Chapter III

REVIEW OF RELATED STUDIES
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While reviewing the related studies, the present study had dealt with the definition of dropout, stagnation, stayins, primary stage, middle stage, secondary stage, higher secondary stage and college education. The study had also dealt with the inspecting officers and staffs, criterian variables, judges, local educationalists and cohort. Review also were made on methods of measuring the phenomena, method of identifying the relative importance of causes, incidence of wastage and stagnation, the various studies made on wastage and stagnation and its causes.

Definition

Dropout

According to dictionary\textsuperscript{73} "Dropout" meant: (a) one who dropped out before achieving his or her goal as from school or a programme of training, (b) to terminate education before completing high school, (c) person who left school or college before completing his or her education and (d) persons who opted out of personal or social commitment\textsuperscript{74}. It meant pre-mature withdrawal of students from

\textsuperscript{73} Websters' Third New International Dictionary and Seven Language Dictionary, p.694.

their respective educational course before the end of final year of the educational stage in which he or she was enrolled. 75

In other words, dropout meant those students who were enrolled in the first year or class A of primary course but could not or did not pursue their educational career 76 for some reason or other. The dropout student by dropping out from their career had wasted not only time and money but it had affected national economy and programmes.

In this connection the Hartog Committee had defined wastage as pre-mature withdrawal of children from school at any stage before completion of the primary course 77. This definition was accepted operationally in almost all studies although certain controversies were raised. R.C. Sarma and C.L. Sapra of the National Council of Educational Research and Training in its series of research studies

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75 Brimer M.A. and Pauli L: Wastage in Education - A World Problem, Studies and Surveys in Comparative Education, ICSSR, New Delhi, p.15

76 Report of the Education Commission, 1964, Ministry of Education, Govt. of India, New Delhi, pp.44-45

had started "the main point at issue was whether or not all pupils who drops lout before passing the last grade of its stage of education be included in this definition of wastage."

Veda Prakasha and others had tried to bring the relation of illiteracy with wastage. He argued that if a child had left schooling before reaching class IV or V he would be counted as waste. He further claimed for fixing the particular class from which literacy could be counted and determined. In this connection R.V. Parulekar and D.R. Gadgilhad studied the problem in two different aras - one at Baroda and the other at Poona. Thus it was found out that classes II and IV respectively were the determining class for literacy in human life.

Thus under this investigation dropout meant those students who left school without completing the prescribed course of study at any stage and at any time without course completion certificate. By dropout it would not simply confine to the period of primary or secondary or college

78 Sharma R.C. and Sapra C.L. : Wastage and stagnation in Primary and Middle School in India, NCERT, New Delhi, p.11

79 Veda Prakasha : Stagnation and Wastage: The Indian Year Book of Education, Second Year Book - Elementary Education, 1964, NCERT, New Delhi, p.133
only. It could be dropout of any prescribed course of study. Hence any student withdrawn without completing the prescribed course was dropout.

Moreover, if wastage and illiteracy were taken together as the one and the same or related to each other, for any course of study it indirectly meant wastage of public money only and not educational knowledge. Thus while a child dropped out at class VII he had not only wasted public money but also curtailed himself from getting educational knowledge either by the family or society or by himself. Moreover, it would be difficult to categorize a child who passed class A or B or just after admission to class B as literate. Because, a child could dropout at any time irrespectively of literacy. The study however, was not going to reveal its relation in detail.

Stagnation

Stagnation was different from wastage. It was defined by the Hartog Committee as retention of a child in a class for a period of more than one academic year. In other

words, stagnated students were those who repeated in one class or the other due to some reasons. It happened mostly with the students who failed repeatedly in the examination. Thus they took a longer time to complete the course than the prescribed minimum period. In general a student was normally expected to complete a prescribed course in one academic year. If the child had completed the course, by spending one, two or more extra years than the prescribed norm the extra year or years spent by him had represented a period of stagnation. In simple language, it meant repeated failure in a class in the examination which had automatically led a child to drop out of the class. Thus stagnation was related to dropout. The Satara Study had pointed out for the first time that stagnation was a greater evil than wastage.

Stayins

A student who passed the various examinations starting from class A and found continuing in the class

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8/ Kamat A.R. and Deshmush A.G. Gokhale Institute of Politics and Economics : Wastage in College Education - Two studies about students of the University of Poona, p.43
9/ Bhanot, I.V.Maharaja Sayajirao University, Baroda : A Report on an Enquiry into the occurrences of 'Wastage' and 'Stagnation' amongst the University students, pp.2-3.
was called stayins. In other words, pupils, who were continuing in schools without any break could be called as stayins.

**Primary, Middle, Secondary, Higher Secondary stages & College Education**

The present study had dealt with primary stage consisting of classes A, B, I, II, III and IV, middle stage covering classes V, VI and VII, secondary stage consisting of classes VIII, IX and X, higher secondary stage consisting of classes XI and XII, and college education consisting of Pre-University and degree classes. The junior basic was included in the primary stage and the senior basic was included in the middle stage having the same class pattern. The Pre-University and higher secondary classes were included under the plus two system. This structure was based on the All India nomenclature for educational structure. College education meant for classes from Pre-University first year to degree second year as it was prevalent during the period under study.

**Inspecting Officers and Staff**

Government officials responsible for inspection and supervision for primary, middle, secondary, higher secondary and college education meant Director of Public
Instruction, Director of Secondary Education, Additional Director, Joint Director, Deputy Director, Assistant Director, Inspectors of Schools, Deputy Inspectors, Senior Sub-Inspectors, Sub-Inspectors, Block Education Officers and Assistant Inspectors. The Director of Education who was the Director of Public Instruction of Assam was the Departmental Head of the office. At the Secretariat level the Secretary of Education was assisted by the Joint Secretary, Deputy Secretary and under-secretary. At the cabinet level the Minister of Education was assisted by the State-Minister of Education.

In Sipajhar Development Block the Sub-Inspectors looked into the Primary schools, the Deputy Inspector looked into the Middle schools, and the Inspector and the Assistant Inspector looked into the High and Higher Secondary schools while the Inspector of colleges looked into the college. The Inspector of colleges were appointed from among the Principals of aided colleges. Table No. 3.21 had shown the District Level structure of Darrang District.

Wastagnation

The term wastagnation was used by D.V. Chickermane⁷³ to mean 'Wastage due to circumstances (WC)' as wastage and

TABLE NO. 3.1

DISTRICT LEVEL STRUCTURE OF
DARRANG DISTRICT

MANGALDAI SUB-DIVISION

UDALGURI SUB-DIVISION

KALAIGAON DEVELOPMENT BLOCK
KHÄIRABARI DEVELOPMENT BLOCK
SIPAJHAR DEVELOPMENT BLOCK

BARDALUGURI GAON PANCHAYAT
BONMAJHA GAON PANCHAYAT
KURUA GAON PANCHAYAT
PATHARIGHAT GAON PANCHAYAT
SIPAJHAR GAON PANCHAYAT
wastage due to stagnation (WS) to mean as stagnation. This term was used to mean wastage plus stagnation. The term wastage or 'educational wastage' was used to mean wastage and stagnation combined. In order to avoid possible confusion as to the meaning of wastage and stagnation separately as well as in combination the term wastagnation was used.

Criterion Variables

The present study used the term criterion variables to mean, as a general term, any of the factors creating diminutions, that is, transfer rate, wastage rates, stagnation rates or dropout rates. Pass percentages, sometimes were also included for the purpose of convenience.

Judges

The term 'judges' in the present study was used to mean the respondents of the different categories like Head teachers including Head Pandis, Head Masters, Head mistresses and Principals, Inspecting officers, and local Educationists. These judges rated the causes of dropout in the opinionnaire of the five point scale of the 75 causes of dropout as to their importance.
Clear Wastagnation

The extent of wastagnation was obtained by substrac-
ting the number of students enrolled in class X from class
A. In Higher Secondary stage, the enrolment of class XII
was substracted from the enrolment of class XI. In college
stage, same process was followed. In short, at the end of
every educational stage the enrolment at the end stage was
substracted from the enrolment of the first stage.

Cohort

The batch of student enrolled for the first time
in class A in 1968 was a Cohort. In the present study 6824
enrolled students of class A was the Cohort for Sipaaajhar.
The career had been followed from 1968 to 1983 from class
A to college education. For Assam 660413 fresh entrance
enrolled in Class A was the Cohort.

Methods of Measuring the Phenomena

In India, five methods had been conducted for measu-
ring the phenomena. Those methods were (i) Sharp's
method, (ii) Equal Enrolment method, (iii) Hartog
Committee, (iv) True Cohort method used in the Satara
study, Poona study and 24 Paragna study and (v) Chickermane
method. Each of these methods were dealt here separately.
Sharp's method

This method was found out by H. Sharp in his 'Progress of Education in India'. He assumed the number of children in grades I to V of 1911-12 as equivalent to those of 1901-02. Availability of data was the main reason for his assumption. So, data for 1901-02 was not available to him. Then he compared the number of children in age group, 5-10 of 1901-02 with that of 1911-12. Taking its difference the extent of wastage was estimated roughly.

Sharp compared census data with the enrolments in grades I-V for estimating 'lapse into illiteracy'. Actual estimation was for wastage. The difference between the terms 'lapse into illiteracy' and 'wastage' was totally ignored. Again,, he assumed for the number of children of the age group 5-10 in schools as the same as the number of pupils in the grades I-V. This assumption was discredited on the ground that about 275 percent of children who were enrolled in grades I-V was found higher in age than the normal age group of 5-10 years. His method did not make any allowance for the deaths which might have occurred during these years. Moreover, it could be used once in ten years since census data was collected every after

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84 Estimated on the basis of figures on enrolment by ages and by grades obtained from the Statistical Unit of the Ministry of Education, Govt. of India, Shastri Bhavan, New Delhi.
ten years. Because of these short comings Sharp's method would not be employed in measuring the problem.

Equal Enrolment method

The simplest and most rough method for measuring the problem was Equal Enrolment Method. In this method, the enrolment in classes I-VIII were equally distributed and the total enrolment in all classes were compared with that of class I. All diminusions from one class to another represented wastage.

This method was based on assumption. It was useless for any scientific purpose. The enrolment of class II or III of the given year was not the result of class I or II of the same year. Its main factor was calculation of the problem without any given year. For instance, in 1970 in Assam there were 1238568 students in class I, in 1971 there were 202604 students in class II. It showed that class I of 1970 had become class II in 1971. The same argument could be applied to other cases also. However, this method could be used for comparison of the relative position of different areas with regard to educational wastage.
Hartog Committee Method

The Hartog Committee Method compared the number of pupils in class A with those in class V. The difference between the substraction of class A and V was considered as wastage.

In other words, the Hartog Committee method might be treated as same as the equal enrolment method. It could be used mainly for its easiness and greater accuracy. But the result obtained by this method did not classify wastage and stagnation clearly. Further, it did not make any allowance for special circumstances like a period of rapid expansion. The method pointed out a period of rapid expansion naturally had resulted in an abnormal enlargement of class I and as a consequence a temporary disproportion between the number in class I and those in higher classes.\(^{85}\)

For instance, in Assam in 1972 the enrolment in class V was flushed due to formal abolition of classes IV the enrolment being increased from 152487 of class IV in 1971 to 303358 in class V in 1972.\(^{86}\) Hence, the question of rapid expansion was totally avoided. The method did also not make any allowance for deaths and double or early promotions. Moreover, no consideration was made for anew admission to grades II - V.

\(^{85}\) Source: Statistical Branch, Directorate of Secondary Education, Assam, Guwahati - 5.

\(^{86}\) Ibid.
Chickermane Method

According to Chickermane a pupil who left school after passing grade III constituted much less wastage as compared to the one who left in grade I. His method was based on the concept of incremental gains in learning outcome. This concept implied that the earlier a child leaves in terms of both Grades and Month, the more will be the wastage due to him while moving from the first grade to the last grade of any stage of education.

Chickermane assumed that there were ten working months in an academic year. The child was entitled to a score of 1, 2, 3, and 4 in Grades I, II, III and IV respectively for each completed month of the academic year. Each of these grades, that is I, II, III and IV were given weights of 10, 20, 30 and 40 respectively. Thus a child had a score of 10 in terms of using the school. Thus out of 100 weights for the grades I to IV the child had wasted 90 scores. Similarly, when a child completed Grade I but left after two months in Grade II had a score of 14 in terms of using the school. Thus he had wasted 86 scores our of 100 scores.
The Poona study of the Research Unit of the Directorate of Education, Bombay in 1960 and the 24 Parganas Study of P. Choudhury of 1965 had also advocated for giving weights of 1, 2, 3 and 4 respectively to Grades pupils for completion of Grades I, II, III and IV. According to these two Studies half the credit could be given to the student who appeared the final examination but failed in the grades of I to IV. For, the pupil did derive some educational benefit even if he failed in the examination. No weightage, according to him, was to be given to the student who absent himself or herself from appearing the examination.

Chickerman interpreted 'lapse into illiteracy' as such that those pupils who dropped out either in grade IV or V was not significantly different from those who dropped at grade I or II. Accordingly, his method was discredited because of the intervention of the phenomenon. Moreover, the method remained silent about the time, money and energy wasted by the pupil when studied upto grade III or IV. In other words, the money, time and energy spent by the student upto class IV or V was much more than the money, time and energy spent by the student who studied upto grade I.
True Cohort Method

The best scientific and latest method for calculation of educational wastage was the True Cohort Method. According to this method the career of a group of fresh entrants were to be followed and pursue them till the completion of the last stage of the course of study under enquiry. Thus, the number of children who left before completing the course of study was thus determined. Its percentage of wastage was calculated from the proportion of the dropped outs to the initial cohort.

Thus True Cohort Method enabled to ascertain wastage and stagnation separately while following their career of the Course of Study. Basing on this method the rate of wastage and stagnation could also be calculated separately. This method was also employed by the Satara Study of D.R. Gadgil and V.N. Dandekar of 1955, the 24 Parganas Study of P. Choudhury of 1965 and the Poona Study of the Research Unit of the Directorate of Education, Bombay of 1960 used this method for measuring the problem. However, the True Cohort Method had dealt with the past periods.

The True Scientific Cohort Method was applied with certain modifications to the True Cohort Method in the
present study. The career of 6824 fresh entrance of Sipajhar Development Block were followed for a period of sixteen years starting from class A upto graduation. Reference for the problem for entire State was made in order to enable the investigator to make a comparative study of the problem. It would help in bringing out a comprehensive study of the problem.

Stagnation

In finding out the number of stagnated students during the period under study the investigator had employed the True Cohort Method. The stagnation Index Formula was also employed wherever required. The true Cohort Method gave a detailed picture of the detailed cases while the Stagnation Index Formula gave an arithmatic index only. Thus, Stagnation was measured by counting the number of failures during different years from the same Cohort of pupils. The formula for computing the Stagnation Index was:

\[ S.I. = 100 \left( 1 - \frac{\text{Total Optimum Years}}{\text{Actually Used Years}} \right) \]

Here, in the present formula, S.I. meant Stagnation Index and Total Optimum Years meant the number of years which would actually be required for completing the course without fail. Actually Used Years meant the total number
of years actually taken by the pupils in the Cohort to complete the course of study. Thus, Stagnation Index was an useful tool for indicating the number of detained cases out of the same Cohort in each class and to express them as percentage of the initial Cohort was easily understandable procedure. Although Stagnation Index Formula had helped in measuring the phenomena its interpretation was not quite obvious.

Method of Identifying the Causes

In identifying the causes of dropout two methods were employed till now. Those two methods were the Direct Method and the Indirect Method. Under the Direct Method direct contact was made with the dropouts' parents and guardians, stayins and stayins' parents and guardians. This method had ascertained the causes which led to premature withdrawal and repeated failure. The NEI - HEW Project 005 had used these methods.

In ascertaining the indirect causes of dropout the Indirect Method was employed. The indirect causes were ascertained from the teachers, headmasters or the head mistresses, school pandits, Principals, the inspecting staff like the assistant inspectors, deputy inspectors, inspectors of schools and inspector of colleges.
The student leaders, dropout friends and neighbours were also included in ascertaining the causes of dropout indirectly. The Satara Study, the Punjab Study, the 24 Parganas Study, the Gargoti Study, and the Madras Study had employed this method. The Satara Study and the Punjab Study had dealt either with the teachers alone or other agencies such as local community leaders and inspecting officers. The 24 Parganas study, the Gargoti Study, and the Madras Study had applied the later part of agencies.

In the Direct Method there might be a chance of revealing the real cause of dropout. The real cause might be coloured by the perception of the respondent. People of the rural area could hardly be expected to distinguish apparent causes and inherent causes of dropout. For instance, when a child was unwilling to attend the school because of some reason or the other the parents simply considered it was unwillingness of the child to attend the school. Thus, inherent cause for unwillingness to attend the school was not at all found out by the parents.

In the Indirect Method there was less elements of biasness as there was less chance of colouring the causes by their own perceptions.
Hence, the Indirect Method was better than the Direct Method. However, both the methods were dependent on each other. Therefore, the present study utilised both the Direct and the Indirect Methods together in ascertaining accurately the causes of dropout.

Methods of determining the Relative Importance of Causes

Five methods were used by the educationists for determining the relative importance of the causes of dropout. They were: (i) Frequency Distribution Method, (ii) Statistical Inference Method, (iii) Discriminant Function Analysis Method, (iv) Fourfold Correlation Table Method, and (v) Rank correlation Method.

(i) Frequency Distribution Method

The relative importance of the causes of dropout was determined by applying the Frequency Distribution Method. At first, the opinions of the Dropouts, their parents and guardians, stayins, their parents and guardians, teachers, administrators, student leaders and friends of the dropouts were collected. Frequency of the statements given by them were converted into simple frequencies. These simple frequencies were again converted into percentage frequencies.
These percentage frequencies were arranged in descending order. It was ranked from the highest to the lowest frequency. Thus the rank obtained by a cause showed the importance order of that cause. Most of the studies had applied this method because of its merit.

(ii) **Statistical Inference Method**

This method was used to draw out the opinions of the responding agencies as to the importance of the causes. The possible causes were put in the form of opinionnaire containing a scoring scale of suitable number of points. Opinions of independent financial condition of the parents and guardians, involvement of children in domestic work and educational status of the family and criterion variables. The opinionnaires collected from the various agencies like teachers, parents, inspecting officers and local educationists were combined together in terms of scores assigned to various categories of importance. In each group the average ratings against each cause for a particular group of respondent was obtained by dividing the composite score by the number of respondents. The causes were then ranked on the basis of the average ratings which established the importance order of Relative importance of the various causes. These causes were prescribed by
the particular group of respondents or judges.

(iii) **Discriminant Function Analysis Method**

In this method, the appropriate weights were ascertained for its causes. The percentage contribution of each of the causes to the discriminant function was worked out. The causes when ranked according to the percentage contribution gave the relative importance of the causes. The NIE - HEW Project 005 used this method in addition to opinion poll method to ascertain the relative importance of causes.

The present investigator had utilised the first three methods for ascertaining the relative importance of dropouts. By applying the Frequency Distribution Method, the Fourfold Correlation Table method and Rank correlation and the Concordance method the relative importance of the causes of dropout was ascertained.

(iv) **Fourfold Correlation Table Method**

D.V. Chickermane utilised the Fourfold Correlation Table in defining the causes of wastage in primary education and home circumstances. The distributions were arranged in dichotomies. The four feature of independent variables of home circumstances were (a) financial condition
of the parents, (b) parents/guardians attitude towards education, (c) involvement of children in domestic work and (d) educational status of the family. Relationship between these variables were established. By utilising Phi-coefficients were calculated from the corelation table. Chi-squares were calculated from phi-coefficients. Values of Maximal co-efficients were also calculated. By examining the magnitude of the phi-coefficient and also by the ratio of its variance to the total variance of the Maximal co-efficient the relative importance of the cause of wastage between the two was established.

(v) Rank Correlation

Rank correlation Method was used to determine the relative importance of causes of wastage. The Agricultural Economic Research Centre Study ascertained the importance of the two selected major causes with the help of two methods. The two methods were 'Rank Correlation Method' or by simple examination of the association between a cause and effect, that is, wastage as revealed by the existence of systematic trend in the values of the two variables.

Incidents of Wastage and Stagnation

The problem of wastage and stagnation was faced by
the educationists all over the world. In India, this problem was quite acute. Various studies had been conducted on the problem of wastage and stagnation in different stages of education in India. Some of the important studies were the Satara Study, the Poona Study, the Gargoti Study, the 24 Paraganas Study, the 92 school study, the Sibsagar Study. The incidence studied by each of these studies were reviewed as follows:

The Satara Study

This investigation was made in the Satara District of Poona in 1945-46 on the problem of wastage and stagnation. The Gokhale Institute of Politics and Economics undertook the study which was conducted by V.M. Dandekar in consultation with D.R. Gadgil.

A cohort of 10,000 fresh pupils were taken for study. By using the True Cohort Method, he found out that out of 10,000 fresh entrants in grade I, actually 6388 had passed grade IV and 3612 left before completing the primary course. Out of these 3612 pupils who left out before completing the course, 1932 were in grade I, 706 in grade II, 504 in grade III and 470 in grade IV. The total percentage of wastage and stagnation during the course of four years
were 36.1 and 45.8 respectively. Its relative distribution of total wastage in the various grades were as mentioned below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>1945</td>
<td>1946</td>
<td>1947</td>
<td>1948</td>
</tr>
<tr>
<td>Number of dropouts</td>
<td>1932</td>
<td>706</td>
<td>504</td>
<td>470</td>
</tr>
<tr>
<td>Percentage of wastage</td>
<td>53.5</td>
<td>19.3</td>
<td>14.0</td>
<td>13.0</td>
</tr>
</tbody>
</table>

The findings of Satara Study were:

(a) Stagnation was an important contributory cause leading to wastage, (b) age of children was an important factor responsible for wastage and stagnation, (c) wastage and stagnation was higher among lower caste communities and lower among higher caste communities, (d) lower income was responsible for higher wastage and stagnation, (e) occupational pattern has relationship to wastage and stagnation.
(f) minimum size of agricultural holdings required to make possible the continuation of education of pupils up to upper primary level was three acres of land, (g) two or more bullocks were necessary for favourable conditions to continue their children in schools, (h) strong and actively interested guardianship was essential for retention of pupils in schools.

Although the Satara Study had found out these above mentioned findings, the investigator had collected responses from teachers only. Hence, the study could be regarded as incomplete.

The Poona Study

In 1960 Poona Study was undertaken by the Research Unit of the Directorate of Education of Bombay, Maharashtra. The objective of this exploratory study was to find out the extent of the problem of wastage.

In this study, a career of 1000 pupils in grade I in 1955 was taken for study which was followed for a period of four years. Out of these 1000 pupils, only 911 could complete the course in 1958. So the percentage of pass was 21.1 only while the percentage of wastagnation was 78.9.
Out of this cohort 414 pupils left school of which 144 were from grade I, 119 from grade II, 103 from grade III and 48 in grade IV and all total 375 pupils had failed in various grades for one or more years. The total percentage of wastage was 41.4 while stagnation percentage was 37.5 which included 7.8 percent absentees in various examinations.

<table>
<thead>
<tr>
<th>Year</th>
<th>1955</th>
<th>1956</th>
<th>1957</th>
<th>1958</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>I</td>
<td>II</td>
<td>III</td>
<td>IV</td>
</tr>
<tr>
<td>Cohort</td>
<td>1000</td>
<td>817</td>
<td>699</td>
<td>611</td>
</tr>
<tr>
<td>Number of dropouts</td>
<td>183</td>
<td>118</td>
<td>88</td>
<td>25</td>
</tr>
</tbody>
</table>

The study used new concepts like career rotation of pupils, effective school years, effectiveness of school system and educational credit which had opened avenues for further research. In this study, the actual expectation was that all the 1000 pupils progressed and passed
regularly. Then the utilised school years would be 4000 years. But there were 414 dropouts. The number of unutilised school years would be three for a pupil who left school after one year of primary course of four years, two years for a pupil who left after two years, one year for the pupil who left the school after three years. Thus it was found that 414 dropouts did not utilise 957 years out of 4000 school years giving 23.12 percent unutilised school years. So 76.08 percent school years were utilised by them as the total number being 3043 years.

The term effective years were used in the study to denote the number of school years profitably used. A pupil promoting to next higher class had utilised one effective school year. Thus 1000 pupils utilised 2008 effective school years against 3043 actually utilised school years in this study. Effectiveness of school system was calculated as:

\[
\frac{\text{Effective School Year}}{\text{Actual School Year}} = \frac{100}{66} = 66\text{ percent}
\]

The Index of Stagnation was shown as \((100 - 66) = 34\text{ percent}\)
Educational credit was given by this study as incremental gains as (a) a credit of 1, 2, 3 and 4 respectively for completing grade I, II, III and IV and (b) half of the above credit was given to the failed pupils in various grades. No credit was given to the absentees in the examinations. The expected credit for 1000 pupil was \((100 \times 1 + 1000 \times 2 + 1000 \times 3 + 1000 \times 4) = 10,000\). But educational credit actually earned was 4,2175 by giving 42.2 percent. The study revealed a total wastage of educational effort to the extent of 57.8 percent. However, this study did not investigate the causes of wastage and stagnation.

The Gargoti Study

The investigator of this study was D.V. Chickermane. He conducted the study on thirteen villages round about Gargoti in Maharashtra in 1962. The population of the villages were less than 1000. The career of 518 children were followed covering a period of four years of the primary stage. In order to find out the total number of students dropout in the primary stage the study was conducted. According to the study efficiency of school system depended upon the attendance of the pupils and completion of grade IV within the prescribed period without fail. Wastage and stagnation was measured whenever any duration occurred from this expectation.
According to Chickermane, educational wastage was of two types i.e. (a) the cases where the pupil had to repeat in grades and could not complete the course due to various reasons were called "Wastage due to Stagnation (WS)" and (b) the cases where the pupil had to drop out from any class before completion of the course due to poverty or the other domestic circumstances were called "Wastage due to circumstances (WC)". Total of these two forms was the total wastage (WT).

Credits or weights given to grade I, II, III and IV were as 10, 20, 30 and 40 points respectively. Thus, the points which were assigned to a year spread over the ten working months of the year by a sliding scale. As the pupils proceeded to upper classes the points were gradually increased. According to this distribution of points it was possible to calculate credits of a pupil who left without completing the course or year after some months. Thus, the schooling efficiency of the pupil was earned by his educational credit. A student could not earn a total credit of 100 points (10+20+30+40) unless he or she regularly completed the primary stage of four year duration. Thus for a pupil the maximum possible score was 100. Wastage was counted when difference between the total credit (100)
and the actual credit earned by the pupil occurred. However, various causes of wastage and stagnation were not discussed by the study.

The 92 School Study (on all India basis)

R.C. Sarma and C.L. Sarpa of the NCERT, New Delhi had undertaken a study on the problem of 'Wastage' and 'Stagnation' in Primary and Middle schools in India in 1969. The study was made on 92 schools. As sample of 790 dropouts and 845 stayins were selected from the 92 sample schools of Punjab, Rajasthan, Maharashtra and Union Territories of Himachal Pradesh and Delhi. In this study, school Information Blanks, and Pupil Information Sheets were used as tools for collecting data about schools, dropouts and stayins. By interviewing the dropouts, their parents and guardians, the stayins and their parents and guardians, the data were collected. Thus the collected data were statistically interpreted and analysed.

While studying in 92 sample schools 18(eighteen) causes of wastage and stagnations were revealed. The problem was studied in depth and pinpointed the facts. The relative importance of the causes of stagnation was ascertained by three sets of judges. The study also analysed
the causes. It would have been more beneficial and comprehensive if it could cover more states and territories from other parts of the country.

The 24 Paraganas Study

P. Choudhury of the State Institute of Education, West Bengal, had undertaken a study in 24 Paragana in 1965. The study was conducted to determine the extent of wastage and stagnation in the primary schools of 24 Paragana District and to ascertain the relative frequency of incidence of various factors associated with wastage and stagnation. The main points of study was on the total time taken by a pupil for completing the primary level of education.

The study used True Cohort Method for completing the extent of the problem. Opinions were collected from teachers and local community teachers. The relative importance were identified through checklist of the probable causes. The calculated ranks were as follows:
<table>
<thead>
<tr>
<th>Ranks</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Economic cause of Parental Poverty</td>
<td>33.0</td>
</tr>
<tr>
<td>2. Parental indifference to education</td>
<td>26.0</td>
</tr>
<tr>
<td>3. Irregularity of attendance</td>
<td>15.8</td>
</tr>
<tr>
<td>4. Social habits and customs</td>
<td>6.8</td>
</tr>
<tr>
<td>5. Admission of under-aged children</td>
<td>4.8</td>
</tr>
<tr>
<td>6. Ineffective teaching method &amp; curriculum</td>
<td>4.0</td>
</tr>
<tr>
<td>7. Large size of grade</td>
<td>2.5</td>
</tr>
<tr>
<td>8. Other sources</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Total 100.0

The study found out that 1,425 pupils left school out of 4,300 fresh entrants in grade I in 1961. The wastage rate was 33.1 percent. Out of 2,875 pupils who remained in schools 1,694 pupils could not complete grade IV in four years and repeated in various grades as follows:

<table>
<thead>
<tr>
<th>Grades</th>
<th>Repeaters</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>90</td>
</tr>
<tr>
<td>II</td>
<td>372</td>
</tr>
<tr>
<td>III</td>
<td>1053</td>
</tr>
<tr>
<td>IV</td>
<td>179</td>
</tr>
</tbody>
</table>

Here the rate of stagnation was 39.4 percent of the initial cohort. Total wastagnation rate was 72.5 percent.
In spite of all its merits the study did not take any opinion of the Inspecting Officers and teachers. It would be more comprehensive if the opinion of these Inspecting Officers and teachers were taken.

The Sibsagar Study

R.C. Das conducted the Sibsagar Study. The investigation was done into the problem of 'An Investigation into the Problem of Wastage and Stagnation at the Primary Level of Education in the District of Sibsagar, Assam in 1970'. The main objectives of the study were (i) to ascertain the extent of the problem in the district and its variations under a variety of situations, (ii) to identify the causes and their relative importance and finally (iii) to suggest some remedial measures.

The study was conducted on a fresh entrants of 14399 students in Class A in 1963. Their career were followed for a period of five years upto class III. The pattern of class structure was A, B, I, II and III. The total number of dropouts and stagnations were calculated both classwise and sexwise. Its percentage of the total strength of pupils were also found out. By utilising the questionnaires, scheduled for Teachers, Inspecting Officers and Teacher, educa-
tors, the causes of wastage and stagnation were determined indirectly. To collect all the informations a five point scale opinionnaire, a proforma and information sheet for stagnation index were used. These tools were utilised for ascertaining the relative importance of the causes of wastage and stagnation. The relative importance of the causes given by three judges were tested by concordance Test.

In the study 14.24 percent incidence of wastage and 62.03 percent incidence of stagnation were found out. The southern region of the District of Sibsagar was higher in incidence of wastage and stagnation than the northern region. For rural area, the rate of wastagnation was 77.91 percent and 63.22 percent for the urban areas. The difference of the two rates was statistically significant.

The highest incidence of wastagnation in classwise breakup was 34.48 percent in class A and 6.24 percent in class III. In schedule tribe community the stagnation percentage for boys were 86.54 and 89.74 percent for girls. The percentage was 74.0 for boys and 75.18 for girls in the non-schedule tribe areas.

Among forty causes of wastage and stagnation at the primary level poverty and economic backwardness claimed
first rank. Non-stimulating social environment and backward society, illiterate parents and guardians, untrained teachers claimed the fifth, forteenth and thirty second rank respectively. According to this investigation, socio-economic causes were more responsible for wastage and educational causes were more responsible for stagnation.

The problem of wastage and stagnation in the district of Sibsagar was studied in a comprehensive way. However, the investigation would have been more comprehensive if the investigator had utilised both direct and indirect methods for identifying the causes of wastage and stagnation instead of using only indirect method.

Incidence of the reviewed studies

A comparative view of the incidence of wastage and stagnation of the reviewed studies were given below. The 92 school study did not find out the rates of wastage and stagnation separately.

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the study</th>
<th>Percentage of wastage</th>
<th>Percentage of stagnation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Satara Study</td>
<td>36.1</td>
<td>45.8</td>
</tr>
<tr>
<td>2.</td>
<td>Poona study</td>
<td>41.4</td>
<td>37.5</td>
</tr>
<tr>
<td>3.</td>
<td>Gargoti study</td>
<td>28.0</td>
<td>40.0</td>
</tr>
<tr>
<td>4.</td>
<td>24 Pargana study</td>
<td>33.1</td>
<td>39.4</td>
</tr>
<tr>
<td>5.</td>
<td>Sibsagar Study</td>
<td>14.24</td>
<td>62.03</td>
</tr>
</tbody>
</table>
The Poona Study was the highest in the incidence of wastage. It was followed by Satara study, 24 Pargana study, Gargoti study and Sibsagar study respectively. The stagnation was highest in Sibsagar study. Poona study had the lowest rate. The Satara Study was second and Gargoti Study was third which was followed by 24 Pargana study and Poona study respectively. There was no significant difference between the stagnation figures of the Gargoti and 24 Paragana studies. In all other studies stagnation was higher than the wastage.

Apart from these above mentioned studies the problem of wastage and stagnation was studied by some other investigators also. Those studies were Provincial Board of Bombay. The Bengal Municipal Corporation, the Madras Study, the Punjab Study, the Agricultural Economics Research Centre and the NIEHEW Project 005.

In 1941 the Provincial Board of Bombay Study was conducted by J.P. Naik on the problem 'Report on Stagnation and Wastage' in Primary schools of the Bombay Provincial Board of Primary Education. The Primary Education Department of the Bomaby Municipal Corporation undertook a study on 'The incidence of Dropouts in Primary schools in Worli' (Electoral Ward No.31) for six months in 1955-56.
Again this department undertook a study on 'Study of the Incidence of Wastage and Stagnation and the effectiveness of our Education Efforts' in 1967. In 1962 Madras Study was undertaken by the Research Bureau of Teachers College, Madras on the problem 'A Study of Wastage and Stagnation in Primary Schools in Madras. The Punjab Study was conducted by Deva Prakasha in four districts of Punjab in 1965. In 1968 the Agricultural Economics REsearch Centre under the University of Delhi conducted a study on the problem of "Primary Education in Rural India Participation and Wastage". The last study was initiated by the Department of Educational Administration under the National Institute of Education of the NCERT.New Delhi with the help of the Department of Health, Education and Welfare of the United States in 1967 on the problem which was known as NIE-HEW Project 005. Moreover by utilising the quinquennial enrolment record of the period, the Education Commission of 1964 had also calculated wastage and stagnation for the period from 1911 to 1965.

Although these studies dealt with the problem none of them could cover all aspects of the problem. No studies had suggested for implementation of specific plan although the NIE-HEW Project 005 and the AERC study had forwarded some advanced suggestions for tackling the problem which was of general in nature.
After reviewing the studies, the important findings about the causes of wastage and stagnation were categorised as (*a) Socio-economic causes, (b) Educational and (c) Miscellaneous. Each of these causes were given below:

Socio-Economic causes

Under the socio-economic categories the causes were (i) Economic backwardness of the family, (ii) Excessive involvement of children in domestic work, (iii) Educational status of the family, (iv) Occupation, (v) Parental opposition and indifference, (vi) Early marriage or betrothal.

(i) Economic backwardness of the family

On opinion surveys, economic backwardness of the family was found as the most important cause of wastage and stagnation. This important cause was interpreted in two ways. The first important concerned with the cost of education to be borne by the parents in the form of fees, school, uniform, books, stationary etc. Secondly, most of the parents had employed children in some form of labour. Sometimes they were employed outside the family. Children were engaged in rearing and tending cattles and taking care of younger so that they might be free for some other work.
The relationship between the parents and the phenomena of wastage and stagnation was found out by Chickermane as insignificant. Through statistical analysis he showed in his study that even children of rich families left school before completing the course while children from poor families did not discontinue due to poverty. As such poverty was not a variable highly correlated with the increasing rate of dropout according to Chickermane.

(ii) Excessive Involvement of Children in Domestic Work

Excessive involvement of children in domestic work was the second finding of these studies. Due to this reason children could not manage time to study at home and were bound to dropout from their career.

(iii) Educational Status of the Family

The third socio-economic cause of students dropout was the low educational status of the family. The studies found out the influence of low educational status of the parents on the phenomena of wastage and stagnation. It further found out that the parents perception of the value of education depended to a large extent upon their own educational status. The presence of large number of illiterate members in the family positively related to the phenomena of wastage according to Chickermane's finding.
(iv) **Occupation**

Four studies of Satara, Poona, Gargoti and 24 Pargana showed that people engaged in business and salaried persons favoured continuation of childrens' education more than those engaged in agriculture, casual labour and non-salaried persons.

(v) **Parental opposition and indifference**

Another socio-economic cause of childrens' dropout was parental opposition towards further education of their children.

The main reasons for opposition for girls education were the social taboos and their greater usefulness in domestic work. Economic involvement of the boys to the family was another cause of dropout. Due to cultural deprivation, poverty and illiteracy of parents, parental indifference towards education prevailed.

(vi) **Early Marriage or Betrothal**

Another cause of dropout for girls was early marriage or betrothal. Although Sharada Act had prevented early marriage to a large extent, the Provincial Board of Primary Education Report mentioned that it could not prevent early betrothal.
**Educational**

According to the findings of these studies, stagnation was a major factor related to wastage. In this connection Hartog Committee Report stated that, the larger a child remained in one class the more discouraged and neglected the felt while his continued presence at school not only conferred no benefit on himself, but also adversely the teaching of the other pupils.

There were various factors which led students to stagnate. Poor quality of teachers, indifferent teaching, defective system of examination, lack of earnestness on the part of the students, lack of proper environment at home, paucity or non-availability of text-book etc. were the important causes of stagnation.

**Miscellaneous**

Some of the important causes which caused wastage and stagnation under miscellaneous category found out by the studies were irregular attendance, death and illness of parents, illness of the pupil and heterogeneity in age composition.
(i) Irregular attendance

The most important cause leading to wastage and stagnation was irregular attendance. The cause for irregularity required exploration at the moment of seeing its symptoms.

(ii) Death and Illness of parents

The child dropped out if his or her parents suffered from continuous illness. It happened due to the death of parents. For these happenings they were deprived of parental love. As such, more responsibility was imposed on the child.

(iii) Illness of the Pupils

Generally many children in our country were undernourished due to poverty. As such, children become the victim of many diseases. Thus frequent or continuous illness prevented them from studies which led to stagnation and waste.

(iv) Heterogeneity in Age Composition

According to D.R. Gadgil and V.M. Dandekar, students older than the median age of a particular class were more likely to dropout. Because they were useful for
earning to the family. Moreover, the older children found it difficult to adjust with their younger classmates.

In addition to the above mentioned causes given by these four studies several other causes might be included to the causes of wastage and stagnation. Importance of the causes also would be different according to the socio-economic position of different areas. As such, in addition to these causes, there might be some other different causes which led students to dropout from their educational career. Whatever the causes of dropout given by both the Direct and Indirect Methods in the Sipajhar Development Block during the period under study would be verified and tested in Chapter IV.