

Unit-VI

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REMEDIAL TEACHING IN SOCIAL SCIENCE
(Diagnoses and Methods of Remediation)

Generally Social Science Teaching is organized to facilitate average students. The individual variation of the students is taken in to consideration. Thus, the extreme case—bright students and poor students are ignored in the normal teaching of Social Science. The achievement test are commonly used for assessing the students performance which is used as the basis for classification—first, second, third and failed. These attainment tests do not reveal the causes of the weakness of poor learners. Therefore, remedial teaching can not be provided to the poor students. A class of students can be classified into three categories— (1) Bright students (2) Average students, and (3) Poor students.

- (1) There should be a different teaching instructional procedure than the average students. The repetition in teaching usually is not required for bright students.
- (2) All the average students can not follow the instructional procedure used in classroom teaching. Their diagnosis should be done to locate the learning difficulties and weakness and remedial teaching should be planned and organized.
- (3) There should be a different instructional procedure of teaching than the earlier two categories of students. The repetition in teaching is very useful for such students. They need diagnosis and remediation in Social Science Teaching at both the level Teaching Social Science as first language and teaching Social Science as second language.

This chapter provides the awareness about diagnostic test in Social Science and Planning for remedial Social Science Teaching.

Need for Diagnosis in Social Science Teaching

In our schools, achievement tests are administered to assess their performance. On the basis of their performance classified into two categories-pass and fail. The divisions are also assigned to the passed students and promoted to next class. But nothing can be done about those who have failed in the examination. The causes of their failure must be identified for their improvement. The attainment test can not reveal the causes of their learning problems. It is the diagnostic test in English that identifies the cause their learning difficulties. The remediation can be provided for their learning weakness. Thus, there are two functions of Educational measurement. Prognosis and diagnosis and both are complementary to each other.

This concept of diagnosis can be illustrated by a simple example. A glass of water is 60 percent full, if is the prognosis or located, then it is known as process of diagnosis. The prognosis and diagnosis are the two function of the same object. Thus both the functions are essential in an educational measurement.

DIAGNOSTIC TEST

A diagnostic test is one kind of educational test. The education test have two function or purposes.

- (1) *Prognostic Purpose*— Attainment test
- (2) *Diagnostic Purpose*— Diagnostic Test

The prognosis means to measure the extent and level of learning outcomes or attainments of the students in a specific subject which has been taught to them. The diagnosis means to identify the causes of their weakness of the poor attainment of the students. The prognostic and diagnostic functions are complementary to each other and both are essential in educational measurement and evaluation.

Meaning of Diagnostic Test

A diagnostic test is designed to reveal specific weakness or failures to learn in some subject of study such as reading or arithmetic. In a diagnostic test the main interest is the performance

on individual items or on small groups of highly similar items. In the diagnostic test score or mark is not assigned for the correct answer but wrong answer provide the basis for the causes of his failure.

Diagnostic tests are those which help us to know the particular strength and weakness of the student. These tests are also known as analytical tests. The correct answer provides his strength and wrong answer indicates his weakness in the content of the individual. The achievement tests provide the over all scores on the basis of correct answers of the subject items. The wrong answers are assigned zero marks. These attainment tests do not provide reason for the poor scores of an individual.

The term "*diagnostic*" as applied to tests is one fraught with danger and ambiguity. The educationists consider the certain test as diagnostic while others are achievement tests which have no diagnostic characteristics. A diagnostic test undertakes to provide a picture of strengths and weaknesses. Hence, any test that yields more than a single over-all score is, in a sense, diagnostic. Even if there are only two part scores, for example, one for arithmetic computation and one for arithmetic reasoning, the test makes it possible to say that the student performed better on computation than in reasoning answers to problems. It means that the *diagnostic tests* are qualitative not the quantitative. A diagnostic test does not yield the total scores of an individual in a subject which he has studied and taken the test.

Achievements Vs Diagnostic Test

Some important characteristics of the two type of educational tests are enumerated as follows-

1. An achievement test provides the extent of the learning out comes of the students. The performance is evaluated in terms of single score and total scores on the items of the test. A diagnostic test is one which is intended to locate specific weakness in the learning of a content but does not provide a single score.
2. As achievement test is quantitative while a diagnostic test is qualitative. An achievement test has prognostic purposes.

3. The items of an achievement are arranged in the order of difficulty value. The easiest item in the beginning of the test and most difficult item is placed at the end of the test. But in a diagnostic test items are arranged in the learning sequence in order of positive transfer of learning.
4. An achievement test items are analysed on the basis of correct responses of the students on an item, *Device* method of item analysis is used for selecting and rejecting the items. A diagnostic test items are analysed on the basis of wrong responses of the students on an items. *Stanley* method of item analysis is used for diagnostic test.
5. The content of a subject is the same in both of tests. The objective type items are used in both types of tests. In an achievement test one score is assigned for correct answer and zero for wrong answer. In diagnostic test scores are not assigned for correct answer but wrong responses are considered in view of the sequence of the content to identify the cause for the wrong answer.
6. The scoring and interpretation is easy for achievement tests scores. The subject specialists is not required but scoring and interpretation of diagnostic test scores is difficult. The subject specialist is must for identifying the causes of the wrong answers.
7. Essay type and objective type test are used in the attainment tests but only objective type can be effectively employed in diagnostic tests. Essay type can not be used in diagnosis purpose.
8. The reliability and validity is essential characteristics of an achievement test. But diagnostic sub-tests or one learning unit are adequately reliable. A diagnostic test is individual test from interpretation point of view but it is group test.
9. In constructing an achievement test, sampling of content is done but in a diagnostic tests all learning and teaching point are taken into consideration, no learning point is omitted or ignored.

10. The diagnostic tests are effective tools for teachers for planning and organizing remedial teaching. Tutorial groups are formed on the basis of diagnostic test. Teacher can help the poor students and can raise their level of performance by removing their difficulties. The purpose of diagnostic test is the remedial teaching and instruction.

The achievement tests are used for selection, promotion gradation, classification and also in research work.

Types of Diagnostic Test

The diagnostic tests are broadly classified into two categories

- (1) Educational diagnostic tests, and
- (2) Physical or clinical diagnostic tests.

(1) **Educational Diagnostic Tests** are various types related to different subjects for specific level or class or grade.

(2) **The Clinical Diagnostic Tests** are also of several type relating to hearing, vision and other aspects.

The regular classroom teacher should make use of the clinical specialist. The knowledge about the students, the classroom teachers can be more confident in their orientation towards group approaches. The teacher would expect normal actions and behaviours on the part of all students. They would be prepared, however, to deal with reasonable departure from normal behaviour, and for the unusual cases, the teacher would feel free to invite the person with special skill in diagnosing and treating such cases to bring them at par to the normal students of the class.

Functions of Diagnosis

It is an individual activity, even then it has four functions-

1. Classification-

- (a) Intellectual level,
- (b) Vocational level,
- (c) Aptitude or Musical level.

2. Assessment of Specific ability-

- (a) Level of adjustment
- (b) Level of abnormality
- (c) Level of depression and anxiety.

3. *Etology function refers to study the diagnosis. or causes*
4. *Remediation may be of following types-*
 - (a) Clinical treatment for physical ailments
 - (b) Counselling for mental ailments
 - (c) Remedial teaching for learning weakness.
 - (d) Special education for handicapped.

These functions are highly individualized.

Methods of Diagnosis

In view of the above functions, the following methods are used for diagnosis-

- (1) *Observation method-* it is most popular method used for both prognosis as well as for diagnosis. It is used for children because the tests can not be administered on them. It has the subjective method even then it is the most commonly used.
- (2) *Testing methods refer to several type of testing procedure used for diagnosis-*
 - (a) Clinical testing method
 - (b) Psychological testing method
 - (c) Educational testing method.

It has been mentioned that the teacher has to invite other skilled persons to know the deficiencies of the students to provide proper remediations.

Steps for Construction of Diagnostic Test

The following steps are used for preparing the diagnostic tests. Formulation of objectives and outline of the content or topic.

1. Formulation of objectives and outline of the content or topic.
2. Content analysis is into sub-topics and its elements-
 - (a) Sequence of sub-topics and elements within the sub-topic.
 - (b) Sequence of learning points.
3. Identify in difficulty order of sub-topics.
4. Deciding the types of the items.
5. Preparing items and tryout.
6. Item analysis of test items and modification of items.

7. Analysis of logical sequence of content by preparing 'Scalogram' given in the chapter 'transfer of learning'.
8. Preparing the final draft of the test.
9. Preparing manual of the test and
10. Remedial devices or measures

Diagnostic Test in School Subjects.

There are several school subjects which are taught at different levels. A large number of tests are required in each school subject. Some specific problems have been described in two subjects- language and arithmetic.

(a) **Diagnostic Reading Test-** The reading is an important skill for school subjects-*Low Silent Reading Test* includes the following sub-tests.

1. Rote of reading and comprehension of prose.
2. Poetry comprehension and appreciation.
3. Vocabulary in different areas.
4. Meaning of sentences and
5. Paragraph comprehension.

With these tests the following types of errors are committed by the students-

Wrong pronunciation of words, spelling errors, omission error, repetition error, placement of words, combining words, adverse reading etc. The teacher has to locate the real causes for these errors, after that remediation would be provided.

Meaning & Definition of Remedial Teaching

F. L. Billows in his book, *Remedial Exercise* writes : "Remedial Teaching is a morale- building and an interest-building enterprise for the students." Remedial teaching is a continuous process. It involves testing, teaching reading, and reteaching.

Yoakam and Simpson Boserve : "Remedial teaching is actually old, since good teachers from times immemorial have always tried to correct the errors in children's reading and set them on the right track. The new remedial teaching has received as stimulus from the testing movement, however, and has been given a name borrowed from the medical profession. It has for its purpose the development of effective techniques for the correction of errors

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in all types of learning. As yet, it has been more effectively used in the skill subjects than in the social studies. This is probably because the errors in learning may be more easily detected in the former than in the later."

Yokan and Simpson further observe : "Remedial teaching tries to be specific and exact; it attempts to find a procedure which will cause the child to correct his errors of skill or thought. It aims to correct errors of the past and thus, in a sense, prevent future errors. It is not always successful, but under favourable conditions, as in spelling, arithmetic, and reading, some unusual results have been achieved. In the regular work of the classroom, one of the purposes of the teacher is to find ways and means of applying remedies for errors of all sorts. In spelling, for instance observation of the work of pupils may reveal that they are not following a systematic method of study. Remedial work may consist in instructing them in a better method and having them practice the method under the teacher's supervision until it is learnt."

Functions of Remedial Teaching

The functions of classroom teaching and remedial teaching are one and the same to realize the Social Science teaching objectives.

In theory, the main function of remedial teaching is to abolish some-educational mistakes. If there are no mistakes in teaching and learning, there is no need for remedial teaching.

In the work of *Yoakam and Simpson* : "Ideally, errors in learning should be prevented and the need for remedial teaching should lessen as teaching becomes more expert. In a sense, the attitude necessary to remedial teaching is that of seeking cures for weaknesses that ought not to have happened. Just as in the medical profession more emphasis is now being placed on preventive medicine, so in teaching there should be increasing emphasis upon teaching so well that error seldom occurs. But as long as human error persists, remedial teaching will be necessary.

"The function of remedial teaching", write *Yoakam and Simpson* "are numerous to recondition habit and skill, to correct errors of knowledge, to improve personality traits, to resolve

conflicts, and to substitute good attitudes, interest, and ideals for undesirable ones. Serious physical, emotional, and social defects of the child will often prevent his learning even though the teacher has used well-established techniques in teaching. Likewise, remedial measures based upon analysis of errors in mechanics of learning will fail unless the physical, emotional, and social defects of the child are successfully treated."

In the above paragraphs the following functions of remedial teaching have been indicated.

1. To assist the poor students to pace with his classroom teaching.
2. To solve the learning difficulties of the poor students.
3. To improve and modify his instructional procedure in view of wide coverage of learners variation.
4. To avoid the wastage in Education process.
5. To raise the standard of Social Science Teaching.
6. To evolve the effective strategy of Social Science Teaching.

Methods and Techniques of Remedial Teaching

There are various method and techniques which have been devised in Hindi language teaching. A language laboratory may be established even remedial teaching. The programmed test are also prepared for this purpose.

In the opinion of *Yoakam and Simpson* remedial teaching is carried on in the following ways.

1. "Incidentally, as in the past.
2. By the case-study or clinical method in which individual pupils are segregated for treatment.
3. By systematic treatment of errors before a whole group after diagnosis.
4. By the group-individual method through the use of practice materials administered to the group but designed for treatment of individual differences.
5. By small group instruction in which the work is largely individualized."

M. S. Sachdeva mentions the following methods by which mistakes in the written English can be remedied :

- (1) "Drills of sentence-patterns may be given. The teacher may take-up one sentence pattern at a time and give simple repetition drill to the class. Then substitution, completion and conversation drills can be used for teaching. The sentence-patterns. After oral practice, they should be given writer practice.
- (2) The correct sentences and the corrected sentences may be written on a chart. The students should be asked to consult that chart again and again. Thus, they will be able to get rid of incorrect Social Science.
- (3) There should be frequent test in order to see whether the students have made some improvement or not.

Thus, regular guidance and careful supervision can help the students in the improvement of Social Science."

Strategies and Devices for Remedial Teaching

Some scientific and psychological strategies have been developed for remedial teaching.

1. Programmed test, *i.e.*, Branching material.
2. Tutorial Device of Remedial Teaching.
3. Supervised study. Process of Assimilation.
4. Action-Research. Solving classroom problem.
5. Language laboratory for language skills.

Procedure for Remedial Teaching

Some procedure of teaching is usually followed but I.K. Device has suggested four steps : *Planning, Organizing, Leading and Evaluating*. The remedial teaching is followed after actual classroom teaching. Thus remedial teaching involves four steps.

First Step : First steps is to identify poor students in Social Science subject by using achievement test, school marks, personal observation of teacher and interview technique.

Second Step : At the second step a diagnostic test in Social Science related to specific area pronunciation, spellings, reading.

Fourth Step : An appropriate, strategy is used for remedial teaching. After teaching, a test is administered to ascertain, how far learning difficulties could be removed. It may suggest about reteaching or further remediation.

Remedial Programme for Teaching Pronunciation

Remedial programme for teaching pronunciation has to take into consideration the individual weakness of students. As students belong to different classes, schools, and regions, there can be no rigid programme. Hence, we are suggesting only its broad outlines.

Difficulties in Learning Pronunciation : E. M. Anthony writes "Difficulties in learning to pronounce the sounds of a second language are associated with the contrasts between the sound system of the native language and the language to be learned."

Enlightened by Anthony's opinion, we can predict that Hindi speakers will have difficulties in pronouncing words, such as 'thin,' 'them,' 'wall,' etc. Its reason is that in Hindi there is an almost even distribution of stress, except in emotionally tense situations. It is therefore, not surprising that Hindi speakers are not able to use proper stress.

As these forms are not found in Hindi, the speakers of this language do not understand their difference. Consequently, they use weak forms in place of strong ones, and full forms in place of contracted ones.

Identification pronunciation Difficulties : We can predict the pronunciation difficulties of Hindi speakers, as pointed out above. But in the absence of experimental evidence, the difficulties remain hypothetical. We should, therefore, determine the actual pronunciation difficulties of Hindi speakers. We can do so by administering to them pronunciation tests, constructed by Lado Robert in his book, *Language Teaching*.

General Objectives of Remedial Pronunciation

According to I. S. Srivastava, the general aims of remedial pronunciation are as follows :

1. "To teach a type of pronunciation which will be internationally intelligible.
2. Top root out the mispronunciations of English sound. which due to the influence of the mother-tongue."

Specific Objective of Remedial Pronunciation

In the words of I. S. Srivastava, the specific objectives of remedial pronunciation are as follows :

1. "To help the students learn those vowels, consonants, and consonant clusters which present special difficulties to Indian students.
2. To help them use proper stress and intonation.
3. To help them use weak and strong forms properly.
4. To help them use contracted forms properly.

Procedure of Remedial Work

Remedial work should be done in small groups of backward students on the following lines :

(1) Lecture and Demonstration : While teaching remedial pronunciation, the teacher should lecture as well as demonstrate. He should give simple demonstrations, because they are always effective. For example, he can demonstrate the sound 'W' with lips rounded and pushed forward. In the same way, he can demonstrate the sound 'V' with the lower lip pressing against the upper teeth. He should supplement his demonstrations with charts showing the position of lips and tongue.

(2) Listening Practice : Teacher's demonstrations should invariably be followed by a listening practice on the part of students. In this respect, linguaphone records render excellent help. Students should be given ample listening practice. They should not be allowed to produce a sound unless they have plenty of opportunities of listening to it.

(3) Ear Training : I.S. Srivastava writes : "Ear training in its most effective form, can be imparted by reading out from a list composed of meaningless words, which when dictated give on clue through meaning to the sound composing them.

The guiding principles of remedial teaching of English pronunciation is that stress should be placed on maximum practice. Students should be given maximum practice in listening, imitating and producing sounds.

Remedial Programme for Teaching Spellings Errors

It is not possible to prescribe a definite programme for remedial teaching of spelling. Its main reason is that this programme

depends on individual weakness of students reason is that this programme depends on individual weaknesses of students who differ from class to class, from school to school, and from region to region. As such, we are suggesting only the general principles and broad outlines of this programme.

General Steps : In the remedial teaching of spelling the teacher should follow the undermentioned general steps.

(1) **Collection of Spelling Errors :** The teacher should collect a large number of spelling errors. By studying them. He should determine the students's tendencies in spelling conventions, use, of spelling rules, and other spelling deficiencies. He should collect words misspelt by more than 90% students of a class.

(2) **Construction of Spelling Tests :** The teacher should construct spelling tests with the help of the spelling errors collected by him. They should preferably be constructed on the pattern of the diagnostic tests of spelling developed by *Fred. J. Schonell* and others in the West.

(3) **Selection of Backward Spellers :** The teacher should administer the spelling test of students. He should select backward spellers on the basis of the student's scores on the tests.)

Techniques of Remedial Teaching

The teacher should use the following techniques preferred by *Schonell* for remedial teaching of poor spellers.

- (1) Words which are difficult from the spelling point of view should be grouped according to rational plan. Some suggested groupings can be as follows :
 - (a) Might, Sight, Fright, Bright.
 - (b) Cutting, Running, Setting, Shutting.
 - (c) Know, Knot, Knock, Knight.
- (2) Only three or four words should be presented to backward spellers each day.
- (3) The visual look of words should not be changed by underlining their difficult parts or by writing these parts with coloured chalk.
- (4) Students' attention should be drawn to difficult parts of words without underlining or marking them.

- (5) Students should be asked to look at a word, hear it spoken by the teacher, say it, and write it.
- (6) The teacher should help the students to analyse the multi-syllabic words into their constituent syllables.

While teaching remedial spelling to backward spellers, the teacher should always bear in mind these words of backward spellers, the teacher should always bear in mind these words of schonell : "It is by combination of visual[auditory, articulatory and grapho-motor impressions that the spelling of words is firmly fixed in memory."

Remedial Strategies of Social Science Teaching

Meaning and definition of diagnosis and diagnostic test, functions and structure have been discussed in earlier chapter. The purpose of diagnosis is to reveal cause-effect relationship. The diagnosis is done to identify the causes of learning difficulties and type of weakness. The experienced teachers can identify the causes of learning difficulties on the basis of their observation. The diagnosis Several strategies of remedial teaching have been developed. It is not possible to enumerated and describe these remedial strategies of teaching. The following remedial strategies are used in Social Science teaching :

- {1} Tutorial System,
- {2} Mastery Learning Strategy,
- {3} Supervised study (*process of assimilation*)
- {4} Branching programme strategy as remedial device
- {5} Action research as remedial device.

The above remedial strategies have been discussed in the following paragraphs. These strategies are used for removing different types of learning problems and difficulties.

Remedial Procedure :

Generally two process are used for remedial purpose :

- (1) **Teaching Process** : Tutorial System and Mastery Learning Strategies.
- (2) **Instructional Process** : Branching programming and adjustive devices.

Teaching and instructional remedial process are used for solving the immediate learning difficulties and problems. The ultimate objectives is to develop master learning and to evolve effective remedial strategy of teaching or instruction. The remedial process is used in both teaching as well as instruction. The remedial process are broadly classified into three categories :

(A) Teaching Process or Remedial Teaching :

- A₁— Tutorial system or teaching
- A₂— Mastery learning strategy, and
- A₃— Supervised study or Assimilation stage.

(B) Instructional Process or Remedial Instruction :

- B₁— Branching Programming, and
- B₂— Adjustive Devices.

(C) Action Research as Remedial Devices :

(A) Teaching Process for Remediation

This type of process of teaching is organized by the teacher as re-teaching to poor students. The most popular and commonly used strategy is the tutorial system. It is planned and organized for specific groups having the specific learning difficulties. It is individualized teaching process.)

{A₁} Tutorials Strategy

Tutorials strategy is considered both autocratic and permissive type of teaching. It is generally considered to be one of the most valuable educational experiences. Lecture strategy is followed by tutorials because individual difficulties can both solved in lecture. Tutorials are highly individualized type of teaching.

Focus : Tutorials aim at to provide remedial help of the learner or to help individual difficulties of the learner. The cognitive and affective objectives may be achieved by the tutorials.

Structure : Tutorial classes are formed by considering the homogeneous type of difficulties of the learner. The small homogeneous group is assigned by one teacher. He has to give remedial help to the learner. Tutorial is a follow up programme.

Principles : It is based upon the following teaching principles.

- (1) It considers the individual difference.

- (2) It establishes the rapport with learners.
- (3) It provides educational guidance.
- (4) It organizes as remedial help to the weak learner.

Type of Tutorials : Tutorial covers a wide range of teaching activities. These may be classified under three heads :—

(a) **Supervision Tutorials :** In this type of tutorial students and teacher meeting are arranged regularly. A student reads an essay and defends it with arguments. This strategy can provide an opportunity to dependant his understanding of subject can provide an opportunity to deepen his understanding of subject for able student. It stresses on the mastery over the basic skills of scholarship.

(b) **Group Tutorials :** These tutorials are useful for an average students. These can satisfy the needs of less exceptional students. The teacher should have the background of social psychology and group dynamics so that he can deal with group tutorials effectively in solving their problems.

(c) **Practical Tutorials :** These tutorials are commonly used for both group and individual basis to achieve psychomotor skills in laboratory, workshop and rehearsal. These tutorials are basically employed to achieve the psychmotor objectives.

Group tutorials are more useful in adult teaching. A tutorial strategy is more useful for achieving higher-order cognitive, affective and psychomotor objectives.

Advantages : The following are major advantages of tutorials:

- (1) It is a valuable teaching strategy from individual differences point of view.
- (2) it provides an opportunity to organize remedial teaching.
- (3) It can fulfil the need of entering behaviour of the learner.
- (4) It provides full freedom to the learner to seek the clarification of their problems and can raise their level of performance.

Limitations : It has the following disadvantages—

- (1) One teacher cannot solve the difficulties related to different subjects and different students.
- (2) The teacher becomes bias and does not take interest in the problem of each and every student.