata describing complex features as

The Semantic web selection faces challenges in identifying resources which are distributed across a number of heterogeneous information stores. The non-authoritative, inconsistent metadata in these heterogeneous resources, metadata with different vocabularies having similarities in different fields of competency, semi-structured repositories are the major challenges in selection. The distinct decentralized repositories provide more structured semantic metadata about the learning resources. The search for the resources in WWW or such repositories can be done using ontology driven which extends the combinations of the search terms which are similar semantically.

The quality data which is of high quality can be obtained by identifying the resources using explicit metadata statements, compared with annotations of co-occurrences, then ranked and selected. The structure of ontology heavily relies on the measure of relatedness and match. The Library catalogue contains structured content which can be made available to the Semantic Web applications. The Semantic Web focuses on the mechanisms of describing the resources and making them available to the user. The collection development policies have to be reviewed and revised periodically as per the present requirements and demands.

The collection developed should have the characteristics of semantic web. The web resources have to be identified, selected and information has to be semantically encoded with the defined type of format(s) that will be tagged. The people who are involved in the collection development and metadata creation should be guided in their selection and tagging of resources. A Semantic Web Selection Policy has to be drafted carefully.

1.6 Semantic Web Reference Service And Community Outreach:

Activities:

There are many types of reference services which include personal interaction, documentation services such as bibliographies, guides on collection resources and technology; user education and outreach activities include bibliographic instruction. These services are provided in conformation with the Library's collection development & access policies, and mission statement, for promotion of its facilities and optimum use of the collection. The semantic Web reference services should assist in search of knowledge and more sophisticated automatic processing. There should be Targeted searching for discovering knowledge.

The Semantic Web reference Service should always anticipate the information

required and sought by the agents (both human & computer), provide them with accurate information regardless of the difficulty and complication in understanding the queries. The usage of latest technologies and media will enable the Semantic Web reference services reach the entire clientele by publicizing the information services. The information products created should promote the goals and reflect the needs and requirements of the Librarians, Library staff and users.

The challenges in designing of interface and architecture, new methods of marketing, evaluation and collaboration of digital reference services needs to be addressed. The IFLA guidelines, RUSA's Guideline for Information Services and other resources on digital reference can be useful in implementing Semantic Web Service plans in the library.

1.7 Semantic Web Resource Use:

The circulation policy always promotes healthy use of the collection and protects the library holdings. The arrival of digital libraries have eliminated many challenges of the circulation section such as lending the limited collection, defining loan periods and renewal policies, issue of lost and damaged items, fragile & rare materials etc. There should be Semantic Web resource use policy in the library which promote resources use, and protect the integrity of resources. The policy should clearly mention the access procedures for agents; provide them with a unique identification number, and borrowing privileges of resources.

The information with regard to the availability of new resources both internally and externally shall be provided to the agents regularly. The Centralised information agents provide a cooperative approach to data sharing. Due to the information explosion digital libraries are facing challenges in managing, organizing and retrieving information from the digital resources. The digital libraries require active information access facilities and to acquire trusted and reliable information.

1.8 Challenges And Threats:

The primary challenges of the Semantic Web are Privacy, Censorship, Double Entry/ Increased Workloads, Network-centric, and it's Cost in implementation. The other challenges for the Semantic Web include the vastness of the information on the web; overlapping and imprecise concepts which is leading to vagueness; logical contradictions leading to ambiguity, variation, and deception. Automated reasoning systems will have to deal with all of these issues in order to achieve the goals of the Semantic Web.

The challenges to the "unifying logic" and "proof" layers of the Semantic Web will require extensions to the Web ontology language (OWL) and this is an area of active research. The major possible threat is from the Vendors as they are incapable and reluctant to make necessary changes due to their failure in coordinating, apathy and indifference attitude towards the new technology. The other possible threats are particular to libraries concerned.

The libraries have to identify the strategies to deal with the vendors and they need to begin adopting standards-based APIs, such as XML-based web service layers. There was a hard criticism that developing of semantic web is time-consuming, as they have to create two formats for both human and machine. Micro formats have solved this problem partially. DBPedia, Friend of a Friend (FOAF), Semantically Interlinked Online Communities (SIOC) and NextBio are few projects to be named that create Semantic Web solutions.

1.9 Information Technology:

In the present era, libraries in India are moving towards use of computers and related technology to improve the efficiency and effectiveness of the information services. Information in digital content makes easier for teachers and students to access information anytime and anywhere. Information has become a necessity for everyone, and everybody needs information for some or other purpose. A database is a computerised collection of logically related set of data or records about something that are stored and organised in the computer. The researchers, especially in the field of science and technology, need information on continuing basis and are considered the biggest users of information.

Therefore, most of the information systems and services have been developed in academic institutions and universities to satisfy these requirements of the researchers. An online database search is simply bibliographic research which is performed by an individual scholar or librarian using a computer and the internet. By connecting with a database research service, millions of records from thousands of publications in hundreds of databases can be searched for material on a topic.

An online database is a database accessible from a network, including from the internet. It differs from a local database, held in an individual computer or its attached storage, such as a CD. Currently, there are several database products designed specifically as hosted databases, delivered as software as a service, products. Some of the differences are: The online databases are delivered primarily via a web browser they embed common collaboration features such as sharing, e-mail notifications, etc.

1.10 LISA:

LISA is an international abstracting and indexing service designed for library professionals and other information specialists. LISA provides bibliographic information about past and present developments in librarianship, information science, online retrieval, and publishing and information technology. This database covers around five hundred periodicals from over sixty countries. It also includes unpublished academic and institutional research from the IRWI - Information Research Watch International database.

LISA has an international perspective, and a diverse audience including researchers, students, library staff, and information professionals. LISA is established in

the year 1969 published bi-monthly. Currently abstracts over 300 periodicals form around 40 countries and 20 languages, providing comprehensive bibliographic coverage of the scholarly literature related to library science. Subject coverage includes all aspects of librarianship, library users, information retrieval, and more.

While LISA's selection policy is more standardized, its international coverage impedes its currency. Since 44% of its collection are foreign language/foreign materials they must also wait on the international mail system in addition to experiencing a time lag for translation purposes. In comparison with ERIC, LISA's currency is quite low, 10.3 months. While one can appreciate the troubles.

1.11 Subject coverage includes:

- Information Management
- Information Technology
- Internet Technology
- Knowledge Management
- Librarianship
- Libraries and Archives
- Library Management
- Library Technology
- Library Use and Users
- Online Information Retrieval

1.12 Scientometric Study:

Scientometric is a quantitative evaluation of publication patterns of all macro and micro communication along with their authorship by mathematical and statistical calculation. According to Alan Pritchard the term “Bibliometric” as the application of mathematical and statistical methods to books and other communication medium.

Quantitative techniques evolved during the Second World War have successfully been applied to various disciplines. There have also been applied in the field of library information science. Scientometrics is a part of the sociology of science and has application to science-policy making. It involves quantitative studies of scientific activities, including among others, publication and so overlaps bibliometric to some extent. Scientometrics is branch of the ‘Science of Science’, Nazimova and Mulchenko define this term, “as a sub field which applies quantitative methods to the study of science as an information process.” In this information and promoters of communication.

Haitan treats ‘Scientometrics,’ as a scientific discipline which performs reproducible quantitative regularities, further he adds that scientometric methods include statistical and thesaurus methods, and indicators as to the number of citations, terms etc. (Amudhavalli, 1997). These are two aspects within science of science, viz. The analytical aspect which deals with the general laws of the development of science as a knowledge

system and a specific social institution, and The normative aspect which deals with the development of practical recommendation for raising research efficiency.

The aim of ‘Scientometrics’ is to determine the state and prospect of subject and its further development. Several Scientometric indicators are used for this purpose, and one of the most significant indicators is the number of publications; its change over time is usually considered as a measure of research topicality in a given field. These indicators are on the way to become a standard tools of evaluation and analysis in research management of science policy making. Considerable attention has been paid in recent years to way to measure scientific information, which may be used for the control of science development in two ways; practical and strategic.

The practical way includes search of information to users. As far as the strategic use of information is concerned it implies the monitoring of science development and the analysis of the changing structure of science. Scientometrics was first defined by Nalimov (1971,) as developing “the quantitative methods of the research on the development of science as an informational process”.

It can be considered as the study of the quantitative aspects of science and technology seen as a process of communication. Some of the main themes include ways of measuring research quality and impact, understanding the processes of citations, mapping scientific fields and the use of indicators in research policy and management. Scientometrics – “The quantitative methods of the research on the development of science as an informational process” (Nalimov & Mulcjenko, 1971,). This field concentrates specifically on science (and the social sciences and humanities).

Scientometrics is the quantitative study of science. It aims to analyze and evaluate science, technology and innovation. Major research includes measuring the impact of authors, publications, journals, institutes, and countries as referenced to sets of scientific publications such as articles and patents. It also aims to understand the behavior of scientific citations as a mean of scholarly communication and map intellectual landscapes of a science. Other effort focuses on the production of indicators for use in the evaluation of performance and productivity [1]. In practice, there is a significant overlap between scientometrics and other neighboring domains such as bibliometrics, informatics, webometrics, and cyber metrics.

Bibliometric, one of the canonical research domains in library and information science, studies quantitative aspects of written publications. Infor metrics is the study of quantitative aspects of information [2], regarded as an umbrella domain overarching the rest of them. Björneborn and Ingwersen [3] describe the relationships between these domains as abstracted in Figure 1. Driven by a variety of research communities, the volume of published literature in these domains has exponentially grown.

Given the increasing publications and the scientific diversity in disciplines, a systematic investigation of the intellectual structure is in need to identify not only

emerging trends and new developments but also historic areas of innovation and current challenges. The motivation of the present chapter lies in our intention to identify the intellectual structure of scientometrics in a systematic manner.

Toward that end, we explore epistemological characteristics, thematic patterns, and emerging trends of the field, using scientometrics approaches. In particular, we operationalize scientometrics as encompassing closely related domains such as informetrics, bibliometrics, cybermetrics, and webometrics. In the rest of this manuscript, we use the term “scientometrics” inclusively. The present chapter aims to trace the evolution and applications of scientific knowledge in scientometrics. Thus, we also operationalize emerging trends and recent developments uncovered throughout the present chapter as “emerging technologies” in scientometrics. The contributions of the present chapter include followings.

First, it helps the scientometrics community to be more self-explanatory as it has a detailed publication-based profile. Secondly, researchers in the field can benefit from this systematic domain analysis by identifying emerging technologies, better positioning their research, and expanding research territories. Finally, it guides those interested in the field to learn about historic footprint and current issues. The rest of the chapter is organized as follows. We introduce the methodology of the study. Then, the intellectual landscapes of scientometrics is described. We conclude this chapter with discussion into findings, implications, and limitations.

The term was introduced and came into prominence with the founding of the journal named *Scientometrics* by T. Braunin 1977, originally published in Hungary and currently from Amsterdam. The scope of the journal is to publish all those studies of quantitative aspects of science as a discipline or economic activity. *Scientometrics* is part of the sociology of science and has application to science policy making. It involves quantitative studies of scientific activities, including among others, publication and so overlaps bibliometrics to some extent. *Scientometrics* is branch of the ‘Science of Science’.

Nalimov and Mulchenko define this term, “as a sub- field which applies quantitative methods to the study of science as an information process”. In this information model, publications are carriers of information and promoters of communication. Haitun treats ‘*Scientormetrics*’, as a scientific discipline which performs reproducible measurements of scientific activity and reveals its objective quantitative regularities. According to him *Scientrometric* methods include statistical and thesaurus methods, indicators as the number of citations, terms etc.

There are two aspects within science of science.

These indicators are on the way to become standard tools of evaluation and analysis in research management of science policy making considerable attention has been paid in recent years to ways to measure scientific information, which may be used

for the control of science development in two ways practical and strategic. The practical way includes search of information to users. As far as the strategic use of information is concerned, it implies the monitoring of science development and the analysis of the changing structure of science. Since the beginning of 1970's, this kind of research activity aimed at getting structural picture of the state of science is gaining popularity. This notion has prompted researchers in this field, in the decades, to develop special type of procedures and quantitative techniques to study the features of a given discipline and to observe changing structural pattern of the discipline over a period of time.

For example,

- i. An ability to map literature of a discipline intelligibly at different levels
- ii. An ability to create useful indicators of development in science and increasingly in technology.
- iii. An ability to model dynamic aspects of literature mathematically with good to excellent fits.
- iv. Growing skill in using computerized databases and practical software for bibliometric ends.

1.13 Definitions Of Scientometrics :

- According to, Nalimove & Mulchenko, “ A sub field which applies quantitative methods to study of Science on an information process.”
- R.A. Merton & Eugene Garfield, “Scientometrics as the field of enquiry give over to the quantitative analysis of science and scientific fields.”
- Solla Price, “Scientormetric has followed the trajectory of econometric in use of quantitative data, concepts and methods and expensive use of mathematical and statistical techniques of modeling and data analysis.”
- According to Sen bibliometrics deals with documents and its components while metrics studies pertaining to information is informetrics.
- The word “Bibliometrics” first appeared in print in 1969 in Alan Pritchard’s article “Statistical Bibliography or Bibliometrics?” (Pritchard Alan, 1969) Pritchard’s article was the result of his judgement that the expression “statistical bibliography” should be replaced with a better term statistical bibliography is clumsy, not very descriptive and can be confused with statistics itself or bibliographies on statistics. Pritchard suggested that the word “BIBLIOMETRICS” i.e. the application of mathematics and statistical methods to books and other media of communication” be substituted for “statistical bibliography”
- The term ‘Bibliometrics’ is combination of two non-English words, that is, ‘biblio

and ‘metrics’.

- The first ‘biblio’ is derived from the Greek/Latin word *biblion*, which means book, While the other word ‘metrics’ indicates to the science of meter, that is, measurement. The later has also been adopted from a Greek/Latin term ‘metrics’ or ‘metrikons’ both having the same meaning (Webster’s, 1981) Therefore, bibliometrics is adopted into English and connotes the science of measurement pertaining to books, research papers, journals or any sort of documents.

1.14 Development Of Scientometrics:

The origin of scientometric research can be traced back to the beginning of the 19th century. However, since early 21st century, the field is growing at an enormous pace and attracts interest far beyond the walls of universities and institutions. One of the most recognized accomplishments in the field of Scientometrics is the development of the Impact Factor and the classic work of Eugene Garfield. He first described the Impact Factor in 1955 as a method of selecting journals for inclusion in a genetics citation index he had been developing. This eventually resulted in the publication of the Science Citation Index in 1961 as a means of linking articles together via their references. Since it was first described, journal Impact Factor has developed into a widely used bibliometric indicator.

Around the same time, Derek De Solla Price¹³ was working on the study of the exponential growth of science and the citation activity of scientific literature. Price published several papers describing the key elements of scientometric analysis, including work on patterns of communication between scientists and the overall history and study of science itself. There was tremendous growth in the scientometric literature in the 1960s and since then the field of scientometrics has developed and differentiated into several specializations. These were brought together by the launch of the first journal devoted to the field, *Scientometrics*, founded and edited by Tibor Braun of the Hungarian Academy of Sciences. One of the most notable developments is Citation Analysis.

Statement of The Problem:

The adoption of semantic web library services in libraries is hindered by various challenges, including lack of adequate infrastructure, resistance to change, cost, lack of trained staff, privacy and security concerns, integration with existing systems, limited user acceptance, cultural barriers, and limited research semantic web based library services. These challenges may prevent the libraries from fully realizing the potential benefits of semantic based systems, such as improved efficiency, accuracy, and user experience. The lack of trained staff and technical expertise may also limit the libraries' ability to implement semantic based services effectively. In addition, user acceptance is critical to the success of library services, and cultural barriers may hinder the adoption of web based systems.

Furthermore, the limited research on sementic web-based library services make it

challenging to identify best practices and potential challenges. Overall, addressing these challenges is essential for the successful adoption of LISA database in library service. make it challenging to identify best practices and potential challenges. Overall, addressing these challenges is essential for the successful adoption of LISA database in library service.

Objective of The Study:

The study will be carried with the following objectives:

- To Identify the volume and year-wise distribution of publications in LISA databases
- To Study the authorship pattern of publications.
- To Apply Lotka's law of Scientific Productivity for publications in LISA databases
- To Examine the prolific authors and the productive Institutions/Organizations.
- To Determine the keyword analysis of publications in LISA databases

Significance of The Study:

The study titled Semantic Web library services: Scientometric study base on library information science abstracts (LISA) is significant as it provides valuable insights into the current state of research on Semantic Web library services. Some of the key significances of the study are Identifies research trends The study uses scientometric analysis to identify the research trends in the field of Semantic Web library services. It provides a comprehensive overview of the most researched topics in this area, and this information can guide future research efforts. The study also identifies the gaps in current research in the field of Semantic Web library services. This helps to direct future research efforts towards areas that need further exploration and promotes the discovery of new knowledge. The study provides insights into the research methods used in the field of Semantic Web library services. This information can guide researchers in selecting the most effective research methods and techniques and promote the adoption of best practices.

The study is of practical significance to libraries and information professionals who are interested in implementing Semantic Web technologies in their libraries. The study provides valuable insights into the potential benefits and challenges of implementing such technologies and can help libraries make informed decisions about the use of Semantic Web technologies. The study contributes to the advancement of the field of Semantic Web library services by providing a comprehensive overview of the research in this area.

It can serve as a valuable resource for researchers and practitioners in this field, and can promote the adoption of Semantic Web technologies in libraries. Overall, the study on Semantic Web library services: Scientometric study base on library information

science abstracts (LISA) is significant as it identifies research trends, identifies research gaps, provides insights into research methods, has practical implications for libraries, and contributes to the advancement of the field.

Scope & Limitation of The Study:

The scope of the present study is limited to LISA Databases for the year 1994-2023. researcher has study the LISA database this is one of the semantic web library service component.

Research Methodology:

A general method for conducting a literature search method using the LISA (Library and Information Science Abstracts) database: Identify research question or topic of interest in the field of library and information science. The data for the present study were retrieved from the LISA database between 1994-2023 for the period from 1994 to 2023. All the documents published in LISA investigated to give a delegate and enlightening point of view of the data. All items in citation data (e.g., authors, document title, year, Page start, Page end, DOI, and citation count), bibliographical data (e.g., affiliations) and abstract & keywords (e.g., abstract, author keywords) of documents published from 1994 to 2023 were selected and exported in CSV format. The data elements consisted of the name of the author (s) with their affiliation, name of the journals and the number of authors contributing the paper.

Hypothesis:

Hypothesis of the present study is to verify the scientific productivity of LISA database and how to useful / effectively semantic web library service of LISA database.

Conclusions:

In this paper we presented Library System will provide effective functioning in the provision of library services. The Librarians who are having full skills, talent and knowledge will become the advocates of Semantic Web and they can fulfill the vision and mission of the Semantic Web. The library functions can be applied for acceleration of research and development of Semantic Web and the library functions can be redefined for making true impact on the society.

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