

CHAPTER VI

SUMMARY, CONCLUSIONS AND
SUGGESTIONS

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6.1. Introduction

University education has to play a very important role in national development in India, particularly after the attainment of independence and adoption of scientific planning as the national policy for social and economic growth. The Radhakrishnan Commission has stated that universities should provide leadership in all walks of life. According to the Kothari Commission, the primary objective of a university is to provide society with competent men and women trained in various professions, who will be cultivated individuals imbued with a sense of social purpose.

It is obvious that the conventional methods of instruction could hardly be expected to fulfill the above expectations. It is a fact that our instructional programmes are overloaded with lectures by teachers which

are passively listened by students, who are obsessed with success in an external examination to be held at the end of the year. This situation needs to be changed drastically.

Both the Radhakrishnan and Kothari Commissions have recommended the extensive use of tutorials, seminars, assignments and small research projects in teaching at the university stage. The Kothari Commission has suggested a reduction in lecture work, so that more time can be devoted by the students to independent study. Both the commissions recommend a greater use of the library facilities by the students in universities and colleges.

Importance of self-study techniques and use of library facilities by students of the higher education stage has been emphasized time and again. It is a basic assumption held by educationists and librarians that the library is an educational agency. It should be more so in a developing country like India, where the average student studying at the university level is hardly expected to own even the bare minimum of books required by him for his studies. Needless to say that he has to depend upon the available library services for his reading.

University libraries in India have had a lop sided development and uneven growth since the first three university libraries were started at Calcutta, Bombay and Madras in 1857. After independence the University Grants Commission took a keen interest in the development of university libraries by sanctioning liberal grants for the construction of buildings and purchase of books. Still the present conditions of university and college libraries in our country is far behind similar libraries in some of the developed countries like U.S.A., U.K. or Germany.

It is in this context that the present study is undertaken. The M.S. University of Baroda is a teaching-cum-residential university founded in 1949. It has a well-developed campus which is served by the Hansa Mehta (University) Library. The library had a collection of more than two lakh volumes in 1968-69 and provides open access to post-graduate and final year undergraduate students into stacks.

It was attempted to measure the use of available library services by the post-graduate students in the M.S. University of Baroda and to find out whether it has any effect on their academic achievement. In other words the contribution of the library as an educational agency

towards the academic success of wstudents is sought to be investigated. Specifically the study undertaken wanted to test the hypothesis: There is no significant effect of the use of available library services on the academic achievement of post-graduate students in the Faculties of Arts, Science and Education in the M.S. University of Baroda.

6.2. Related Studies

A number of studies on different aspects of libraries and their uses have been briefly reviewed in Chapter II. Studies abroad, particularly in U.S.A., are discussed in the beginning, followed by a few surveys done in India. Most of the studies reported from America are reports of the surveys of university and college libraries and the extent of their use by students. Dr. Harvie Branscomb's study on college libraries in U.S.A. is an excellent survey which has been conducted with great care and precision. It gives useful insight into the use of college libraries by the undergraduate students. He has also investigated the contention of the college or university library to be an educational agency, which is not confirmed by the findings in his study. Another study by Dr. Patricia Knapp has also tried to find out the relationship between the library and a number of

student characteristics. The other studies are investigations on similar lines.

Most of these studies have concluded that library has still to prove its worth as an educational agency. The use of library's services made by students is far below than expected; the students do not use the library facilities because they don't need to and that a large majority of the student community get acceptable or even superior grades with no use or poor use of the library. Lack of co-operation between the teachers and librarians is evident from many studies and it appears to be the single most important factor responsible for this sad state of affairs. Experimental projects in some institutions like the Stephens College illustrate that library use by students can be increased to much higher levels, if library and instructional activities are integrated properly.

Three surveys, two on school libraries and one on a university library are reported in the second part of the review of related studies. The two surveys on conditions of school libraries in U.P. and Madras have painted a truly dismal picture of the conditions of school libraries in India. Lack of space, derth of books, almost no provision for furniture and untrained-mostly part time and lowly paid-staff, make a mockery of library facilities in the schools.

With limited funds and complete indifference of the concerned authorities there is no hope of any change in the near future in these conditions. Prof. Carl M. White has done an excellent study of the functioning of the University of Delhi Library. He has pinpointed the strong and weak points of this library. Compared to the libraries in other countries the book stock, expenditure on books and periodicals, use of library facilities by staff and students etc. are far from satisfactory, though it is better than in many other university libraries in India.

6.3. Sample

A total of 301 students were selected in the three samples namely M.A., M.Sc. and B.Ed., all of whom satisfied the criteria of being on the rolls of the University during the academic year 1968-69, and being the members of the Hansa Mehta (University) Library. All the students satisfying the above criteria in the Sr.M.A., M.Sc.Final and B.Ed. classes were initially included in the samples, but some of them were not available for testing and the administration of the questionnaire. Finally, the three samples M.A., M.Sc. and B.Ed. consisted of 56, 104 and 141 students respectively. All the 301 students in these three samples have been designated as the entire sample.

6.4. Collection of Data

The required data was collected through different techniques. Academic achievement of the students has been

measured by their final examination marks in this study. Similarly their past achievement has been measured by the marks obtained by them at their qualifying examinations. Data for both these variables was collected from records of their examination results and their admission forms in the University and Faculty offices respectively. The level of their intelligence was tested by Raven's Progressive Matrices Test, which^{is} a widely used standardised test of intelligence. Another standardised test, Kuppuswamy's Socio-economic Status Scale (Urban) was used to measure the socio-economic status of the students. The last three variables were used to control the variation amongst the students in the samples with regard to ability (past academic achievement), intelligence and socio-economic status.

Use of available library services, by the students in the samples, has been considered to be made^{up} of six variables in this study. They are :

1. Books taken for home reading.
2. Familiarity with rules and regulations of the Hansa Mehta Library.
3. Time spent in reading on the library premises.
4. Books and journals read in the library.
5. Books owned.
6. Books received from sources other than the Hansa Mehta Library.

Data for books taken for home reading was collected by recording the books issued to students in the sample daily during 1968-69 from the appropriate records in the Hansa Mehta Library. Familiarity with library rules and regulations was measured through a specially constructed test of familiarity with rules and regulations of the Hansa Mehta Library. All the remaining four library use variables were included in a questionnaire which was given to the students; and data regarding these variables was collected from the answers of the students to the questionnaire. These six library use variables were combined into a total library use index score for each student.

6.5. Statistical Analysis

Multiple regression analysis has been used as the principal statistical technique in this study. Academic achievement as shown by the final examination marks has been considered as the dependent variable in the regression equation. The six library use variables along with the three control variables, namely, qualifying examination marks, intelligence and socio-economic status have been used as independent variables in the regression equation in the first phase of statistical analysis of the data. In the second phase, only the total library use index obtained by combining the six library use variables, has been used as an

along with the three control variables stated earlier.
independent variable ~~in the regression equation in the~~

~~first phase of statistical analysis of the data.~~ The hypothesis is tested at predetermined levels of significance for each of the six library use variables as well as the total library use index for all the three samples and the entire sample.

The F ratios for the multiple regression in each set of data has been tested at 1 per cent level of significance. The predictive power of the multiple regression equations has been expressed by the factor $100 R^2$ in this study, where R is the coefficient of multiple correlation. t values for the different library use variables were tested at the 5 per cent level of significance for all the sets of data.

6.6. Interpretation of Results

The statistical results have been interpreted for the three samples and the entire sample. All the F ratios were found to be significant at 1 per cent level of significance. This means that the independent variables were good predictors of the dependent variable. The predictive power of the different regression equations varies between 10.24 to

47.61 per cent. It is found that out of the six library use variables only three namely, books taken for home reading, familiarity with rules and regulations of the Hansa Mehta Library and books owned are having a significant effect on the academic achievement of B.Ed. students. The total library use index is showing a significant effect on the academic achievement of post-graduate students in the M.Sc. and B.Ed. samples. The hypothesis is rejected in all the above cases. For all other categories the t values for the library use variables are not found to be significant at 5 per cent level of significance; the hypothesis in such cases is accepted. In other words no significant effect of library use on academic achievement of students in these sets of data is demonstrated.

Before conclusions are drawn from the findings of this study, it must be stated clearly that a number of assumptions have been made in undertaking it. It would be worthwhile to discuss them briefly, before conclusions are drawn from the statistical findings.

6.7. Assumptions

It has been assumed that the samples were unbiased and were normal. It has already been stated how the

samples were selected. All the students in the respective populations were included in the samples at first. The reduction in the size of the original samples due to the non-availability of some students for collection of data, was beyond the control of the investigator. The samples were selected without any bias and it can be assumed that each of the three samples was normally distributed. This is observed from the distribution of the variables, such as socio-economic status, intelligence and past academic achievement.

It has also been assumed that the examination marks are a true measure of academic achievement. The defects of the examination system are too wellknown and hardly need any elaboration. But it has been pointed out that examination marks are used as a measure of academic achievement in this study because firstly, no other measure of academic achievement is readily available and secondly it has been shown how the reliability of examination marks has been increased by employing the system of internal examinations spread throughout the year, which are given weightages of 30 to 100 per cent in the three samples. Unfortunately this cannot be said for the use of qualifying examination marks used to

measure the past achievement of students in the samples. It must, however, be remembered that a large majority of students, who have graduated from the four universities in Gujarat State, have gone through a system of examination where 30 per cent weightage is given to internal assessment based on periodical tests and assignments given by the teachers who teach them. So the reliability of examination marks as a measure of past academic achievement was improved to some extent in case of these students. It has further been assumed that the examination marks as a measure of past academic achievement are at par and comparable for the students coming from different universities. It has been stated how it was impossible to control this factor by either selection of the students in the respective samples or by statistical processing of these scores. All interpretations and conclusions are subject to these assumptions.

Level of intelligence has been measured in this study by Raven's Progressive Matrices Test as indicated by the raw scores. Indian norms for this test for the age level tested are not available; but for the reasons stated earlier it is not of much relevance as far as this study is concerned. However, level of intelligence of the students in the sample is assumed to be a measure of their score on the

the Progressive Matrices Test, as indicated by the raw scores.

Socio-economic status of the students is measured by Kuppuswamy's Socio-economic Status Scale (Urban) in this study. It is a standardised test for the measurement of socio-economic status in India. However, it must be understood that socio-economic status has been measured within the limitations of this test.

A few words about the measurement of the library use of students, which has been primarily studied in this study. It has been assumed that use of library services by the students can be measured in quantitative or numerical terms, a contention which can be challenged by educators and librarians. But it has been stated that for operational considerations and statistical processing of data, library use must be considered as a variable which can be stated numerically or quantitatively. The six variables used for measuring library use are also open to discussion. The investigator has given his reasons for their inclusion in this study. Particularly the variables books owned and books received from other sources can be criticized as not forming part of library use. But these are included because it was felt that by their inclusion a more correct measure of the student's independent reading could be obtained. Similarly, the way these six library use measures are combined

to give the total library use index is open to discussion. There could have been other ways of doing this. It has been assumed that the use of available library services by the students has been quantitatively measured by these six library use variables and their combination into a total library use index. One last word about the availability of library services. It has been assumed that all the students in the samples have equal availability of library services. That this is not a fact is at once evident. The students live at different places in Baroda city, and this factor of varying distances between their homes and the Hansa Mehta Library results in different levels of availability of the library facilities. There is also the question of the time which they can devote to library use. Some of the students may be preoccupied in other activities including part time jobs. This is another factor which differentiates the students as far as availability of the library facilities is concerned. But it has been assumed for the purposes of this study that equal level of library services are available to all the students in the samples.

Finally it must be remembered that this study has been done on a particular population of students namely, the post-graduate students in the Faculties of Arts, Science and Education in the M.S. University of Baroda. It has already been stated in the last Chapter that interpretations of

the statistical findings have been done separately for the three groups from which the samples are drawn because of the differences in the composition of these groups. Therefore it must be understood that ~~any~~ conclusions drawn can be for the students of the post-graduate classes in the Faculties of Arts, Science and Education in the M.S. University of Baroda during the year 1968-69. These conclusions cannot be applied to other groups of similar students ^{who} may differ in ability and intelligence with the students in the samples or belong to institutions which have different curricular and instructional programmes. They cannot be applied to students who have a different system of library services available to them or have a different system of evaluation being followed in their institutions. It is, therefore not believed wise to make broad generalizations for all institutions on the basis of this study. For the specific population and situation dealt within this study, and within the limitations of the above stated assumptions, certain conclusions can be drawn. These are discussed below.

6.8. Conclusions

Before conclusions are drawn regarding the library use by students in the post-graduate classes in the M.S. University of Baroda, it would be better to discuss the contribution of the three control variables used in this study.

1. It is observed that socio-economic status is not having a significant effect on the academic achievement

of students in any of the groups from which the samples are drawn. It can, therefore, be concluded that differences in the socio-economic status of students participating in this study do not influence their academic success. It is a finding which is encouraging in a country where socio-economic differences are quite pronounced.

2. The qualifying examination marks (a measure of past academic achievement) are having t values which are significant for the M.A. and M.Sc. samples, but not for the B.Ed. sample. It means that the qualifying examination marks are good predictors of the final examination marks for the M.A. and M.Sc. students. This finding is in agreement with many studies on the prediction of academic success. But why don't the qualifying examination marks significantly influence the final examination marks of the B.Ed. students? One reason may be the very different nature of the B.Ed. course in comparison to the first degree courses like B.A., B.Sc., B.Com. etc. Many skills needed to be successful at the B.Ed. examination may not be required to qualify for a B.A. or B.Com. degree. Secondly the system of continuous internal examination used in the B.Ed. course in the M.S. University of Baroda is totally different from the system in which one single external examination prevails. May be, this is the reason why there

is no significant effect of past achievement (as measured by the qualifying examination marks) on the academic achievement of B.Ed. students in the M.S. University of Baroda.

3. Level of intelligence as measured by raw scores on Raven's Progressive Matrices Test has demonstrated a significant effect on the academic achievement of B.Ed. students, but not on the academic achievement of M.A. and M.Sc. students. It is rather surprising that intelligence does not show a significant influence on the academic achievement of M.A. and M.Sc. students. Intelligence has been found to be contributing significantly to the academic achievement at all levels of schooling including the higher education level. It has been clearly stated earlier that according to Mr. Raven, his test is not a test of intelligence as such but a test of observation and finding out relationship in the pattern which is presented in the problem. Further, only the raw scores on this test have been used as a measure of the level of intelligence in this study, because norms for Indians in the age groups tested are not available. May be because of these reasons, no significant effect of the level of intelligence (as measured by the raw scores on Raven's Progressive Matrices Test) is observed on the

academic achievement (as measured by the final examination marks) of students in the Sr.M.A. and M.Sc. Final classes in the M.S. University of Baroda.

4. What can be said about the use of the available library services by the post-graduate students taking part in this study ? It has been reported in Table 18 in Chapter IV that the mean values for books taken for home reading for M.A., M.Sc. and B.Ed. samples are 18.59, 11.78 and 6.38 respectively. In other words, the M.A., M.Sc. and B.Ed. students on an average borrowed about 18.59, 11.78 and 6.38 books per student per year. Professor White has quoted 7.6 books per student per year borrowed on an average from the University of Delhi Library during 1964-65.¹ Professor White's figure is for loans to all categories of students; undergraduates, post-graduates and research scholars. It is evident that B.Ed. students make the least use of the library, if library use is measured by withdrawals for home reading. The use of the library materials by the M.Sc. students is about double the use made by B.Ed. students. The M.A. group appears to read three times as much as the B.Ed. students. Approximately that ratio is also shown for the home reading of the M.A., M.Sc. and B.Ed. students with the average figure of the per student per year

borrowals by students in Delhi University Library. It must, however, be remembered that the Delhi University figure includes the use of the library by undergraduate students and that the students in Delhi University make use of their respective college libraries in addition to the University Library. Thus, it is difficult to conclude that the use of the library materials by the post-graduate students in the Faculties of Arts, Science and Education in the M.S. University of Baroda is at a much higher level than the Delhi University post-graduate students.

The number of books taken for home reading on an average by students in this study compares very poorly with the figures quoted by Dr. Branscomb for the use of libraries by undergraduate students in America. Dr. Branscomb has reported that an average undergraduate student draws from the general collection of his college or university library about 12 books per year, and about 50 to 60 withdrawals per year from the reserve book collection.² Thus the average undergraduate in America withdraws about 62 to 72 books per year from his college libraries. How poorly the average borrowal of about 18, 12 and 6 titles per year by the M.A., M.Sc. and B.Ed. students in the M.S. University of Baroda compares with the above


figures, which it must be noted are for undergraduate students. Even the figures given by Dr. Patricia Knapp for the undergraduate students' use of the library at Knox college are much higher than the average withdrawals by students in the present study. Dr. Knapp has reported a per capita borrowal per year of 12 books from the general collection and 17 books from the books on the reserved lists, that is a total of 29 withdrawals per student per year.³

The M.A. and M.Sc. students have to study about six to eight papers in addition to writing a dissertation or an essay in some of the subjects. The B.Ed. students had to study in 1968-69 about fifteen theory courses. It can be concluded that the average M.A. and M.Sc. student required no more than three and two books per year for each paper studied respectively. The B.Ed. student needed less than half a book to be read per year for each course he studied. That the reading of students in these groups is appallingly low needs no further elaboration.

5. In addition to the books borrowed for home reading the M.A., M.Sc. and B.Ed. students have reported reading 2.5, 2.3 and 1.5 books and journals per week in the library. They respectively spend on an average 5.3, 4.3

and 1.4 hours per week in reading in the library. Both these figures are collected from their answers to the questionnaire and so the reliability of these figures cannot be as high as for books taken for home reading which has been objectively recorded. Professor White has reported that the typical Delhi University student visits the library three times a week spending about one hour in the library for each visit.⁴ Thus he spends a total of three hours in the library. The figures for stay in the library of the M.S. University post-graduate students compare favourably with the average for the Delhi University students, except for the B.Ed. group. Again it must be remembered that the Delhi University average is worked out for all the students, not specifically for the post-graduates.

6. A test of familiarity with the rules and regulations of the Hansa Mehta library was given to each student in the sample. The maximum possible score on this test was 25. The means of scores obtained by M.A., M.Sc. and B.Ed. students are found to be 10.9, 11.3 and 8.2 respectively. It seems that the students in the samples are unfamiliar with about 55 to 67 per cent of the rules and regulations of the library. The B.Ed. group is again showing the lowest figure. It is alarming to note such a high level of



ignorance of library procedures by a majority of students who have used the library for a long time, some of them for a number of years.

7. The combined library use index is a total of the six library use variables including books owned and books received from sources other than the Hansa Mehta Library. The mean library use index figures are 30.64, 28.66 and 18.21 for the M.A., M.Sc. and B.Ed. groups respectively. It is seen that the trend of highest use of the library by M.A. students, followed by the M.Sc. students and the B.Ed. group being the lowest is maintained in this case too. That the M.A. students should read more books and generally use the library facilities to a greater extent than the M.Sc. students is expected, and this has been supported by the findings of this study. What should be the quantum of library use by the B.Ed. students ? Comparisons are difficult to make because of differences in the instructional programmes of B.Ed. course and the M.A. or M.Sc. course. However, there is no denying the fact that a reading of less than half a book per course per year is hardly sufficient - or even tolerable - use of the library materials.

8. It may be generally stated that the use of library services by the post-graduate students of the Faculties of

Arts, Science and Education in the M.S. University of Baroda is far from satisfactory. It compares very poorly with the use of library materials by students abroad and appears to be insufficient in terms of the course requirements. It can be said that amongst the three groups the highest use of library is made by M.A. students and the lowest by the B.Ed. students, with M.Sc. group being placed in between the two.

9. What conclusions can be drawn regarding the effect of library use on the academic achievement of post-graduate students in the Faculties of Arts, Science and Education in the M.S. University of Baroda ? It appears that library use does contribute to academic achievement of some of the students who participated in the present study. This is shown by the significant effect of the total library use index on the academic achievement of students in the M.Sc. and B.Ed. samples. Three of the library use variables are also contributing significantly to the academic achievement of the B.Ed. students.

It has been reported earlier that the M.A. students appear to be making the highest use of library materials. The library use figures for the M.Sc. sample are lower than those for the M.A. sample. The B.Ed. students make the least use of library materials. It has to be concluded

that though the M.Sc. and B.Ed. students make lesser use of the library, it contributes to their academic achievement significantly. The M.A. students read more but apparently it has no effect on their examination marks which is the measure of their academic success.

10. What is the extent of the contribution of library use on academic achievement ? The partial regression coefficients for the independent variable, total library use index for the M.Sc. and B.Ed. samples are .1468 and .23883. The partial regression coefficients for the library use variables; books taken for home reading, test of familiarity with the rules of the Hansa Mehta Library and books owned for the B.Ed. sample are .2972, .34495 and .72021. All these three library use variables are found to be contributing to the academic achievement of B.Ed. students (The respective t values being significant at 5 per cent level of significance). The partial regression coefficient shows the average change in the dependent variable for a unit change in one independent variable, the other independent variables remaining unchanged or held constant. It can be said that according to this interpretation the rate of change in the academic achievement due to the influence of total library use index is higher in the M.Sc. sample

than in the B.Ed. sample. Similarly the highest rate of change in academic achievement of B.Ed. students is due to the influence of books owned which is one of the three library use variables, which significantly contribute to their academic success. The next lower rate of change is due to the test of library familiarity and the lowest due to books taken for home reading.

11. It is evident that out of the six library use variables studied, the two which are objectively measured namely, books taken for home reading and the test of familiarity with the Hansa Mehta Library rules and regulations are showing significant effect on the academic achievement of B.Ed. students. Of the remaining four library use variables only one namely, books owned is having a significant effect on academic achievement of students in the B.Ed. sample. The rest three are showing no significant effect on academic achievement of students in any sample. Thus it may be said that books borrowed for home reading and a test of familiarity with rules and regulations of the library are more efficient measures of library use. The books owned by students also contribute to the academic achievement of students in the B.Ed. sample. It is obvious that in the total measure of library use a higher weightage should be given to books

taken for home reading and some measure of familiarity with library rules. This is what has been done in the present study. Books taken for home reading are assigned a weightage of fifty percent and the test of familiarity with the Hansa Mehta Library rules twentyfive per cent. The need to control the variation in books owned is also clear from the significant effect of this variable on academic achievement of B.Ed. students. Either this factor be controlled or used as one of the library use measures as has been done in the present study.

12. It may be noted that the effect of library use on academic achievement is most pronounced in case of the B.Ed. sample. It may be said that the semester system of curricular organization and complete internal assessment based on periodical tests and assignments, encourage the B.Ed. students to use the library services purposefully. This is why, though the quantum of their library use is the lowest in the three samples, it has a significant contribution towards their academic achievement. The same thing can be said regarding the M.Sc. students. Their library use is lesser than those of the M.A. students, but it is related meaningfully to their academic success.

13. The findings of the present study regarding the effect of library use on academic achievement of students (as measured by their examination marks) are not in agreement with the findings reported in other studies. Dr.Branscomb⁵ and Dr.Knapp⁶ have not found any significant contribution of library use on the grade-point averages of students. It must be remembered that Dr.Branscomb and Dr.Knapp have reported studies on undergraduate students whereas the subjects in the present study were all post-graduate students. Secondly - and this is important - both Dr.Branscomb and Dr.Knapp have reported only correlation coefficient (total correlation) between library use and scholastic achievement. No attempts were made to control the variation in ability, intelligence etc. of the students in the samples. Both have studied the library use of high and low achievers and their mean differences tested for significance.

In the present study the variations due to intelligence, past achievement and socio-economic status have been controlled through the use of multiple regression analysis. It is possible to measure the effect of one independent variable on a dependent variable while keeping the effects of other independent variables

constant by this procedure. Needless to state that the use of this technique in estimating the influence of library use on academic achievement is expected to yield more precise results. All that can be said is the fact that in two of the three groups of post-graduate students in this study, library use has a significant effect on academic achievement as measured by their examination marks.

14. To sum up, it may be concluded that this study, which is of an exploratory nature, has definitely given an indication of the important role which a library can play in the instructional programme of the post-graduate level in the M.S. University of Baroda. A clear trend of the significant effect of library use on achievement of post-graduate students is established in two of the three groups studied. It is possible that this trend is manifested in similar studies on other categories of post-graduate students, though this cannot be definitely said on the basis of the findings of this study.

15. A few words about the findings for the non-qualitative data collected in this study. The two categories of information collected relate to the sources from which the students get books for reading and the

type of difficulties which are encountered by them in getting books and other services from the Hansa Mehta Library. The responses of the students to the queries regarding the above matters, have been reported in tabular form in Chapter IV (Table 25). If the sources from which books are obtained by the students are ranked according to the frequencies of their choice, the ranks for the M.A. and M.Sc. samples are as follows :

<u>Rank</u>	<u>Category</u>	<u>No. of Choices</u>	
		<u>M.A.</u>	<u>M.Sc.</u>
1	Friends	51	87
2	Teachers	36	75
3	Departmental libraries	28	55
4	Other libraries	23	25
5	Any other source	5	10

The picture is slightly different for the B.Ed. sample. The ranks according to the frequency of the choice of B.Ed. students are as follows :

<u>Rank</u>	<u>Category</u>	<u>No. of Choices</u>
		<u>B.Ed.</u>
1	Friends	116
2	Teachers	68
3	Other libraries	44
4	Departmental libraries	35
5	Any other source	33

It is clearly seen that the students depend upon their friends and teachers to a great extent for the

books required by them and upon the Departmental and other libraries to a lesser extent. The B.Ed. students appear to be borrowing books from their school libraries which they have included under the category, other libraries. Among any other source, the few opinions given usually indicate purchasing books from the market. On the whole, it is heartening to note that there is good co-operation among students in the exchange of books. Good teacher-student relationship is evident from the large number of students who opine that they get books from their teachers.

A large number of students do not appear to have any difficulty in getting books from the library. The number of students in the M.A., M.Sc. and B.Ed. samples reporting no difficulty in getting books from the library are 22, 46 and 105 respectively. In other words 39.2 per cent M.A. students, 44.2 per cent M.Sc. students and 74.4 per cent B.Ed. students encounter no difficulty in getting books from the library. The investigator has a feeling that most of the students who have reported ^{no} difficulty in getting books from the library are poor users of the library facilities. This was experienced while scoring the questionnaires.

The types of difficulties in getting books listed by the students can be classified into a few categories. The frequencies of difficulties encountered by them have been

reported in Table 25 of Chapter IV. The largest number have reported non-availability of required books in each of the three samples. (Respective frequencies 16 for M.A. sample, 40 for M.Sc. sample and 35 for B.Ed. sample). The other difficulties stated are; misplaced books not available in their proper place, keeping books for a long time by students and specially by teachers and misuse of books such as tearing pages or whole chapters by readers, in that order of importance according to the frequency of responses. Hardly one or two students have reported other difficulties namely, difficulty in searching books and not being properly attended to in the stacks by the library staff. By and large the students appear to be satisfied with the courteous behaviour of the library staff.

It seems that those who are regular users of the library do have difficulty in getting the books they need and locating them in their proper place. It is alleged by some of them that students wilfully misplace books in the stacks so that they may not be available to others. This is rather unfortunate, but in a library which follows the open access system it is difficult to control this type of misbehaviour by readers. It is also unfortunate that even a few students carry the impression that books are kept too long by teachers (some have used expressions like:

' Books are cornered by teachers'). So this is the picture regarding the working of the Hansa Mehta Library seen through the eyes of students participating in this study.

6.9. Implications and Suggestions

What implications, educational or otherwise, can be drawn from the findings of this study ? It has already been stated that the findings can be applied to only those students who belong to the populations from which the samples are drawn, and keeping in view all the assumptions and limitations discussed in the beginning of this Chapter. It is not wise to make broad generalizations regarding all institutions. The following implications of the findings of the present study are suggested for the consideration of appropriate agencies and a few suggestions given.

1. The library services available to post-graduate students in the M.S. University of Baroda have shown their educational value. It should be attempted that these library facilities are used to the fullest by the post-graduate students in the University. All necessary steps to encourage the optimum use of library facilities should be taken by the concerned authorities.

2. Use of available library services by the students, particularly post-graduate students, should be systematized. It appears that no guidance or very poor guidance is available

to the students to select the proper reading material from the library stock. Most of them appear to be after a few titles which naturally are not available to all of them. Teachers should give the students detailed guidance in the selection of books and as far as possible there should be a large number of recommended titles from which they can select the books of their choice.

3. It would be worthwhile to enrich the Departmental libraries, not only because they are reported as an important source of getting the required books by the students, but also because it would be possible for the teachers concerned to guide their students in the proper use of books and journals through these libraries in comparison to the centralized University Library. This suggestion is in agreement with the recommendation of the University Grants Commission in 1962 stating that 'the formation of departmental libraries... was considered by the U.G.C. to be desirable.'⁷ But Professor White has opined against this practice of decentralization of library services^{and} pointed out the trend towards centralization of library resources in the university libraries of some developed countries.⁸ The investigator has given this suggestion with the hope that such a measure will lead to a higher use of library services by the post-graduate students in the M.S. University of Baroda.

4. It is suggested that there should be a closer contact between the teachers and the Hansa Mehta Library staff. In many developed countries, the University librarian is actively associated with the organisation of the curricula for different courses and regular teaching in some of them. The educational function of the University Librarian is becoming more and more important in those countries. Something on these lines needs to be done in the M.S. University. To begin with the University Librarian should be actively associated with the academic work in the different Faculties and in turn the respective teachers should be given a more active part to play in the working of the library. Many things are being done at present. Teachers from the various faculties are free to suggest books to be ordered, journals to be subscribed and the books to be kept in the Departmental Libraries. What is needed is to systematize this relationship between the teaching and professional library staff in the University.

5. There is a definite need to train the students in the proper use of library facilities. It has been shown by this study that a majority of the post-graduate students are not trained in the proper way of using the different library facilities. Systematic training in the use of the library facilities should be given to the students in small groups,

preferably in their own institutions. The library staff should arrange orientation programmes in the different institutions. The possibility of involving the library science students in conducting such orientation programmes may also be examined.

6. The investigator is tempted to suggest to the students to use the library materials with the proper care they merit. It is in their own interests to keep the books and other library materials in their proper place, use them with care and generally follow the library rules and regulations.

7. The courses of study should be so revised in the concerned Faculties that more importance will be given to independent study by the students. Use of seminars, assignments, small group discussions, writing term papers and similar activities be encouraged. It would be a good beginning to leave a few topics for the students to study independently. So also, the practice of writing a short research or scholarly report, already in vogue in certain departments or allowed to some students only, be made compulsory for all the post-graduate students.

8. Definite efforts should be made to encourage students to use other libraries and community resources in the City

of Baroda and out side. There should be more meaningful use of the various Departmental and Institutional Libraries in the University by all the post-graduate students.

9. It may be worthwhile to examine the possibility of separating the library facilities for the post-graduate students from those for the undergraduate students. It is a welcome news that a separate block of the University Library is going to be constructed shortly for the undergraduate students. This measure it is hoped, will relieve the the pressure on the strained services of the Hansa Mehta Library to some extent.

10. The teachers should make a concerted effort to develop the proper study habits among the students. They should set an example before the students on the proper utilization of the library resources, which includes returning books in time as well.

11. The University administration should see that the high standard of library services is maintained and, if possible, improved by augmenting the staff in proportion to the expansion of the library materials and readership from time to time.

6.10. Suggestions for Further Research

It has been stated earlier that this study was of an exploratory nature. Research on the educational contributions of the library should continue in many directions. The following areas are suggested for further research in this field.

1. Studies such as the present one, on the effect of library use on academic achievement may be taken up for different groups of students at the various levels of the educational ladder. It would be worthwhile to conduct such studies on larger and more representative samples. If larger populations are available for study, samples can be drawn from them taking all the necessary care to make them truly representative.
2. Library use patterns of different categories of readers can be studied and their effect on academic achievement measured and compared. The criteria of categorisation may be sex, rural-urban setting, socio-economic status levels and so on.
3. Studies should be taken up to examine the concept of library use and its measurement in operational and quantitative terms. Quite a lot needs to be done in this direction. Many

more aspects of the use of library services can be investigated as measures of library use. The following are suggested as measures of library use to be studied further :

- i The time for which books are kept for home reading by the students.
- ii Whether books recommended for study are read by the students or not ? If so, how many such books are read over a fixed period of time ?
- iii The level of the seriousness of purpose while reading books and journals, which may be self evaluated or evaluated by teachers.
- iv Motivation for use of library materials and services.
- v Exact measurement of the use of curricular section and reference section of the library by students.
- vi Level of achievement in topics left entirely to independent study through the use of library services.
- vii A test of familiarity not only with library rules and regulations but with the active working of the library. Such a test can be standardized for a given population with all the necessary care which is taken in standardizing any tool of measurement.
- viii More exact measures of the time spent on the library premises and its utilization.
- ix Exact measurement of relevant books owned and received from other sources such as teachers and Departmental libraries.

- x If possible, the opinion of the library staff on the use of library services by the individuals using the library.
 - xi Various possibilities of combining the different library use variables into a combined index of library use may be examined, with the use of appropriate statistical techniques if necessary. More objective and efficient measures of the library use need to be selected and combined into the total library use index.
4. Studies on use and efficacy of use of libraries by teachers can also be taken up. Efficacy of the use of library services may be tested with measures of professional growth such as publications, research projects, participation in seminars and conferences or it may be self evaluated or evaluated by colleagues or superiors.
5. Similar studies on the use of library services in other libraries such as Public Libraries, Research Libraries and other specialized libraries can be taken up. Use and efficacy of use studies may be taken up for business executives, administrators or professional research workers, with regard to their special libraries.
6. It would be interesting to study the library use patterns in different institutions which have varied instructional programmes and use differing teaching

techniques and evaluation procedures. It may be possible to discover the relationship between library use and the factors stated above through such studies.

7. It may be possible to devise studies which enquire into the relationship of library use and personality characteristics of the library users. The same may be said regarding the personality characteristics of others who influence the reading of students, such as teachers and librarians. In other words the interaction of the different components of the library organization can be studied with reference to its effect on library use patterns.

8. Studies on the combined effect of availability and use of library services on academic achievement may be devised. Alternately, the variation in availability of library service should be controlled by appropriate statistical or other techniques in such studies.

9. Surveys of availability of library services and their use for various categories of readers can be undertaken. Local, regional and national norms on availability and use of library services may be developed in this manner.

10. Studies on the effects of the use of library services and materials in adult education and extension work may be undertaken. Efficacy of the use of special categories of

books, such as books for the neo-literates, books in regional languages or books published by nationalised agencies may be enquired into.

11. Relationship between the physical facilities in a library and library use patterns may be taken up. It may be studied whether factors such as the library building, furniture, lighting and ventilation, arrangement of stacks etc. have any effect on library use, and if so, how much.

12. Studies to evaluate the effectiveness of a library through different techniques may be initiated. Merely expressing the effectiveness of libraries in terms of circulation statistics is not enough. Attempts to devise appropriate techniques and evolve indices of library effectiveness with regard to the varied services offered should be made.

13. The role of libraries in the evaluation of educational institutions may be taken up. Suitable norms for grading the level of excellence of the educational institutions in terms of library materials and services may be worked out.

14. Experimental projects, like the one in Stephens College in U.S.A. may be taken up in selected institutions or University Departments. It may be possible to investigate the integral relationship between instructional programmes

and library use by students more precisely through such projects.

15. The working of the libraries and their organizational set-ups may be studied through Operations Research and similar techniques on the lines of the studies done in M.I.T. libraries.

To sum up, it should be remembered that further research and development of finer and more adequate measures of the availability and use of library materials and services are needed before the educational functions of the library can be correctly measured. It is a fact that the effectiveness of libraries can - and should be - measured in terms of their use by those for whom they are meant. Further research studies must necessarily continue to explore ways of solving the ever-growing problems of furnishing the needed library service to the fast growing population of readers, including students at all educational levels.

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