

# Libraries as catalyst of learning process as viewed from Ranganathan's Fifth Law

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**Abstract:** Learning is a continuous course of action executed in human mind and intrinsically associated with human psychology. There are several ways of facilitating learning process, e.g. education, personal development, schooling or training in different forms etc. Today learning process has attained quite a lot of new dimensions, of which lifelong learning is a significant facet. The technological, socio-economic and socio-cultural paradigm shift particularly since after communication and internet revolution of nineties of the last century continuously engage people in ceaseless self-upgradation stretching their studentship beyond young age within traditional institutional walls. This phenomenon gradually popularized the concept of learning in distance mode, the furtherance of which connotes a learning process throughout the life or lifelong learning. This fulfils, very quintessentially, the vision of traditional Indian schools of thought about knowledge and learning process. The importance of library systems was increased day by day. The libraries are undergone through metamorphosis. The transition from traditional printed document-based library to library-without-walls metaphor, a long voyage, though in Indian context today all forms of library systems mostly co-exist. This is known as hybrid library system. A library system may act as catalyst to boost up learning process. In this paper, the reciprocation between learning process and library system is explained from the viewpoint of Ranganathan's Fifth Law, which states 'Library is a growing organism'. Also, Ranganathan's first four laws have been logically proved by Fifth law applying reduction ad absurdum method. The malfunctioning of reciprocation between learning and library systems eventually leads to disobedience of Ranganathan's Five Laws – this proposition has been logically concluded at last.

**Keywords:** Learning process; Library system; Lifelong learning; Five laws; Fifth law of library science; Library system-reciprocation; Learning process-reciprocation; Reductio ad absurdum

## Introduction

The process of learning indicates functions of acquiring anything new or modifying and reinforcing, existing knowledge. The process of modification of existing knowledge may be achieved through several ways, for instance, amendment of behaviors, upgradation of skills, recapitulation of values, synthesizing different types of information et al. The ability to learn is possessed by human beings, animals and some machines also. The learning is a highly time-dependent function. It is intrinsically associated with instinct and emotion of animal and human beings and highly contextual with respect to human psychology<sup>1</sup>. It is quasi-dynamic process, i.e. builds upon slowly and is shaped gradually in newer forms by what we already know. Therefore, learning is reckoned as a continuous course of action, rather than a collection of factual and procedural knowledge.

Learning produces changes in psychology and thought process that leaves relatively permanent impressions on mind.

Human learning may occur as part of education, personal development, schooling or training in different forms. It may be objective-oriented and guided by motivation. There are so many subject areas embracing the facet of learning e.g. neuropsychology, educational psychology, learning theory and pedagogy, education, personality development etc. Learning may also occur as a result of habituation as seen in many animal species, such as play, seen only in relatively intelligent animals like dog, horse etc. Learning occurs consciously, but it also incessantly knocks on the subconscious mind. If there exists any psychological aberration then some signal may be noised on the learning process. Several psychologists recognized *play* as first form of learning. Children's first interaction with the world is manifested through plays. It is the media where they learn the rules, and learn to interact. Lev Vygotsky agrees that play is pivotal for children's development, since they make meaning of their environment through play. It is interesting to note that 85 percent of brain development occurs during the first five years of a child's life<sup>2</sup>.

### Learning process and library system: different aspects

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  - Amendment of behaviours,
  - Upgradation of skills,
  - Recapitulation of values,
  - Synthesizing different types of information et al.
- The ability to learn is possessed by human beings, animals and some machines also. The learning is a highly time-dependent function. It is intrinsically associated with instinct and emotion of animal and human beings and highly contextual with respect to human psychology. Learning is thus a psychological process
- It is quasi-dynamic process, i.e. builds upon slowly and is shaped gradually in newer forms by what we already know. Therefore, learning is reckoned as a continuous course of action, rather than a collection of factual and procedural knowledge. Learning produces changes in psychology and thought process that leaves relatively permanent impressions on mind.

## Types of learning

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- Learning occurs consciously, but it also incessantly knocks on the subconscious mind. If there exists any psychological aberration then some signal may be noised on the learning process. Several psychologists recognized *play* as first form of learning. Children's first interaction with the world is manifested through plays. It is the media where they learn the rules, and learn to interact. Lev Vygotsky agrees that play is pivotal for children's development, since they make meaning of their environment through play. It is interesting to note that 85 percent of brain development occurs during the first five years of a child's life. Thus learning occurs at both conscious and sub-conscious levels.
- There are so many subject areas embracing the facet of learning e.g. neuropsychology, educational psychology, learning theory and pedagogy, education, personality development etc.

## Basic principles of learning

- Learning is continuous
- Learning is purposeful & must make sense to the learner
- Learning involves as many senses as possible
- Learning activities must be appropriate for the situation

## Learning & Library: the reciprocation:

Table 1: Reciprocity between library and learning

LIBRARY PROVIDES INFORMATION PLACE In the physical world	LEARNING CREATES KNOWLEDGE SPACE In the mental world
Collection	Building knowledge through engagement with information
Technology	Accessing information resources and sources in quickest possible time, i.e. easy retrieval
Access	Information literacy
Staffing	Learning outcome
Locating and finding information	Making a difference

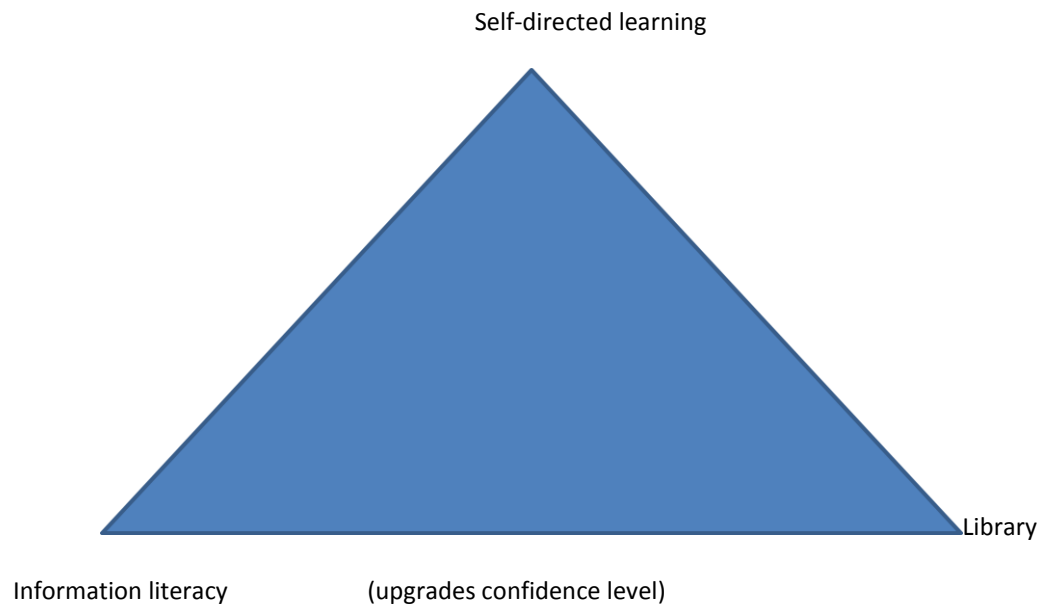


Figure 1: Self-directed learning, information literacy and library trinity

### What is Self Directed Learning?

Learners take the initiative to:

- Determine what they need to learn
- Identify resources and determine how best to use them
- Present and persuade others of their research conclusions
- Self asses when they have learned enough and if they have done it effectively & efficiently

### Information Literacy

According to Presidential Committee on Information Literacy of American Library Association, Information literacy is a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."

An information literate individual is able to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

Table 2: Teacher & Librarian: comparative study

Teacher	Librarian
Environment encourages exploration and cooperative learning	Environment encourages exploration and cooperative learning
Teacher acts as coach or facilitator to the students	Librarian acts as coach or facilitator to the readers or users
Teacher acts as a role model in developing group and research skills	Librarian acts as a role model in developing group and research skills

Thus it is clear from Table 2 that the role of teachers and also librarians are identical. Ranganathan viewed the librarians as the teacher of the teachers, as the librarians help teachers to navigate towards right source of information.

### Learning styles

The styles of learning may be represented through four quadrants of an arbitrary Cartesian system as presented in Figure 2 below:

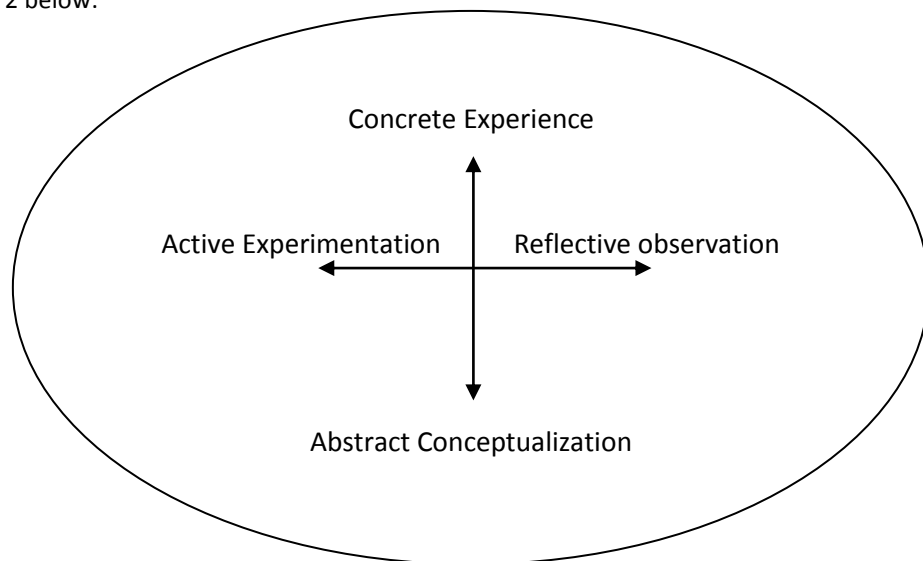


Figure 2: Learning styles

The trinity of educational institution may be presented through a triangle as in Figure 3. The three apices of the triangle stand for learner, teacher and learning resources respectively.

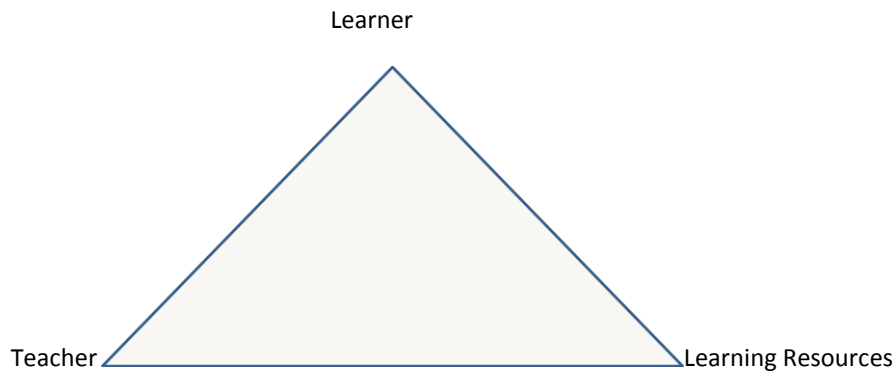


Figure 3: Trinity of educational system

From the analogy of Ranganathan's five laws of library science, another five laws for an educational institution may also be framed as follows:

1. Learning resources are for use
2. Every learner his/her learning resource
3. Every learning resource its learner
4. Save the time of the learner
5. An educational institution is a growing organism

Actually Ranganathan's Five Laws may be extended to any such system where a trinity between user or consumer, object or commodity and service provider exists. Neelameghan<sup>3</sup> explained this growth concept from biological viewpoint. Parekh<sup>4</sup> studied application of five laws in information society. Tikekar<sup>5</sup>, Thaker<sup>6</sup> and Jain<sup>7</sup> discussed application of five laws from various aspects. Aghav<sup>8</sup> discussed five laws in the present day context and Raju<sup>9</sup> searched the root of five laws. Dasgupta<sup>10</sup> and Neelameghan<sup>3</sup> analysed the probable impact of five laws on the library staff. Sen<sup>11</sup> analyzed Ranganathan's five laws from completely new angle. Sen's<sup>12</sup> generalized approach interpreted the five laws not only from the context of library and information science, but also from the context of so many other subjects. Sen formulated five laws for educational institutions, i.e.

1. Class rooms are for learning
2. Every student his/her teacher
3. Every teacher his /her student
4. Save the time of the student
5. An educational institution is a growing organism.

Similarly, five laws for museums, hospitals, grocer's shops, temples et al may be framed as follows:

For museums:

1. Museum objects are for viewing
2. Every viewer his/ her object

3. Every object its viewer
4. Save the time of the viewer
5. A museum is a growing organism.

For hospitals:

1. Patients are for treatment
2. Every patient his/ her doctor
3. Every doctor his/her patient
4. Save the life of the patient
5. A hospital is a growing organism. Etc...

Learning and Library: two trinities

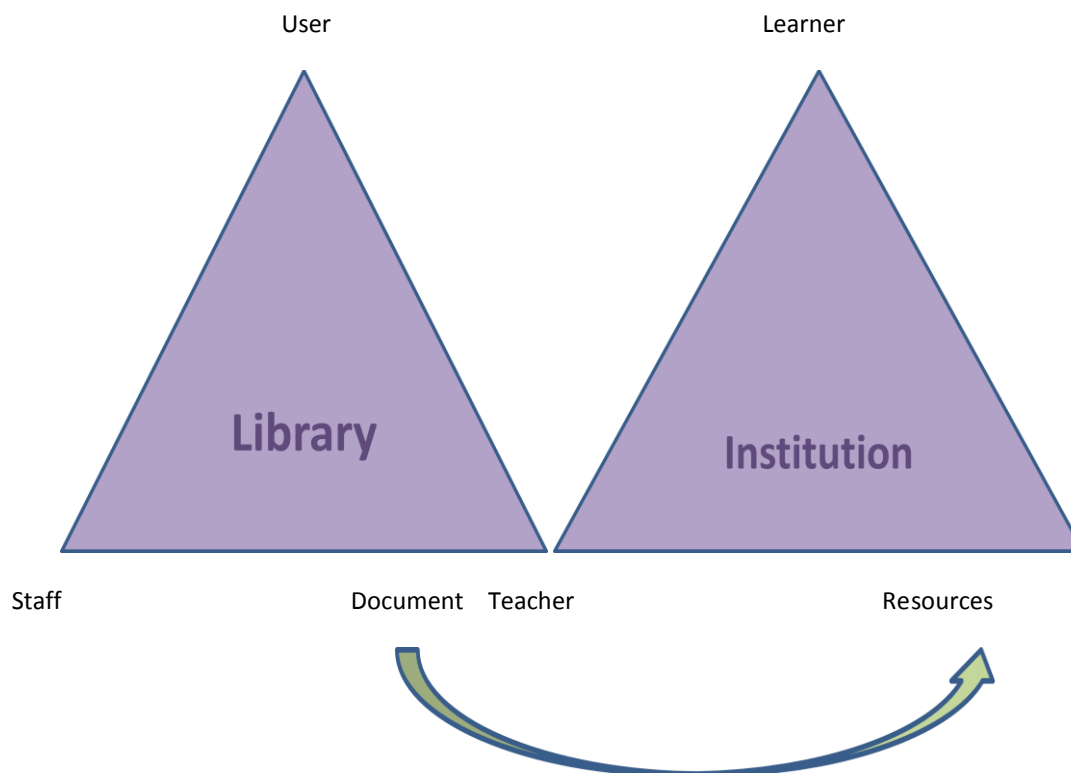


Figure 4: One-to-one mapping between library and learning institutions

One-to-one mapping

It is clear from the above Figure 4 that there is a one-to-one mapping exists between library and learning systems. Hence reciprocity library and learning systems already exists by default.

Fifth law: growing organism

The reciprocity is also clear from Fifth law. Actually fifth law demands any system should function like a living system. The growth concept of fifth law, as Ranganathan explained, is a biological growth. It grows

homogeneously in all possible orientations, but not any uni-directional aufbau that is noticed in artificial growth. The growth process encountered in Fifth Law is thus a natural growth like trees and other living beings, but not an artificial growth like construction of high-rise buildings. Fifth Law thus touched the life stick on other four laws. Hence it may be stated that that the validity of first four laws stands on the fifth law, that may be proved logically as shown here by applying the method of Reductio-ad-absurdum. Fifth law may be allegorically stated as equivalent to painting the eye on the idol or *Chokshudaan* on an image.

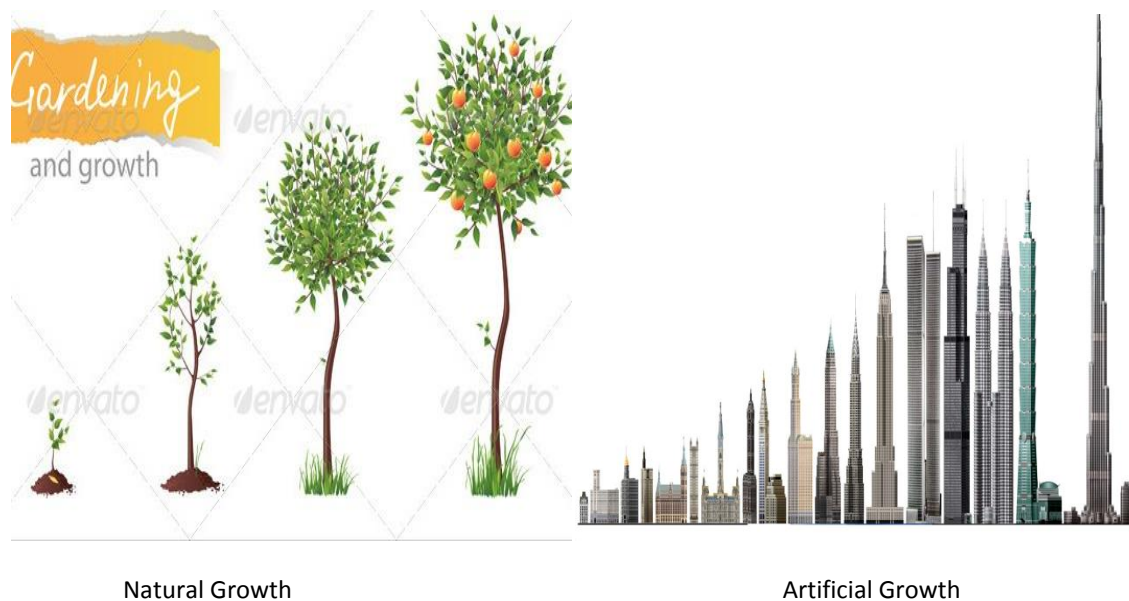


Figure 5: Natural and artificial growth

### Fifth Law and other four laws

The five laws as stated by Ranganathan in *Five laws of library science*<sup>13</sup> are:

1. Books are for use
2. Every reader his/her book
3. Every book its reader
4. Save the time of the reader
5. Library is a growing organism

Here 5<sup>th</sup> law demands that library should grow like any organism, i.e. the growth should be natural or biological, but not artificial. Ranganathan described library as a trinity of reader, staff and book or document. The growth of library thus indicates growth of all these three components. Let us now see what happens if any one or two components stop growing. Let us frame a thought experiment to prove that all three components should grow simultaneously, i.e. it should be homogeneous growth in all possible orientations. If any one or more components stop growing then the first four laws will be violated. To prove this let us consider a library



system as shown by the triangle ABC in the year  $Y_1$  in Figure 6. Let the same system changed to EFG in the year  $Y_2$ , where,  $Y_2 > Y_1$ . Here,

D – No. of documents/ books

S – No. of staffs

R – No. of readers

The suffix '1' indicates the quantities in the year  $Y_1$ , while the suffix '2' indicates same in the year  $Y_2$ .

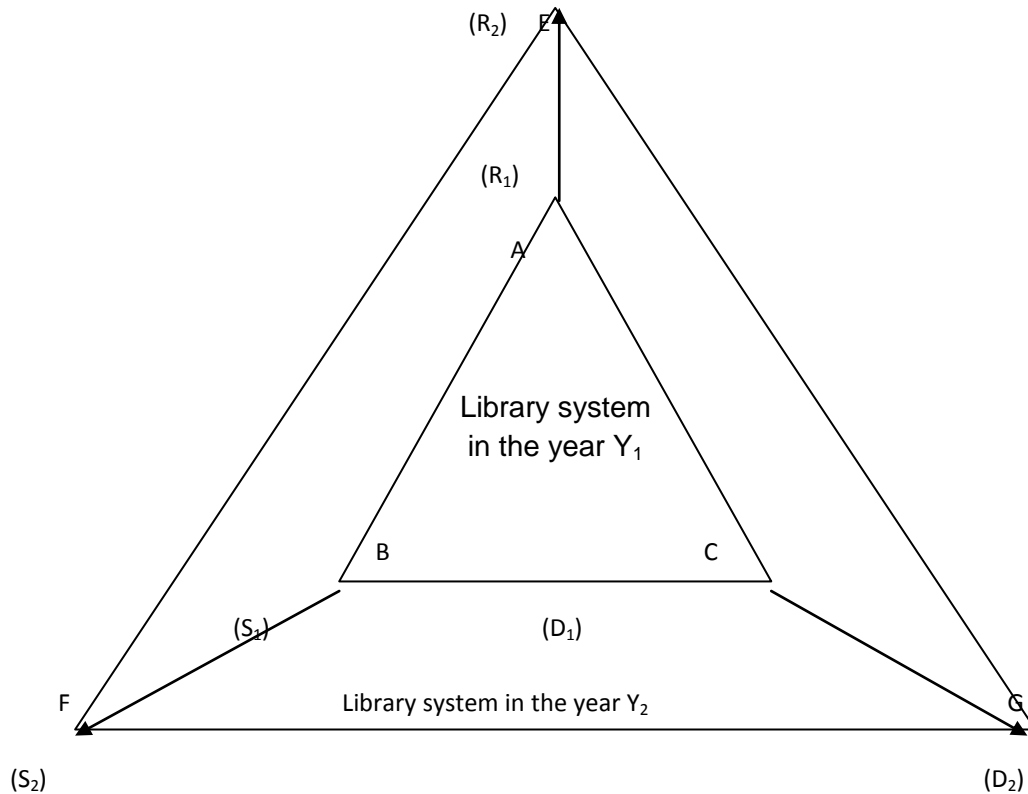


Figure 6: The ever-growing library system

Here the sides of the triangle represent the corresponding relationships between any two variables within reader, staff and document that are denoted by L.

$(L)_{R-S}$  = Side AB/ EF; It represents mental reciprocation between reader and staff

$(L)_{R-D}$  = Side AC/ EG; It represents quest for knowledge/ Information need of the reader

$(L)_{S-D}$  = Side BC/ FG; It represents Document processing done by the staff.

Now, here seven cases may occur as listed below: (Here the symbol  $\nlessgtr$  stands for 'Not increased' of 'Remained same')

Case 1:  $D_2 > D_1, S_2 > S_1, R_2 \nlessgtr R_1$

- No. of documents increases
- No. of staffs increases
- No. of readers remains same
- This indicates violation of first three laws

**Case 2:**  $D_2 > D_1, S_2 \mid S_1, R_2 > R_1$

- No. of documents increases
- No. of staffs remains same
- No. of readers increases
- Readers will not get proper service. This indicates violation of fourth law

**Case 3:**  $D_2 \mid D_1, S_2 > S_1, R_2 > R_1$

- No. of documents remains same
- No. of staffs increases
- No. of readers increases
- This indicates violation of first and third laws

**Case 4:**  $D_2 \mid D_1, S_2 \mid S_1, R_2 > R_1$

- No. of documents remains same
- No. of staffs remains same
- No. of readers increases
- This indicates violation of first four laws

**Case 5:**  $D_2 \mid D_1, S_2 > S_1, R_2 \mid R_1$

- No. of documents remains same
- No. of staffs increases
- No. of readers remains same
- Here the staffs will sit idle. This indicates violation of first four laws

**Case 6:**  $D_2 > D_1, S_2 \mid S_1, R_2 \mid R_1$

- No. of documents increases
- No. of staffs remains same
- No. of readers remains same
- The documents would be left unused. This indicates violation of first and third laws

**Case 7:**  $D_2 \rightarrow D_1, S_2 \rightarrow S_1, R_2 \rightarrow R_1$

- No. of documents remains same
- No. of staffs remains same
- No. of readers remains same
- Here all variables become constant, that indicates a trivial solution. This indicates closure of library system

Hence, all components of the trinity should be equally and homogeneously increased, otherwise any of the first four laws would be violated. The homogeneous growth of all components will facilitate the linking up between learning and library systems.

## Conclusion

In this paper, Ranganathan's five laws of library science have been interpreted from a new angle. An inspection of the five laws instantly reveals that the first three laws focus on the reciprocity between reader and document, the fourth law is a general appeal and the fifth law focuses on the growth of an organization. Hence the first four laws involve no dynamic parameter, while the fifth law encounters a dynamic variable, i.e. growth. This is the crux parameter of five laws. If the growth sustains homogeneously, the first four laws will be automatically hold good. Also if the growth either stops or continues heterogeneously, the first four laws will no longer be valid. It has been proved here by a thought experiment, where a heterogeneous growth and 'no growth' have been assumed initially and the disobedience of the first four laws is logically established. It is finally inferred that to sustain a library system homogeneous growth of three components (reader, staff and document) is necessary.

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