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Developing Communication Competencies of Library Professionals Through Semiotics Theory Approach in the Contemporary Information System

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Abstract:

Purpose: The purpose of this paper is to identify the relationship between semiotics theory and communication theory and focus on how semiotics could act as a useful tool to play a big role in the development of communication competencies of library professionals in the contemporary information system.

Design/ Methodology/ Approach: The study is fundamentally analytical and qualitative in nature. The analysis of semiotic theory and communication theory is done one by one. In this paper, we use the semiotics theory approach in library services and propose an illustrative library classification list based on Dewey Decimal Classification (DDC) for the development of an effective communication competency as well as improve the visual literacy skills of library professionals.

Findings: After the study, we find out that the semiotic theory is a general and unrestricted model of sign whereas communication theory is also a general and unrestricted model of communication which is useful for every field of study including the LIS field. Semiotics theory and Communication theory both are very similar and Semiotics build a strong communication competency and improve the visual literacy skills of library professionals.

Practical implications: This study will be helpful for library professionals to develop their competencies according to the needs of the hour. Users will be more beneficial and attracted to the library than the formal mode of communication. Those people who cannot

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communicate in an unknown language and are unable to articulate language can also communicate easily through the visual mode of communication with the help of semiotics.

Originality: This paper is the first to combine the theories of communication and semiotics within the context of the competency development of library professionals.

Keywords: Semiotics, Skill, Visual Communication, Visual Literacy, Illustrative library classification, Triadic Model, Shannon-Weaver Model, Transaction Model of Communication, Information system.

Paper Type: Conceptual paper.

1. Introduction:

A library is a storehouse of knowledge where information is collected, organized, and disseminated to the right person at the right time. It has always played a crucial role in the development of civilization from time immemorial and is identified as a serviceoriented organization wherein the information needs of the users are satisfied (Bajpai and Madhushudhan, 2019). In the 21st century library services are drastically changed so; the Skills and competencies of library personnel are needed to develop on-demand of their users' needs and requirements in the contemporary world (Patel,2012). Communication is the first and foremost important factor to connect with library users and library professionals. The term 'communication' was derived from the Latin word 'communis' which means 'common', which consequently implies common understanding. The Merriam- Webster dictionary online version (25th August.2021) defined communication as a process by which information is exchanged between individuals through a common system of symbols, signs, or behaviour. According to G.G. Brown, "Communication is the transfer of information from one person to another, whether it elicits confidence. But the information transferred must be understandable to the receiver". In other words, "Communication is the process of exchanging information". Basically, it is the process of transmitting the idea generated by the human mind, following an event or fact. For this processing, two or more terminals are required. Thus, when the message is passed on from one person to another, they are said to be communicating.

The modes of communication are mainly two ways: these are- Formal mode of communication and Informal mode of communication. At the time of conducting this study, it was observed that informal mode of communication is more effective for any organization than formal mode of communication. It can say that informal mode modes like- oral communication, visual communication etc. are very useful for library services. Effective communication is an essential competency for library professionals because without proper communication; information cannot reach its defined destination. Library professionals tried to serve their users by providing the required information possibly available. The users of today are surrounded by visual information both online and

offline so, visual communication becomes a very effective communication for today's environment for both users as well as library professionals. Semiotics is a study of signs, symbols, and significance. Semiotics is a key tool to ensure that intended meanings (of, for instance, a piece of communication or a new product) is unambiguously understood by the person on the receiving end. Semiotics as a tool can make visual communication more effective, and could help to increase the communication competency level of library professionals, and could help to improve visual literacy skills.

So, in this study, we are trying to focus on how semiotics could be applied as a tool to make signs and symbols more attractive to users and how semiotics could help improve the communication competency of library professionals. To attempt this enquiry, we describe two semiotics theory: Ferdinand de Saussure, and Charles Sanders Peirce, and two communication theories Shannon-Weaver model of communication and Barnlund's Transactional model of communication and shows how theoretically semiotics theory and communication theory are related and can smooth the path of our library services. Lastly, we proposed an illustrated library classification or visual library classification list which is based on DDC (23rd edition) hundred division for an effective result of this study.

2. Literature Review:

The review of the literature is done to identify the previous discussions made by many authorities regarding the above-mentioned topic. So many scholarly communications are consulted for this purpose. Some of them are discussed below:

2.1 Semiotics and Information Retrieval Perspectives: Brier (1996) claimed cyber semiotics as an interdisciplinary framework for library and information science domain, especially in information retrieval (IR) which goes beyond the cognitive 'information processing paradigm'. The biggest downside of this paradigm is that its construct of information and language does not deal systematically with how social and cultural dynamics set the contexts that determine the meaning of those signs and words that square measure the fundamental tools for the organization and retrieval of documents in LIS. Mia (2001) explained that indexing is not a neutral and objective representation of a document's subject matter but their presentation of an interpretation of a document is for future use. Semiotics is offered as an epistemological framework for understanding the 'interpretative' nature of the subject indexing process. By placing this process within Peirce's semiotic framework of ideas and terminology, a more detailed description of the process is created by the fact that the indexer goes through a number of steps can creates the subject matter of the documents during this process. The creation of the subject matter is based on the indexer's social and cultural context.

2.2 Information as sign: Buddh et al. (2003) outlined "Information" as a term, concept, or subject of study that poses a problem for anyone who wants to define it comprehensively. From the viewpoint of semiotics "information" is considered as an ambiguous theoretical concept because the word is employed to represent both the concept. These are (i) signifier and signified, (ii) text and content. Using the exertion of Ferdinand de Saussure, the theoretical possibilities open by understanding the information as a sign. The author also suggests some ways to bridge the theoretical gap between information as a thing and information as a cognitive phenomenon by positing information as a cultural phenomenon. Blair (2006) observed a problem in assessing the conflict between informational and semiotic approaches to cognition. Taking this problem deep into sense some vital sensible problems of subject searching in the LIS field is discussed.

Friedman *et al.* (2010) claimed that the semiotic model is considered a useful tool for subject mapping but it is a general and unrestricted model of signs and Dahlberg mode. This is thought from the perspective and demand of better knowledge organization system development. In the application of subject compared with both theories it is found that Dahlberg's concept model provides an in-depth method for analysing and representing concepts in a Knowledge Organisation system, where semiotics provides the philosophical context for representation.

2.3 Ontology and Semiotics: Kåhre (2013) investigated how library systems work in the networked society and need to concentrate on how tools work as independent factors in creative processes. The author also explained how Library and information science often concentrate more than previous capacity and how the library systems are functioning as scaffoldings extending human capacity. Stockinger (2015) identified Peirce's semiotics can be seen as a transdisciplinary paradigm that also includes phenomenology and hermeneutics. In digital archives and libraries also explained four major application domains of semiotics in the field of digital archives. Sorensen (2017) provides an analytical framework that can be extracted from semiotics and can be added to the development of the philosophical dimensions of information within LIS. Brier (2019) provides a transdisciplinary theory of cognition and communication based on the process of a self-organizing and auto- poetic system theory of Nicklas Luh-mann integrated with a triadic semiotic paradigm of experience and interpretation with phenomenological and hermeneutical aspects of C.S. Peirce.

Trifonas (2020) indicated to rewriting most of the theories concerning library and information science study objects as relevance, information literacy, and social processes in knowledge sharing and creation in a way that they include an autonomous functionality in tools. Pictorial grammar has been derived from the fact that pictures have no unique visual meta-language and therefore require recourse to

language as an instrument for pictorial analysis. Wagner *et al.* (2020) find out the flexible nature of emojis in from the perspective of semiotics in e-communication and analyses the applications in various legal cases to demonstrate the way emojis, as negative emotional influencers, affect the understanding of online communication and decision-making in courts.

This study provides a concise review of available online literature. "Developing communication competencies of library professionals through semiotic theory approach in the contemporary information system" is nowhere visible in the existing literature. Most of the literature uses semiotics as an epistemological framework for knowledge organization and dissemination but does not focus on semiotics use in competency development in libraries. So, after the above discussion, it is assumed that semiotics can be used as a helpful tool for communication competency development for library professionals.

3. Statement of the problem:

This study is entitled "Developing communication competencies of library professionals through semiotic theory approach in the Contemporary System". Semiotics is the study of signs. In LIS field semiotics is related with various areas but the main purpose is to easily locate the required document in an effective and efficient way. Library professionals directly deal with users through communication. So, library professionals needed to develop their communication competency level to build a very strong relationship s between users and library professionals. So, the statement of the problem may be extended as "to find out how semiotics could act as a useful tool for communication competency development of library professionals and how it could be demonstrated through a systematic procedure". So, the statement of the problem warrants some research questions which are as follows:

4. Research questions:

- 1. How semiotics and communication theories are related to Library and Information Science field?
- 2. Is semiotics usable for easy access of to documents in the library?
- 3. Are there any challenges faced by the users and library professionals to use semiotics in a library in the contemporary environment?
- 4. How does semiotic theory approach help in developing the communication competency of library professionals?

5. Objectives of the study: The objectives of this study are:

1. To identify the relationship among the semiotics theories, communication theories and Library services.

- 2. To identify the visual communication pattern of library professionals and users.
- 3. To understand the challenges of library professionals using the semiotics approach in daily library activities.
- 4. To develop an illustrative classification scheme for better library communications.

6. Methodology:

The study is fundamentally analytical and qualitative in nature. The analysis of semiotic theory and communication theory are done systematically. An attempt is made to establish a relationship between those theories and some theories of library science. Here, we use the semiotics theory approach in various library services and proposed a visual library classification list based on Dewey Decimal classification (23rd edition) hundred division for the development of effective communication competency as well as improve the visual literacy skills of library professionals.

7. Semiotics- the study of sign:

Generally, Semiotics is outlined as the study of the sign process, which has any kind of activity, conduct, or any process that involves signs, as well as the production of meaning. It is primarily associated with the signs and symbols. Encyclopaedia Britannica, online version (21st May, 2020) described "'Semiotics', also known as 'Semiology', that means "the study of signs and sign-using behaviour". Ferdinand de Saussure outlines semiotics as the study of "the life of signs within society". Although, the word was previously employed in the 17th century by the English philosopher John Locke who tied the advancement of intelligence to three steps: understanding the nature of things, understanding what to do to achieve, whatever wish to achieve, and the ability to communicate these things to another. In the late 19th and early 20th centuries, the idea of semiotics as an interdisciplinary field of study emerged with the independent work of Ferdinand d Saussure and Charles Sanders Peirce.

In the 19th century the Semiotics concept was first introduced by Swiss linguist Ferdinand d Saussure, he was viewed as the father of modern semiotics. Saussure described signs within their social context. Charles Saunders Peirce American linguist viewed a sign as anything that could be taken as standing for something else and also and views sign as representations that are basically 'containers' for an object. Semiotic systems may include-linguistic, visual, audio, gestural and spatial systems. The texts that users encounter today may include many signs and symbols to communicate information: such as letters and words, drawings, pictures, videos, audio, sounds, music, facial gesture and the design of space. Charles Morris described foundation of theory of signs, one of the volumes of the Encyclopaedia of Unified Science in 1938, he divided semiotics into 3 branches these are- Syntax, Semantic and Pragmatic. In present study we are followed Saussure's theory of semiotics and Peirce's theory of Semiotics and we are

trying to highlight how semiotics could be applied to competency development of library professionals.

8. Co-relation among Skill, Competency and Visual Communication:

The Oxford English Dictionary online version (2021) defined 'skill as the ability to do something well, whereas competency is the ability to do something successfully or efficiently'. Generally, competency is the combination of skill, knowledge, and ability of a person, whereas, communication competency is the ability of someone who is communicating with another person to achieve their goals through interactive and appropriate interaction. Primarily, it is a skill level that human resources professionals and those responsible for managing others should attain and possess. To achieve competency in communication, the communicator should meet the following six criteria: flexibility, involvement, management, empathy, effectiveness, and appropriateness.

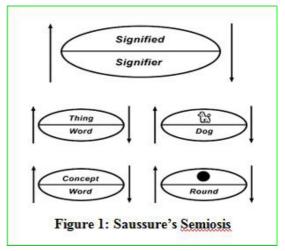
Visual communication is very effective communication of in the contemporary working environment, so, library professionals needed to be more efficient about with their services. Usually, visual communication is the practice of graphically representing information efficiently and effectively to produce meaning. The examples of visual communication include: Infographics, Interactive Content, Motion Graphics, and more. However, despite the medium, all incorporate at least some of the following elements However, despite the medium, all incorporates at least have some of the following elements, and these are: interactivity, iconography, illustration, supporting text, graphs, data visualization, and animation. Hence, it can said that Visual communication is so effective for library professionals in a wide area of communication competency development and that it enhances semiotics uses in library services.

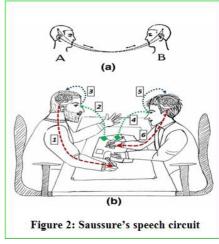
9. Relationship between Semiotics Model and Communication Model:

Sign, signified (content), and signifier (expression) the fundamentals of semiotics: There are various frequent applications of the idea of sign, including using signs as the foundation for drawing conclusions about something latent (such as medical symptoms): Rule-based communication signs, such as street signs: or symbols used as recognizable expressions (e.g., Rule of thumb for like, use smileys to convey different emotions, such as sad, etc.) using cup plate sign for indicating restaurant). Additionally, different semiotic concepts are found in semiotic literature. Both the semiotics theory models of Saussure and Peirce are the ones we're concentrating on in this article. Put equal emphasis on the communication models developed by Shannon, Waver, and Barnlund. The idea of Semiosis was initially conceived by Swiss linguist Ferdinand de Saussure. In his writings, Saussure primarily addressed the linguistic sign, which he split into three categories: 1. Signifier 2. Signified 3. Sign

In Chapter 3 of his book "Cours de linguistique générale," Saussure makes an effort to define the "object of study" of linguistics. Making distinctions between the psychological and the physiological, the language system and acts of speech, the individual and the social, the status of a language and its evolution, and what is necessary and unnecessary for the study of language are all crucial for realizing this. Saussure offers his "speech circuit" diagrams to demonstrate this set of variations.

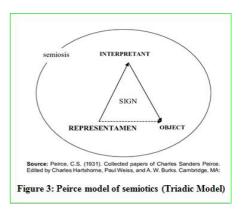
By starting with the simplest representation of a communicative act—two persons conversing with one another in this graphic aims to clarify these contrasts as well as Saussure semiotics and the model of communication links (see Figure 2). A signifier and a signified are mutually articulated in a linguistic sign, which is where the ordered progression of communication is depicted in Figure 2. The sign is first spoken by A, after which it is heard in B's ear. After that, Person B connects a sound, image, and concept in his mind and creates a message in return using a similar method.





In Saussure's own words: "The circuit begins in the brain of a single person, let's say A, where facts of awareness, which we will call concepts, are linked to representations of language signs or sound patterns via which they may be conveyed. Assume for a moment that a particular idea causes a corresponding sound pattern to be produced in the

brain. The brain sends an impulse corresponding to the pattern to the phonation organs, which is a purely psychological phenomenon that is then followed by a physiological process. After then, a completely physical procedure involves sending sound waves from A's lips to B's ear. The circuit then continues in B in the reverse order: the physiological transmission of the sound pattern from the ear to the brain; in the brain, the corresponding concept. "(Saussure 2003 [1922]: 11–12/28 Following Saussure's semiotic



concept, American philosopher Charles Sander Peirce (1839- 1914) developed the semiotics Triadic Model. The Sign connection is the key, according to Charles Sanders Peirce. He outlines the sign's relationship to three fundamental parts of Semiotics (signs action), which are 'Signifier', 'Signified' and 'Sign'. The model is illustrated bellow:

In the Peirce model, it outlined in this way that anything that stands for something else in the production of meaning is called "Sign". Any Sign that has a subject to express the matter is called "Object" and Signs that have meaning when it translates to get meaning is called "Interpreting". Peirce describes it's a triadic relation. All three elements are depending on each other to produce a similar meaning. He measured the sign is a subject which refers the matter is called object, at the same time without interpreting there is no meaning for the sign, physiological, the language system and acts of speech, the individual and the social, the status of a language and its evolution, and what is necessary and unnecessary for the study of language are all crucial for realizing this. Saussure offers his "speech circuit" diagrams to demonstrate this set of variations.

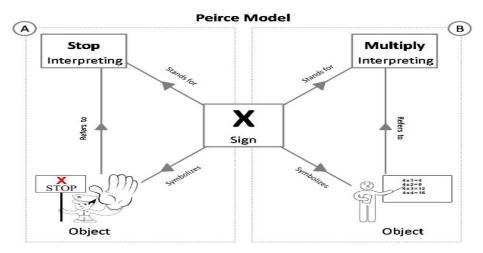
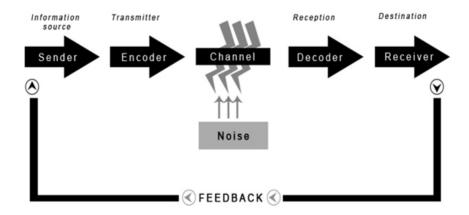


Figure 4: Image shows (example) how Peirce model of semiotics is work

Peirce illustrates his semiotics concept with the following example: A sign represents something that can be interpreted to mean something. It could be a symbol, sounds, or linguistics, for example. A sign represents a subject known as a "object," which might be anything imaginable, such as a rule, a quality, or an occurrence. "Interpreting" refers to the process of forming some kind of thought or effect from a sign in order to translate it for others. In traffic, for example, the green light always means to move or go. According to the idea, the green light is a sign. The object (green light) represents and interprets meaning is also the same. In real-life situations, all these components and elements don't seem to be separable. The diagram is provided below for your convenience in understanding how it functions.

Peirce described the semiotic structure by using a triangle relationship. For example: The letter "X" stands for varied alternative references of interpretation. A. Sign "X" offers a symbolic reference for traffic signal "X" Peirce further analysis the "X" by giving the certain interpretation. B. Sign "X" offers a symbolic reference for mathematical sign ("X"). During this case the interpretation offers the multiplication sign ("X") between two numbers. A Mathematical Theory of Communication, also referred to as the "Shannon-Weaver Model of Communication," was created in 1948 by American mathematician and electronic engineer Shannon and American scientist Weaver. This paradigm was primarily created to develop effective sender-receiver communication. Additionally, they discover "Noise"-causing factors that influence communication. The concept was first created to enhance technical communication, but it has now found widespread use in the communication industry.



SHANNON-WEAVER'S MODEL OF COMMUNICATION

Figure 5: Shannon-Waver Model of Communication

The Shannon-Weaver Model of Communication deals with various things these are: Information source, transmitter, Noise, message, receiver, channel, encode, decode information destination etc. For effective communication, the process of communication must be completed otherwise it is not effective. In Saussure's speech circuit is a continuous process like the model of communication. Thus, it is observed that the Saussure's speech circuit, and the Shannon weaver model of communication conceptually are both similar. Library professionals' and users in library also communicate in this way to sharing their knowledge and disseminate information. In the year of 1970, Barnlund introduced another model of communication which is known as Transactional Model of Communication. It also has similarity with semiotics theory. This model is usually used for interpersonal communication.

Transactional of model communication deals with the exchange of messages between sender and receiver here both take turns to send or receive This messages. approach emphasizes the uniqueness and distinctiveness of the stress response while focusing on psychological factors that one has no control over. It is obvious that this model shares some theoretical similarities

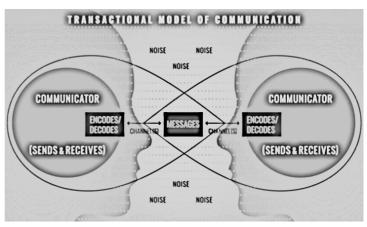


Figure 6: Transaction Model of Communication

with Pierce's Triadic Semiotics Model.

10. Impact of Semiotics in LIS field:

Semiotics is a study of signs. The word sign is generally including the numerical and alphabetical characters, words, sentences, messages and all actions which through custom are convention have acquired some recognizable interpretation. Semiotics theory is concerned with the properties of things in their capacity of signs (Barron, 1999). In the LIS field conceptually most of the areas are connected to semiotics like- information retrieval, knowledge organization, information behaviour, philosophical perspectives of LIS field, and psychological perspectives of LIS field these all are related to effective communication. Some Laws of libraries and information science are related to semiotics theory. The application of semiotics in library systems and services should follow Dr. S.R. Ranganathan's 4th law of library science that is "save the time of the user" and also follows the book selection principle of Drury that is "to provide right book to the right reader at the right time".

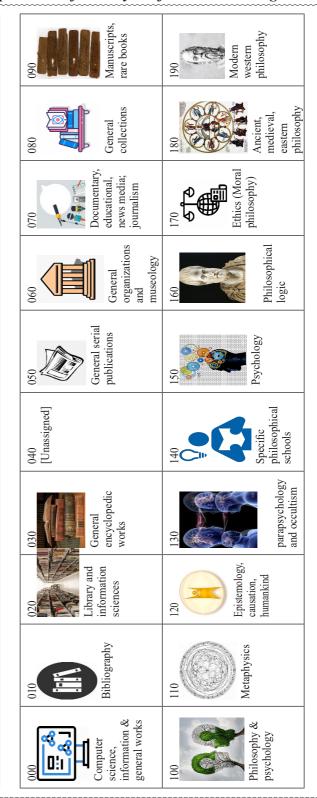
11. Use of Semiotics in library services:

From the above discussions, it is clear that semiotics theory and communication theory both are strongly related to each other. Our main goal as LIS professionals is to find the best way to make it simple for users to access library content while also saving them time. As a result, our conclusion is that we need to figure out how to use semiotics to simplify library services and improve the communication skills of librarians. There are various service components available in our library. Semiotics will be used to classify libraries in this project, mainly because classification requires mental processing. It can develop the critical thinking ability and visual literacy skills of the library professionals

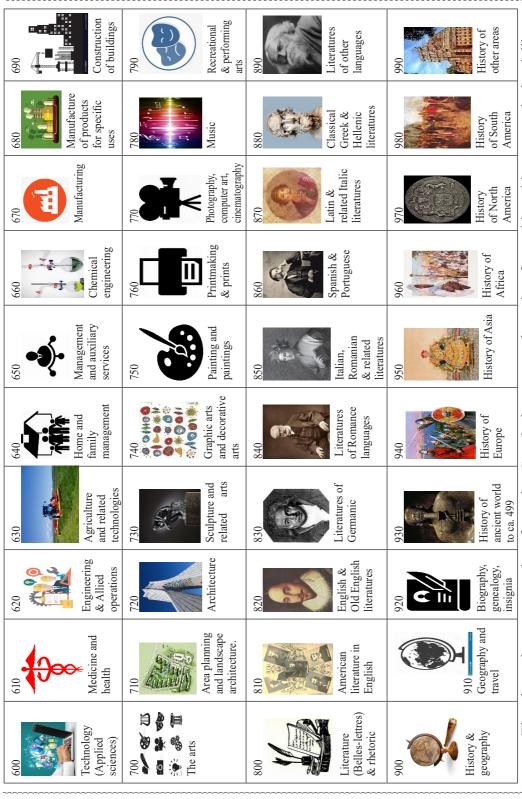
and It is used to provide a simple communication mechanism between users and librarians. Here, we employ semiotics to everyone who are associated with library. Therefore, if this idea is implemented in academic libraries, users will find it to create a visual classification system that will aid in the simple shelf arrangement of books in libraries. As an example, we undoubtedly be more efficient than it is now. The hundred divisions in our suggested visual library classification list for of the Dewey Decimal Classification (23rd edition). We think that it might be very simple, illustrated and effective for be very appealing. It will also save time and energy for both users and library staff, and the communication process will made a list of visual library classification (pictorial signage) it is corresponding to the hundred divisions (Third summery) pictorial signs.

(Third summery) of Dewey Decimal Classification (23rd edition) for shelving of the documents in library is shown below:

A proposed illustrative library classification (Pictorial signage) of DDC (23rd edition) Hundred division for identifying documents on the shelve and easy Communication



290 Other religions	390 Customs, etiquette, folklore	490 490 490 490 490 490 490 490	590 Animals
280 Denominations & sects of Christian church	380 Commerce, communications, transportation	480 ** by Fe &s ** Fe &s	580 Plants
270 Example 270 History, geographic treatment, biography	370 Education	470 ***Automotion of the control of	570 Biology
260 Christian social and ecclesiastical theology	360 Social problems and services; associations	460 ************ ********* ******** Spanish, Portuguese, Galician	560 Palacontology
250 Local Christian church and religious orders	350 Public administration and military science	450	550 Earth sciences
240 Christian moral and devotional theology	340 Law	440 Computer Formers French & related Romance language	540 Chemistry & allied sciences
230 Christianity	330 Economics	430	530 Physics
220	Political science (Politics and government)	420 PRETRIES RESIDENTE PRETRIES RESIDENTE RESIDENTE COLD English (Anglo-Saxon)	520 Astronomy & Allied science
210 Philosophy and theory of religion	310 Collections of general statistics	410 Linguistics	X — Mathematics
2000 中は 中は 中は Religion	300 Social sciences	400	Soo Natural sciences & mathematics



classification (pictorial signage) list. For preparing this pictorial signage we have followed H.W. Hulme's 'Principle of The above images are taken from the Google image search engine for making this proposed visual library

literary warrant' concept (1911) for this search. This visual library classification (pictorial signage) can be used in this way: At first, take an image from the broad list of pictorial signage and paste it on the spine of the document based on the class number, then arrange the document on the shelves based on the main class number. As an example, suppose a user comes to the library for a book on painting but he or she is not aware of unknown about the concept of the call number, but in Dewey Decimal classification 750 means Painting and paintings so when users come to the library and when he or she is searching for this book, it will be confusing and difficult not easy for them to search and they will need help immediately then needed to help. However, if this kind of symbol is used in addition to the call number for 750, the class number painting, and paintings, then both users and library staff will have no trouble communicating. Therefore, we argue that this type of illustrative library classification (pictorial signage) will be more successful than call numbers alone and that visual communication will be more successful than conventional modes of communication. Both users and library workers will benefit more from it. Users of all ages, even those connected to academic libraries, can benefit from using it. A visual library classification is particularly useful for facilitating shelf access and locating documents.

It has also some benefits for easy communication these are; Any user could find it to be very straightforward and simple to understand. Every division and each of the major classes is denoted by a straightforward representation that is so simple to understand that users quickly adopt it as a universal sign. The image is repeated on each tool from a large poster or list, which serves as a map of the library of the document, thus facilitating the search path. Each Dewey class might be given a certain colour, resulting in a colour code that the user will find useful. Library staff members can now instantly identify a misplaced book thanks to the use of colour.

It is safe to say that by making it simple for users to find the papers they require, semiotics will attract users. As librarians assist users in becoming familiar with the Dewey Decimal Classification system, encourage their independence. Semiotics will help library patrons become more independent, and librarians will conserve time and resources by employing them more efficiently, allowing them to focus on more engaging tasks. As a result of this procedure, library workers now have improved critical thinking skills and visual literacy. Consequently, it is possible to conclude that semiotics is extremely beneficial for the growth of library professionals' communication skills.

12. Practical implications:

As for the practical implementation, we conducted a 2-month observational survey on the school library. In this process, we selected a govt school and find changes in the library.

- The library becomes more attractive to the students
- Searching for books has become easy for students by using semiotics
- Students are also attentive to using the library by using semiotics.
- Students can easily access the resources than before.

13. Conclusions:

Knowledge is crucial for an organization's success and on-going progress in the twenty-first century. The needs and requirements of users are significantly changing every day in today's ICT-enabled environment, so library personnel must update their communication skills on demand. At this time, electronic documents are becoming more and more popular, slowly eroding the area that physical documents once occupied. Today's users are surrounded by visual information both online and offline, therefore both users and professionals need visual communication. Any of the senses—visual, aural, tactile, or gustatory—can be used to understand signs.

Semiotics investigates the study of signs and symbols as a significant part of communications and studies non-linguistic sign systems. Semiotics helps users be attracted to using documents and improved their understanding levels and knowledge to process or communicates information. This study also reveals that semiotics theory and communication theory both are both very similar. Although semiotics is coming earlier but it is very effective for today's world. Semiotics has built a strong communication skill which upgrades the competency levels of library professionals. It should break the language barriers of any library professionals and deploying the leadership quality. Library is a store house of knowledge if we using semiotics as an effective tool in our library services library professionals can provide a better system and speedy service to fulfil people's need for information in the library. In this study we also reveal that informal mode of communication (particularly Visual communication) is more effective than formal mode of communication in library services in the contemporary environment. Semiotics aids in visual communication, and its principles have an impact on raising one's level of visual literacy.

Visual communication improves comprehension and influences the cognitive growth of both users and library staff. In the modern world, librarians strive on their professional development to acquire visual literacy and become multi-literate. As a result, we discovered that semiotics is a particularly useful tool for different sorts of library professionals to facilitate document retrieval. For the librarians, good communication is of the utmost importance. Professionals in the library should have communicated well; else, they risk losing their ability to lead. The study of the communication process in libraries

using semiotic theory provides library workers with a flexible research instrument. So, the theoretical basis of communication studies library professionals can benefit from research using semiotics, the science of signs and Library professionals can be act as the mediator between the information and users by using semiotics. So, library professionals must have the critical thinking ability to understand semiotics and the authority may take initiative by conducting various trainings, workshops, seminars or any other interactive sessions to enhance the visual literacy skills and critical thinking ability of library professionals and improve library services in the contemporary environment.

Notes: https://www.communicationtheory.org/peirce-model/

References:

- **Bajpai,V., and Madhusudhan, M. (2019).** "ICT Skills and Competencies of Library and Information Science Professionals working in College Libraries, University of Delhi: A study", *Library Philosophy and Practice (e-journal)*,2275, Available at: https://digitalcommons.unl.edu/libphilprac/2275 (Accessed 25th august 2021)
- **Barron, T. M., Chiang, R. H., and Storey, V. C. (1999).** "A semiotics framework for information systems classification and development." *Decision Support Systems, vol.25 No.1, pp.1–17.* doi:10.1016/s0167-9236(98)00088-8
- **Brier, S. (1996).** "Cyber semiotics: a new interdisciplinary development applied to the problems of knowledge organisation and document retrieval in information science", *Journal of Documentation*, vol.52 no.3, pp.296-344. doi:10.1016/s0363-8111(98)80018-0
- **Brier, S. (2010).** "The foundation of LIS in information science and semiotics." *libreas*, vol. 2 no.1.
- **Brier, S. (2019).** "Cybersemiotic Systemic and Semiotical Based Trans disciplinarity", *Transdisciplinary Journal of Engineering and Science*, vol.10, pp.81–92. doi: https://doi.org/10.22545/2019/0119
- **Daylight, R. (2017).** "Saussure and the model of communication", *semiotica*, vol. 217, pp.173-194. doi: 10.1515/sem-2016-0038
- **Friedman, A., and Thellefsen, M. (2011).** "Concept theory and semiotics in knowledge organization", *Journal of Documentation*, vol.67 no.4, pp. 644-674. doi:10.1108/00220411111145034
- Harris, R., and Love, N. (1990). "The foundations of linguistic theory: selected writings of Roy Harris". United Kingdom: Routledge.

- **Huang, S. C. (2007).** "A semiotic view of information: Semiotics as a foundation of LIS research in information behaviour", *Proceedings of the American Society for Information Science and Technology*, vol.43 no.1, pp. 1-17. doi:10.1002/meet.1450430166
- **Jain P. (2013).** "A paradigm shift in the 21st century academic libraries and librarians: prospectus and opportunities", *European journal of Academic Research*. vol.1 no.3 pp. 133-147
- **Kahre**, **P.** (2013). "Library and information science's ontological position in the networked society: using new technology to get back to an old practice", *Information Research*, vol. 18no.3, paper C13.
- **Khan, A., Masrek, M. N., and Nadzar, F. M. (2015).** "An investigation of the training needs on emotional intelligence of academic librarians", Library *Review*, vol.64 no.8, pp. 597-613.doi: 10.1108/LR-04-2015-0040.
- **Mai, J. A. (n.d.).** "Semiotics and indexing: an analysis of the subject indexing process", *Journal of documentation*, vol.57 no.5, pp.591-662. doi: 10.1108/EUM0000000007095
- Nagata,H.(2010). "Exploring the competency of Academic library staff engaging in emerging services", Communications in computer and information science. vol.96. pp. 74-84,
- Patel, U., and Bhavsar, V. (2012). "The Changing Role of Library Professionals in Academic Libraries", *International Journal of Scientific Research*. Vol. 1 no. 5, pp. 73-74
- **Raber, D., and Budd, J. M. (2003).** "Information as sign: semiotics and information science", *Journal of Documentation*, vol. 59 no.5, pp.507-522. doi:10.1108/00220410310499564
- **Rasakumaran, A. (2018).** "Application of semiotics in organizational communication", *Journal of Business Studies*, vol.5no.1, pp.75-91, doi:10.4038/jbs.v5i1.26
- **Rothwell. W. J. and John E.L. (1999).** "Competency identification, modelling and assessment in USA", *International journal of training and development*.vol.3 no.2, pp. 90-105.
- **Vidales, C. (2021).** "Communication, Semiosis, and Living systems", *Comunicacióny Sociedd*, e7932. Doi:10.32870/cys. v2021.7932

- **Soutter, J. (2013).** "Academic Librarian Competency as defined in the Library and Information Science journal literature of 2001-2005 and 2011", *Partnership: The Canadian journal of library and information practice and Research*, vol.8 no.1
- **Stockinger, P. (2015).** "The semiotic turn in digital archives and libraries", Les Cahiers du numérique, Lavoisier. *Perspectives européennes*, vol.11 no.1, pp.26-39.
- Wagner, A., Marusek, S., and Yu, W. (2020) "Emojis and Law: contextualized flexibility of meaning in cyber communication", *Social Semiotics*, vol.30 no.3, pp.396-414, DOI:10.1080/10350330.2020.1731198
- **Webber,S.(1999).** "Competencies for information Professionals", Bulletin of the American Society for information Science. Vol.26 no.1, Available at: https://doi.org/10.1002/bult.140
- Wells, M. J.(2015). "Social semiotics as theory and practice in library and information. science", *Journal of Documentation*, vol.71 no. 4, pp.691-708. doi.:10.1108/jd-01-2014-0018