

Technical Appendix to

THE IMPACT OF DIAGNOSTIC FEEDBACK TO TEACHERS ON STUDENT LEARNING: EXPERIMENTAL EVIDENCE FROM INDIA

Karthik Muralidharan and Venkatesh Sundararaman

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Appendix A. Details of Communication Letter to Schools

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To
The School Committee/School Headmaster/Teachers
XXX Primary School
Address

As you are aware, your school has been randomly selected for a study on improving learning outcomes in primary schools in Andhra Pradesh. This study is being conducted by the Azim Premji Foundation with the support of the Department of School Education, Government of Andhra Pradesh. The Azim Premji Foundation (APF) is a not-for-profit organisation based in Bangalore and works with many state governments in India running various schemes to improve primary education.

The first step in improving learning outcomes is to identify the level of student learning in various competencies and to understand their strengths and weaknesses. This was the objective of the tests conducted a few weeks ago in your school. These tests were developed after careful analysis of the competencies that children should have at various stages of educational development and were designed to provide an accurate picture of learning-levels. A key feature of these tests is that they are administered independently by the Foundation with a view to providing detailed feedback on how to improve learning levels in government primary schools.

We have analysed the data from the performance of the children in your school and are now in a position to provide the following information to you:

- 1 Each child's original answer paper, with the assessment code assigned by the evaluator to each question.
- 2 A test scorecard that shows the evaluation criteria for each question, the meaning of each code, and the marks assigned to each code.
- 3 A detailed question by question summary report of the performance of each child in each class for both subjects (Telugu and Mathematics).
- 4 This question summary report is organised by skill and the questions corresponding to each skill are shown along with each child's summary performance in each skill.
- 5 We also provide a descriptive summary of the areas of relative strength and weakness of children in your school

- 6 In addition to data on the performance of the children in your school, you are also provided with data on the average performance of the children in your district and in the state.

A short note on how these results can be used is attached along with the assessment reports. The note also includes some tips and suggestions with regard to how to improve the skill levels of children in your school and on how to develop teaching plans for different children in your school.

We hope that this assessment and report will help you in improving the learning outcomes of children in your school. We will conduct another similar test at the end of the school year (in March/April 2006) to track the progress of the various students and expect that all enrolled students will take the test. If you have any questions regarding the test, the assessments, or the reports, you may contact either the Mandal Education Officer of the Government of Andhra Pradesh or the Mandal Coordinator of the Azim Premji Foundation.

We wish you all the best for your teaching activities over the school year.

XXX XXX

District Education Officer Project Manager
Government of Andhra Pradesh Azim Premji Foundation

Appendix B.2. Extracts from the Note Accompanying the Class Reports

How to read your test analysis reports?

A sample of the results of a School exam/ board exam may look like the following

Telugu = 53% Mathematics = 69%

If we only go by the marks it appears that the Sample Student is 'Weak' in Telugu and 'relatively good in Mathematics'. The important question is – Does this analysis answer the following questions?

- 1 Are there any areas of strength in Telugu?
- 2 Are there any areas of weakness in Mathematics?
- 3 Is 69% good when compared to other students across the whole state?
- 4 Which are the concepts that the student has not understood in the portion covered and which are the concepts the student has understood and internalised?
- 5 Why is the Sample Student making the mistakes s/he is making?
- 6 What are the skills in which all the students in the class are doing well and what are the areas/skills they still need to improve?

The answers to all these above questions are given in the reports given to you. By using these reports, as a teacher you will be able to

- Develop appropriate expectations for your students.
- Recognise the strengths and weaknesses of your students, and
- Understand the degrees of difficulty students have with different concepts.

Appendix B.3. Template for Diagnostic Feedback Letters

Andhra Pradesh Randomised Evaluation Test – Assessment for Student Learning (July 2005)

Village Name (xxx)/School Code (yyy)

This letter provides feedback on the performance of children and entails some recommendations that can help students in your school improve their learning.

Mathematics

Mathematics Class 2

The strongest skill in Class 2 was found to be '*Number Concepts*'. This means that children in your school are good at identifying, counting and comparing numbers. The weakest skill in Class 2 was found to be '*Measurement and Application*'. This means that children in your school have not understood the meaning of different attributes like heavy/light, tall/short etc. To correct this we recommend the following:

- 1 Make use of teaching aids like Calendar, Rhymes which teach weekdays, months etc.
- 2 Show children currency notes and coins in the classroom.
- 3 Try using visual clues like pictures, or use nearby surroundings in the school premise.

Mathematics Class 3

The strongest skill in Class 3 was found to be '*Number Concepts*'. This means that children in your children are strong in identifying/naming numbers up to 1000 and have a good understanding of ordering, place value, number patterns, etc. compared to the rest of the state. The weakest skill in Class 3 was found to be '*Geometry, Shapes and Pattern*'. This means that the students have a weak understanding of space and shape, and are weak in identifying basic

plane shapes, geometrical patterns etc. compared to the rest of the state. To correct this we recommend the following:

- 1 Make use of objects in the school, shape cut outs, drawings etc. to familiarise with shapes.
- 2 Encourage playing with tiles of different shapes, building blocks, etc.
- 3 Make use of the names of shapes as much as possible in day-to-day conversations.

Mathematics Class 4

The strongest skill in Class 4 was found to be '*Addition and Subtraction*'. This means that the students are strong in computation problems based on addition/ subtraction of numbers up to 3 digits – both without and with regrouping compared to the rest of the state. The weakest skill in Class 4 was found to be '*Word Problems*'. This means that the students are weak in solving basic word problems involving all four operations, ordering, etc. and lack the ability to apply mathematics to real life problems compared to the rest of the state. To correct this we recommend the following:

- 1 Expose students to situations and problems they can identify with.
- 2 Encourage students to make up realistic problems for a given fact.
- 3 Encourage students to read more to improve language.

Mathematics Class 5

The strongest skill in Class 5 was found to be '*Operations on Whole numbers*'. This means that the students have a good understanding of all four basic operations and the relation between them and are strong in computations involving one or more operations compared to the rest of the state. The weakest skill in Class 5 was found to be '*Fraction Concepts*'. This means that the students have a weak understanding of the basic concepts of fractions. To correct this we recommend the following:

- 1 Reinforce the concept of fractions through a variety of real-life situations like dividing fruits, paper folding and shading, etc.
- 2 Use paper folding to explain concepts like equivalent fractions, etc.

Telugu

Telugu Class 2

The strongest skill in Class 2 was found to be '*Follows simple instructions*' []. This means that children in your school are able to follow simple commands and instructions (listening skill). The weakest skill in Class 2 was found to be '*Writes simple words either in response to dictations or simple questions*' []. This means that children in your school are weak in constructing words. They may be familiar with the letters, but face difficulty in writing simple 2–3 letter words. To correct this we recommend the following:

- 1 Stress on Phonics.
- 2 Use teaching aids such as flash cards, flip charts etc. to teach simple words.
- 3 Use worksheets.

Telugu Class 3

The strongest skill in Class 3 was found to be '*Recognises and writes letters, knows starting sound and alphabetical sequence*'. This means that are strong at recognising and writing letters as per their sound and alphabetical sequence compared to rest of the state. The weakest skill in Class 3 was

found to be '*Understands simple story narrations and answers questions*'. This means that the students are weak at understanding the meaning of words/sentences in simple stories that are read out and are weak in answering related questions compared to rest of the state. To correct this we recommend the following:

- 1 Narrate simple stories with pictures once a week.
- 2 Narrate simple stories with actions and ask oral questions.
- 3 Narrate simple stories with intonation and use worksheets for comprehension exercises.

Telugu Class 4

The strongest skill in Class 4 was found to be '*Reading/Writing of words*'. This means that the students are strong at recognising and writing names of common objects, feelings and actions compared to rest of the state. The weakest skill in Class 4 was found to be '*Constructs more complex sentences independently*'. This means that they are weak at constructing complex sentences using conjunctions independently compared to rest of the state. To correct this we recommend the following:

- 1 Use sentence jumbles for practice.
- 2 Ask children to make 2 sentences with names of things in the room and then join them into one sentence.
- 3 Use 'Gap filling'/'Jumbled sentence' exercises in worksheets.

Telugu Class 5

The strongest skill in Class 5 was found to be '*Knows alphabetical sequence in any form*'. This means that the students are strong at sequencing letters/ words alphabetically compared to rest of the state. The weakest skill in Class 5 was found to be '*Comprehension*'. This means that the students are weak at reading and understanding stories/passages and reproducing statements from the passages compared to rest of the state. To correct this we recommend the following:

- 1 Use direct questions on short texts of 4–5 sentences on wild life, nature, places.
- 2 Ask direct questions on translations of Panchatantra.
- 3 Use simple questions on short passages in worksheet.

We hope that the above will help you and your students to achieve better results.
With warm regards,