Developing Language Proficiency While Working Across Diverse Subjects

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Language learning is not confined only to the language classroom; other subjects, such as science, social studies, or mathematics, also facilitate language learning. This article suggests experiential approaches to enhance the development of reading and writing skills, particularly among upper-primary students who have not been able to acquire the expected level of language competencies.

The main objective of language teaching at the primary level is to develop foundational skills in students. It is expected that by the time students reach the upper-primary level, their reading and writing abilities will be fully developed. However, most of the students do not acquire adequate skills in reading, comprehension, and writing even by the upper-primary level. Owing to this, besides language development, students face difficulties in understanding concepts, connecting with the text, and working on exercises in subjects, such as social studies, mathematics, and science. This creates obstacles to learning at their levels and prevents them from progressing. Teachers at the upper-primary level often face challenges, such as:

- How should they work on subject-specific concepts and competencies with students who struggle with reading and writing?
- Should they devote additional time to building foundational reading and writing skills? If they do this, then these students will fall behind in grade-level subject concepts and skills.
- Should they focus primarily on grade-level subject content and competencies? If they do this, students who have difficulties in reading and writing may lag behind in class.

The issue is complex. The question now is: How do we work with the students? What are the approaches that can help them connect meaningfully with the classroom?

In this context, an attempt was made to understand the classroom practices of some upper-primary school teachers and to observe how they are working to overcome these challenges in order to ensure students' learning. Here, we look at certain practices and processes adopted by teachers, illustrated through examples from different subjects, which can be implemented in classrooms.

> **If a child has not acquired the expected foundational skills, it is the teacher's responsibility to understand their difficulties and provide support tailored to their needs.**

At the upper-primary level, it becomes essential not only to work separately on reading-writing and subject-specific competencies, but also to carry forward previously acquired skills within regular subject teaching. For this, effective teaching approaches must be explored not only during regular subject classes but also by conducting additional sessions. It is vital to understand that students who are facing learning-related challenges require planned and systematic support. In such a situation, if a child has not yet acquired the expected foundational skills, it is the teacher's responsibility to understand their difficulties and provide support that is tailored to their needs.

Assessment

Assessment is an effective process for understanding students' learning levels in the classroom. Along with evaluating language-related competencies, it is equally important to assess where students stand in terms of subject-specific concepts and skills. For instance, can students provide examples based on their surroundings and experiences? Such understanding can help teachers plan their work with students more effectively. For example, while teaching the concept of the 'Effect of heat in an electric circuit' in science, a teacher may observe the learning outcomes that a class VIII student is able to achieve related to electric circuits. Can the student independently analyse the effect of heat on an electric circuit? If not, then the teacher may first need to work with the student on understanding the different components of an electric circuit before moving further.

No additional material is required to assess language competencies; this can be done during regular subject teaching itself. Let us look at some approaches suggested by a teacher:

- During discussions based on a lesson, teachers can ask questions and observe students' responses. This helps in understanding whether students are only able to answer fact-based questions or can clearly explain concepts as well.
- Teachers can give opportunities to students to read a text individually or in a group. During this process, the teacher can observe their reading progress: who reads fluently, who faces difficulties, and whether students are able to identify and explain the main ideas of the text.
- Students can be asked to present a topic or concept through drawings, flowcharts, or similar visual formats, and then write a description of it. For example, present pointers or illustrate how an electric circuit works when a switch is turned on, or how the circulatory system works.

In addition, students' understanding can also be assessed through projects, presentations, question-answer discussions, and similar activities, while continuously observing their participation and responses.

Compared to the primary stage, by the time students reach the upper-primary level, their experiences and skills have developed to a certain extent. Even if a child is not yet proficient in reading and writing, their ability to understand and learn concepts tends to improve. Subject-based assessment can, therefore, be designed around key concepts or themes of the subject. For this, it will be useful for teachers to clearly identify grade-appropriate expectations and learning outcomes related to the concept or theme. Then, it becomes possible to form groups based on the assessment and develop a teaching plan.

From everyday language to the language of the subject

At the upper-primary level, general language proficiency alone is not sufficient, as each subject has its own specific language and vocabulary. Therefore, while working with students, it is important to move gradually from everyday language towards subject-specific language and terminology, using familiar language as a foundation. This acts as a bridge for students to understand subject-specific concepts. It also supports the development of oral expression as well as reading comprehension skills.

While working with students, it is important to move gradually from everyday language towards subject-specific language and terminology.

For example, teaching about the respiratory system in a science class, the teacher first worked on the vocabulary related to the concept. The teacher connected these subject-specific terms with simple, commonly used words and wrote both everyday language and subject terminology on the board and discussed them in the class.

Later, these vocabulary words are displayed on the classroom wall. Some examples of such vocabulary connections include: linking temperature with the idea of heat; trachea as the breathing tube; larynx as the voice box; magnetic substances as objects attracted by a magnet; circuit as the path through which current flows; energy as the capacity to do work; reflection as light bouncing back after striking a surface; refraction as light passing through; and transparent as something that is see-through and so on.

This process was not limited to vocabulary. Along with discussing and understanding the lesson, students were given multiple opportunities to read and write. For students who faced difficulties in reading and writing, their responses to questions were discussed and then written on the board. Students were asked to copy them into their notebooks. After teaching the lesson, students were asked short concept-based questions such as:

- If the switch is removed from a circuit, will the bulb glow? Why or why not?
- If a wire is removed from the circuit, what will happen?
- What will happen if the bulb itself is removed?

The answers were written along with classroom discussion. Through this process, understanding the lesson becomes easier, and even those students who are not yet at grade level are able to participate actively in the classroom.

Classroom environment

Materials displayed around students provide repeated opportunities for them to encounter different words and concepts. For students who feel uncomfortable reading extended texts, such materials offer accessible reading experiences. However, it is important that these materials match students' learning levels and needs.

For example, a teacher had displayed on the walls the words that students had learned, placing charts of key vocabulary as they worked on each concept, and presenting concepts through flowcharts.

In the classroom, students were seen reading the written words displayed around them. Through flowcharts, they were able to clearly explain concepts, such as adolescence and electricity. However, this print environment was not limited to wall displays alone.

While teaching the circulatory system, the teacher collaboratively created a large diagram on the floor along with the students, labelled its parts, and worked through the entire process together. Students who struggled with reading and writing were nevertheless able to explain the process with ease and recognise the labelled terms. Here, the teacher emphasised language development alongside subject content and created meaningful opportunities for students to engage in reading.

Use of level-appropriate TLMs

A thoughtful combination of level-appropriate teaching materials and activities helps students progress in their learning. Teaching-learning materials (TLMs) need to be designed or selected based on subject concepts in ways that make learning easier for students.

For example, while working on the concept of maps in social science, a map should be available in the classroom so that foundational activities related to map work can be carried out with students. These may include understanding directions, identifying the location of different states, and interpreting symbols used on maps, etc. Similarly, with the help of a globe, students can explore concepts, such as Earth's rotation, the time taken for one rotation, and the occurrence of day and night. The more opportunities these materials provide for hands-on engagement, the more students develop both conceptual understanding and reading skills simultaneously.

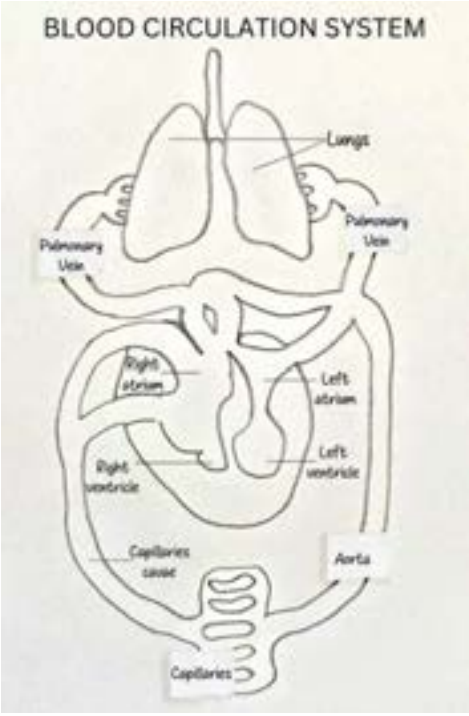


Figure 2: The TLM that shows the diagram of the blood circulation system that the students have to label.

It is important to provide adequate opportunities for reading and writing with activities, such as using the spelling and structure of a word to match it with the complete word, labelling pictures, and so on.

An example from a science classroom is shown in *Figure 2*. In this TLM, a picture of the circulatory system is drawn along with related vocabulary. There are also slips with the names of the organs for the students to match and place on the picture. In the next activity, students can be given blank slips on which they have to write the organ names and place them on the appropriate parts in the picture.

Project-based tasks

Through project-based work, students can be actively engaged in the processes of reading, understanding, and explaining a lesson. Textbooks provide many opportunities through which students can be connected to learning processes beyond the classroom. It is, of course, important to ensure that tasks related to any subject provide opportunities for expression not only through oral communication but also through writing, drawings, and the use of words and visuals. It is also possible to design a single task in a way that integrates concepts from different subjects. Such a planned and systematic approach can help strengthen both language

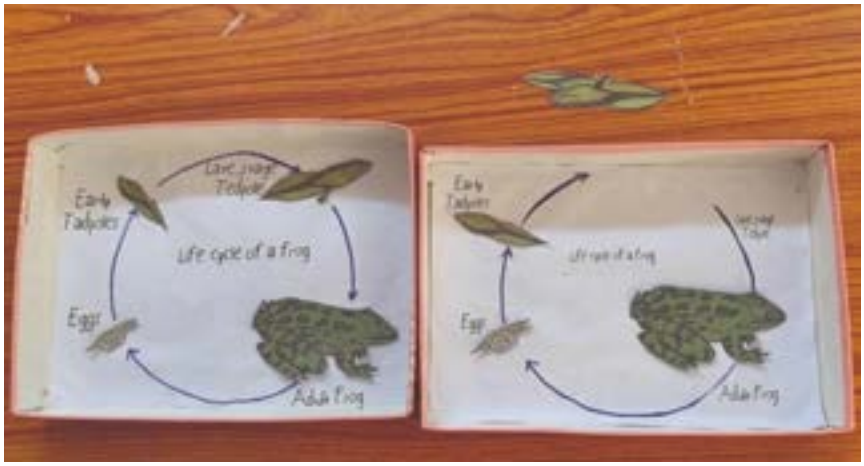
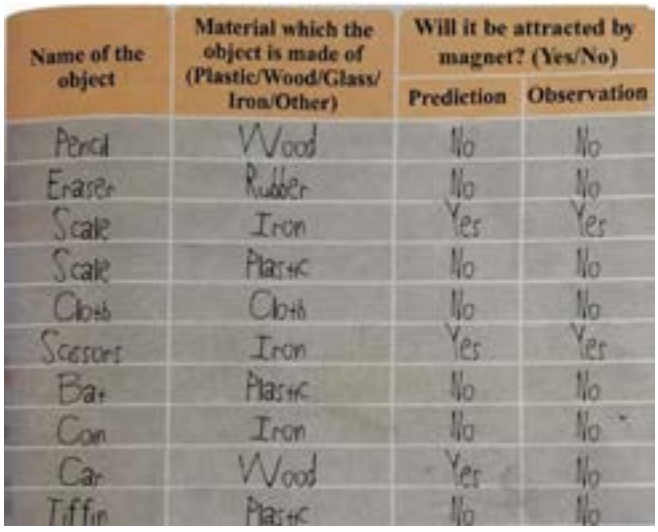


Figure 3: Another TLM for a similar exercise to explain the life cycle of a frog.



Name of the object	Material which the object is made of (Plastic/Wood/Glass/ Iron/Other)	Will it be attracted by magnet? (Yes/No)	
		Prediction	Observation
Pencil	Wood	No	No
Eraser	Rubber	No	No
Scale	Iron	Yes	Yes
Scale	Plastic	No	No
Cloth	Cloth	No	No
Scissors	Iron	Yes	Yes
Bat	Plastic	No	No
Coin	Iron	No	No
Car	Wood	Yes	No
Tiffin	Plastic	No	No

Figure 4: A classroom exercise on identifying objects, the metals they are made of, and whether they will be attracted by a magnet or not.

competencies and subject-related concepts and skills simultaneously. (See *Table 1* below)

Integration of content and reading-writing skills

In all the above examples, establishing coordination between subject content and the development of reading-writing competencies is of utmost importance. During classroom teaching, the following points can be incorporated into planning while working with students who experience challenges in reading and writing:

- Teachers can observe and identify tasks a child can complete independently while understanding a concept. For example, while working on a lesson, writing key words on the board, asking students to locate words in the textbook and write them down, and engaging students in similar activities can support comprehension.
- Efforts can be made to include certain activities in mixed groups, where students of different learning levels work together on a task. For instance, discussing possible answers to questions and writing them collectively, expressing ideas in written form after discussing a picture, reading a text collaboratively, or preparing lists together.
- Students' work may also be differentiated according to learning levels. Those who face difficulties in writing can be encouraged to label pictures, express ideas through drawings, oral responses, or other modes of expression, and gradually be supported in bringing these expressions into written form. Students who are able to read and write independently can be included in groups in ways that enable them to support and assist their peers.

As teachers, it is equally important to understand how the content of a lesson can be taught in simpler and more accessible ways. For example, presenting the key points of a lesson on the board and explaining concepts through diagrams, tables, and visual representations can help make the subject matter more comprehensible.

It is essential to give special attention to students who struggle with reading and writing, to include them in every classroom process, and to create opportunities that gradually enable them to develop language competencies.

Table 1: Examples of tasks that strengthen both language and subject-related skills.

Theme	Science	Social Studies	Connection with Language
Soil and Crops	• Collect information about the different types of soil available in one's surroundings. • Gather information about the changes that occur in soil. • Understand the fertility levels of different types of soil. • Collect information about crops that grow locally and prepare a list of food items made from them.	• Understand different types of soil and collect information about which crops are grown in which type of soil. • Explore which types of soil are found in different regions, such as brown soil, rocky soil, red soil, and black soil and investigate the reasons behind this. • Gather information about crops, understand crop cycles, and prepare lists based on the findings. • Collect information about the crops grown in one's city or local region.	• Present the information related to the given task in written form. • Write about the changes that occur in soil, in your own words. • Find a poem related to soil, read it and recite it in class.

Food	• Write about the different components related to food and collect information on which nutrients are obtained from which foods. • Create a food mile map, tracing the journey of food from the field to the plate.	• What are the different types of food items that people eat? • Collect information about the kinds of food consumed in different regions, such as Gujarat, Madhya Pradesh, Uttarakhand and others.	• Present the assigned task in written form. • Write a recipe for any one dish, such as *dal-baati.*
Water	• Understand the water cycle, that is, where water comes from, by discussing it with people at your home or in the surrounding community.	• Collect information about the water sources available in the local area, such as: • How was the lake formed? How old is it? • How was the stepwell constructed? Who built it? And how old it is, etc.	• Draw and label a diagram of the water cycle. • Students who can read and write can describe the process of the water cycle in detail. • Gather information about water sources, their uses, and their history, and write about them in one's own words. Present the writing by reading it aloud in class. • Find a song related to water, present it orally, and write it down.
Metals	• Prepare a list of materials or utensils available in one's surroundings, such as a ball, hammer, spoon, bottle, earthen pot, pitcher, etc. • Identify which materials are made from which metals, and find out which metals are attracted to a magnet, and which are not, etc.	• Collect information about household utensils, their structure, the metals used, their uses, and their historical contexts. For example: Which types of metal utensils were commonly used in the past and which metals are more commonly used today?	• Write, in one's own words, the information collected through the task. • Write about the structure and uses of any one selected material or object. • Write the history of utensils in the form of a story.

Translated from Hindi. *Translator: Dawangara Umat* *Vetter: Simran Luthra*

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