CHAPTER 4

CONCEPT OF EFFECTIVENESS
1. OBJECTIVE
TO APPLY SYSTEMS APPROACH TO THE DESIGN AND ANALYSIS OF AN INFORMATION SYSTEM FOR LIBRARY MANAGERS - DEVELOPMENT OF MODELS AND TESTING

2 LITERATURE SEARCH
MEASURE OF EFFECTIVENESS, LS, WITH D.R. APPLICATION

3 GENESIS OF GROUPING ITEMS TO PARAMETERS

EARLIER PROPOSAL

4 CONCEPT OF EFFECTIVENESS
BEHAVIOURAL EQUATION

CIRCULATION MODULE

ACQUISITION MODULE

BUDGET OR INVESTMENT MODULE

USER MODULE

SYSTEM-FLOW MODULAR CHART (CHAPTERS 1 TO 4)
4.1. DESIGN ASPECTS : TYPE OF INFORMATION SYSTEM.

It is commonly agreed that irrespective of type, size or objective of a library, a manager would cheerfully welcome the idea of evaluating his library in terms of its end-products. If an information system could be designed encompassing the major aspects of a library (as discussed in the earlier chapter) such that it could measure the effectiveness of a library then such a self-evaluation system would be more useful to the library managers and would be more appropriate to the objectives of this study. Such an information system, in the discerning eyes of system analysts, would not only explore the operational aspects and identify pitfalls but would also guide in finding remedial measures since the inherent characteristics of performance measuring systems would be analysing the past, present and projected performances. Hence, it appears that the design could be oriented towards developing an information system which would subject a library into self-evaluation.

In this context, the concept of effectiveness should be appropriately conceived since there is a plurality of approaches advanced by various schools of thought.
4.2.1. DESIGN ASPECTS : CONCEPT OF EFFECTIVENESS

Since a library is delineated as a system and that system approach is being applied to reflect the internal-links with the aid of modelling and O.R. techniques, the concept of library effectiveness has to be introduced in the proper perspective with a slant to quantitative measurements.

Conventionally, 'Effectiveness of a library' has been thought of as the extent of degree to which a particular service has fulfilled its objective. It is considered to have only a relative measure. The library inputs (like publications acquired, money spent on various activities) and processes are utilised to measure the effectiveness. Many criteria have been proposed as measure of effectiveness by many schools of thought (vide Chapter 2). So, in this study an attempt has been made to formulate a concept of effectiveness incorporating the several measures advocated, in some meaningful proportions.

It has been already observed (Chapter 3) that the modules representing the behavioural aspects of a library system appear to be oriented in the direction of users' satisfaction which is the product of service levels indi-
ated by the modules which seem to have a telescopic relationship. Hence, the factors that contribute to the "users' satisfaction" could turn out to be a good base for the envisaged information system, incorporating as system parameters that would measure the effectiveness.

With this end in view, if a search for parameters, suitably reflecting the "users' satisfaction" is made, it would culminate in the emergence of the most pertinent parameter, viz., "users' visits to the library". In other words, the frequency of users' visits to the library is an indicator of the level of their satisfaction since, unless one has complete gratification over the library, he will not be visiting it often. So users' satisfaction, interpreted in terms of users' visits, can be portrayed as a measure of effectiveness.

The purpose of the visits to the library could be manifold. But almost every one of them is for satisfying the information needs. Normally, the primary purpose of the visits is to borrow publications; browsing, reference and in-house reading would also result in borrowing, if not on the same occasions, on some other day. In fact all circulation activities could be considered in this way as a single entity viz., borrowing of publications and hence all the visits that are made to fulfill one or other of these 'circulation activities' could be considered as visits to borrow publications.
Secondly, the library visited should have a good collection of publications to meet the information needs of the users. The document collection also represents the quantum of facilities provided to satisfy the users which would result in making the users to visit the library often.

While, 'borrowing' and 'collection of publications' are directly responsible for the frequency of users' visits to the library, the 'expenditures on publications' influence the visits indirectly. That is, a library would be spending money for various purposes under different 'account heads', but the expenditures on macro documents and periodicals are the most relevant to the users in the sense that these expenditures are the investments made to build the collection of publications which are sources of use to the patrons of the library.

With a new dimension emerging from this way of thinking, the concept of effectiveness, (viz., Users' satisfaction) gives rise to a new perspective of looking at the cause-effect parameters discussed above, as system parameters for the envisaged information system. A hypothesis could be formed which gives the basis for the information system being designed. That is, "the effectiveness of a library and the parameters of effectiveness can be stated as measure of users' satisfaction, which in
turn is influenced by the number of circulations made, the total collection of publications, the expenditure on macro documents and the expenditure on periodicals". Incidentally, the impetus to the choice of these parameters has stemmed from the 'inputs to information system' narrated in Section 3.3.

4.2.2. BEHAVIOURAL FORM OF THE HYPOTHESIS.

The above hypothesis gets a behavioural form representing the cardinal parameters of effectiveness as the following.

Users' visits to the library = a function of number of circulations made, total collections, expenditure on macro documents, expenditure on periodicals.

In addition to the four parameters mentioned as primarily responsible for the frequencies of users' visits, there may be some which would have influenced to a lesser extent, the users' visits to the library, whose effects are not reflected directly or indirectly by the parameters chosen. Such effects are not directly represented by individual parameters, in the behavioural form
since they are either abstract or not directly amenable to quantification due to their subjectivity. However, these can be taken care of, by suitably manipulating the equation, when it is given a mathematical form. The mathematical equation of the behavioural form of the hypothesis would, thus, be comprehensive and would be true to reality.

4.3. CHAPTER SUMMARY.

The information system for library managers is supposed to provide the managers an inkling and insight into the contributing factors relating to the effectiveness of a library they are managing. In the present study the concept of effectiveness is not considered in its conventional sense; but it is viewed in a new perspective as a measure of users' satisfaction. Unless the patron has a complete gratification over the library, he will not be visiting it often. Hence, a measure of frequency of users' visits to the library can be considered as an indicator of the level of their satisfaction.

This users' satisfaction—the ultimate goal of a library—as reflected by the frequency of users' visits, is the measure of effectiveness of library and is expressed as a function of cardinal parameters of the information system, viz., the number of circulations made,
the collection size of publication, the investment on macro documents and the investment on periodicals.