WASTAGE AND STAGNATION: A CONCEPTUAL ANALYSIS

Concept of Wastage and Stagnation:
Various view points.
Measurement of wastage.
Methods of identifying the causes of wastage and stagnation.
Methods of determining the relative importance of causes.
Factors in wastage in education.
CONCEPT OF WASTAGE AND STAGNATION: VARIOUS VIEW POINTS

The concept of 'educational wastage' has been denoted by various terms such as academic failure, dropping out, attrition, wastage, student mortality (Miller: 1970), grade repetition and school drop-out (Chandrakant: 1967), and step-outs, withdrawals, retirements (Watson: 1975).

By 'wastage' Saiyidain et al. (1952) means 'only those cases where a child leaves school without even acquiring a fairly stable literacy - the humblest goal of primary education'. According to Sapra (1967), 'wastage' is generally understood to connote 'the premature withdrawal of a child from school before completing the last grade of the stage of education in which he is studying. Thus, at the first level of education, the objectives of which are the attainment of permanent literacy and citizenship training, every child who is withdrawn from school before completing grade VII or VIII is a case of wastage'. 'Wastage criteria', according to Miller (1970), 'includes percentage of students failing to complete a course on a year, failure of students to remain in one particular institution until graduation, and failure to transfer to another institution to complete a qualification'. The
Indian Institute of Education (1962) defines a case of wastage in the secondary school as 'a student who enters a secondary school, but leaves it without completing the secondary course'.

Mc Neely (1938) defined wastage in two ways: gross wastage and net wastage. By 'gross wastage' he meant failure or withdrawal of students from courses without account being taken of whether they enrolled in another university or re-enrolled at a later date in the same university. 'Net wastage' occurs when account was taken of later enrolment of students in another university or re-enrolment in the same.

A 'drop-out', according to Cervantes and Husted (1966, p. 196), "is any youth who for any reason, except death, has left school before graduating from one school and without transferring to another school". According to Longstreth et al. (1964), if a student left school prior to graduation, he was considered a drop-out, unless another school requested his cumulative record. To Lichter and others (1963, p. 2), the high school drop-out is usually a child who has failed in his general school adjustment. This failure is not necessarily a matter of a specific learning disability but rather a broader 'educational' disability. Dresher (1954) defined a
'drop-out' as a pupil who has left school permanently for reasons other than graduation or transfer to another school, with the exception of those pupils who leave school to take employment and complete required subjects in evening school to qualify for high school graduation. 'Drop-outs' according to Chaudhary (1974) are those pupils (1) who are admitted to a class but left out without taking the examination for the purpose of promotion to the next higher class; (2) who left the school after failing in one class or in another. Tannenbaum (1966) defines 'a drop-out' as 'the pupil who does not stay in school long enough to qualify for a high school diploma'. As Watson (1975) puts it, the classic drop-out is seen "as a failure, a quitter, a delinquent, the product of the slums who was likely to be a welfare burden all his life, lazy, shiftless and irresponsible." The profile sketched by Schreiber (1967) coincides with the above view.

The Report of the Provincial Board of Primary Education, Bombay (1941) asserted that "anyone who drops out or is withdrawn from school before spending sufficient time (at least 120 days) in Grade IV or V or before actually passing it, constitutes a case of wastage". Several researchers have agreed on this point. (Gadgil and Dandekar: 1955; Directorate of Education, Bombay: 1960; Chickermane: 1962; Choudhury: 1965).
Voss (1966) identified three major types of drop-outs and they are:

(i) The involuntary drop-outs: those individuals who leave school as a result of some personal crisis.

(ii) The retarded drop-outs: those who are not capable of doing the necessary work required for promotion to higher grades and eventual graduation.

(iii) The intellectually capable drop-outs: those students who have the requisite ability to do passing or even superior work in high school, but who may or may not be making satisfactory academic progress. Of the various types of drop-outs, it is the capable drop-out that is considered a contemporary social problem, because their abilities and potentialities are not realized; and thus constitute social waste.

'Stagnation' which is also known as 'retardation' or 'grade repetition' is defined by Sapra (1967, p.7) 'as the retention of a pupil in a grade for more than one year on account of unsatisfactory progress. Thus, if a child passes a grade in two or more years, he constitutes a case of stagnation'. MeShon (1936) reveals that stagnation due to detention is another source of wastage.
Chaudhary (1974) distinguishes the lower and upper limits of stagnation. The percentage of number of students admitted in a class to the number of students who failed in a session, gives the lower limit of stagnation. The upper limit of stagnation is measured by taking the percentage of the number of students who failed in a class to the total number of students who took the examination.

Several studies have shown that failure or grade retardation as one of the outstanding characteristics of drop-outs (Schwebel: 1947; Allen: 1956; Livingston: 1958; Chickermane: 1962; Deble: 1964; Hurrelmann: 1981, Porter: 1984). Dass (1986) points out that failure is the result of the pupils' backwardness in class, because of their losing interest in studies or of their inability to cope up with others in the class; it is a casualty of our traditional grades class system.

**Measurement of wastage**

The different methods evolved over the years to measure the extent of wastage in education have been classified by the UNESCO (1970) into three categories:

1. (i) Apparent Cohort Method
2. (ii) Reconstructed Cohort Method and
3. (iii) True Cohort Method
(i) **Apparent Cohort Method**

This method uses either cross-sectional year-grade data or a time series data on grade-wise enrolment. While using cross-sectional data, enrolment in Grade I in a given year is considered as a cohort. Enrolment in all other grades in the same year is compared with that in Grade I and diminution from one grade to another is regarded as evidence of drop-out. This method considers only drop-outs and it provides only a rough estimate of educational wastage and as such has its limitations.

(ii) **Reconstructed Cohort Method**

This method was used in a world-wide survey of educational wastage conducted by the UNESCO office of Statistics in 1969. This method uses successive year-grade data on enrolment and repeaters are given a full cycle of cohort.

The reconstructed cohort method marks a distinct improvement over the apparent cohort method, is as much as it focusses attention on two aspects of wastage, viz., the drop-out and stagnation. But the method is not without its shortcomings. The main assumption of this method that there is a homogeneous behavioural pattern in the movement of pupils in a cohort is open to criticism.
(iii) **True Cohort Method**

Under this method, information is gathered regarding movement of students within the system and from the system to the outside by way of dropping out, migration, grade-repetition, mortality and promotion. This method is the most suitable method in measuring wastage. It involves an enormous task of data collection.

**Methods of identifying the causes of wastage and stagnation**

Studies conducted so far have employed different methods to identify the causes of wastage and stagnation, which can be classified as under:

(i) **Direct Method,**

(ii) **Indirect Method,** and

(iii) **Hypotheses Testing Method.**

A short description of each of these three methods attempted below;

(i) **Director Method**

Under this method, the drop-outs and their parents are interviewed by the investigators to ascertain the cause of dropping out or premature withdrawal from school. The main drawback of this method is that it does not ensure true causes being told by the respondents and that the causes are all coloured by the respondents' perception.
(ii) **Indirect Method**

The causes of dropping out or premature withdrawal from school under this method are ascertained either by interviewing the drop-outs by friends, neighbours, teachers and members of the local community, or by administering check-list of possible causes, requesting the respondents to tick mark those which are applicable to each case being investigated. The responses obtained through this method are, by no means, more objective than those obtained through the first method.

(iii) **Hypotheses Testing Method**

On the basis of previous studies and through discussion with experts and teachers, a number of hypotheses relevant to each of the different areas like pupil, family, school and community have been framed. In general, while examining the different variables, an attempt is made to find out both the personal and the environmental variables on which drop-outs and stay-ins differ from each other. The personal data about the respondents are collected through interview schedules for drop-outs and stay-ins. The data include the perception of teachers, parents and peers on certain referents which largely explain the interactional influences the pupils have at home, in the neighbourhood
and in the school. The justification behind examining interactional influences is that they have a major role in making the personality of a child, building his ego-ideal, motivation for learning and need for approval. The personal data are mainly of perceptual nature. The environmental data are both factual and perceptual. The fact questions pertain to the size, the structure and the socio-economic status of the families of drop-outs and stay-ins. The opinion questions relate to the opinions of parents about the school, need for educating the children, etc. The environmental data which have been confined to the family area, have been collected on interview schedules for parents of drop-outs and those of stay-ins. The effect of personal and environmental (family) variables on wastage is studied through univariate analysis (chi-square) of the interview responses of drop-outs and stay-ins and those of their parents.

**Methods of determining the relative importance of causes**

Three methods have been generally used to determine the relative importance of causes of wastage and stagnation and these are discussed below.

(i) **Frequency Distribution Method**

This is the most commonly used method and has been adopted in almost all the studies. The frequencies for
each of the causes as stated by the drop-outs, their parents, teachers, peers, the local community leaders, etc., are worked out. Simple frequencies are converted into percentage frequencies, which are arranged in the descending order. The percentage frequencies are ranked and the ranks thus obtained reflect the relative significance of each cause.

(ii) Opinion Poll Method

Another method used to determine the relative importance of causes of wastage is called the opinion poll method. The method aims at eliciting the opinion of parents, teachers and educationists on the relative importance of the causes of dropping out from school on a five-point scale (most important, very important, important, less important and least important). The causes are given in the form of statements in an opinionnaire. To quantify the responses, the scale values of 5, 4, 3, 2, 1, corresponding to most important, very important, important, less important and least important are respectively assigned to each of the statements. The average rating for each of the three groups, separately, are worked out by dividing the composite score by 'N' (No. of cases in each group). These ratings are ranked for further analysis to establish
the relative importance of the causes of dropping out as perceived by parents, teachers and educationists.

(iii) **Statistical Method**

Chickermane (1962) attempted to find out the relationship between wastage in primary education and home circumstances by means of four-fold correlation tables. The distributions were arranged in dichotomies. Phi-coefficients were calculated from the correlation table; chi-squares were calculated from phi-coefficients and values of Maximal phi-coefficients were also computed. In the first instance, the relationship between the independent variables (four features of home circumstances - financial condition of parents/guardians, attitude of parents/guardians towards education, involvement of children in domestic work and educational status of the family) and the criterion variable, the phenomenon of wastage was established by the significance of phi-coefficients, which was examined by the value of chi-square in each of the correlation tables. The relative importance of each of the variables in causing wastage in primary education was established by examining the magnitude of the phi-coefficients and also by the ratio of its variance to the total variance of the Maximal phi-coefficients.
Factors in Wastage in Education

Socio-economic variables and the educational variables pertaining respectively to the wide social system and the educational system tend to continuously interact, as seen in Figure 1 (Mehta: 1977). The poor home conditions interact with the poor school conditions. The parental failure experiences interact with the system of school examination, which also promotes further failure experiences. Parental apathy interacts with the teacher's own apathy and low expectations. The children's sense of insecurity interacts with the teacher's own sense of insecurity. The resultant effect of such interactions among school, socio-economic, educational and psychological variables produce powerful conditions for continuous wastage in education.
Fig 1: Two dimensional Model for Understanding Factors in Wastage in Education