
UNIT 3 USING THE CROSS-CURRICULAR APPROACH

Structure

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Language Across Curriculum (LAC): Ways and Means
 - 3.2.1 Whole Language Perspective
 - 3.2.2 Content and Language Integrated Learning (CLIL)
- 3.3 Strategies
 - 3.3.1 Thematic Approach to Teaching-Learning of all Subjects and Language in the Primary School
 - 3.3.2 Language Registers
 - 3.3.3 Project Work as an Instrument for Promoting LAC
 - 3.3.3.1 Short Term Project Work
- 3.4 Writing Across the Curriculum
- 3.5 Reading in Subject Specific Content
- 3.6 LAC as a Response to Internationalization of Foreign Language Instruction and to Promote Multilingualism as a Strategy
- 3.7 Role and Place of English in the Processes of LAC in Indian Contexts
- 3.8 Let Us Sum Up
- 3.9 Hints to Check Your Progress
- 3.10 Suggested Readings

3.0 OBJECTIVES

At the end of the Unit you should

- be familiar with the concept of language across the curriculum;
- understand the centrality of language in any learning;
- understand and distinguish language use and language register of different content subjects viz. Science, Social Science, Mathematics; and
- be able to design activities for promoting language learning through content learning, and use language as an instrument for learning of content subjects.

3.1 INTRODUCTION

There is plenty of research evidence to show that in real life children do not compartmentalise learning. In fact, learning progresses from simpler, concrete, general and more holistic forms initially, to more complex, abstract, specific and fragmented learning at a later advanced stage. This has great relevance to the development of reading and writing skills in the initial years of school. This essentially means that language learning is not confined to the area of the language class alone. Much of the language skills that develop at school are within other subject areas. Although this is particularly true of the mother tongue, it is also relevant to schools where there is a transition to the second language, in this case

English, as the medium of instruction. It is important to expose the children to language tasks from various subject areas, right from the beginning so that they are adequately prepared for later reading and writing tasks in school, and in real life.

Before we specifically look at language across the curriculum let us take a glimpse at the philosophy of integrating the curriculum through what may be called 'holistic teaching'. Holistic teachers endeavour to place the children's learning within the context of their own experiences. **There is a fundamental belief that when learning is meaningful, children learn.** In fact in a meaningful environment it is difficult to stop children from learning. Within the constraints of the formal syllabus, teachers should try, as far as possible, not to fragment learning or divide and subdivide it into artificial time periods or subject areas. We must recognise the fact that boundaries between subject areas have been artificially created, purely for convenience. There are overlaps and a flow between subjects. In the child's mind there are no compartments. These are artificially created. Whether writing happens in a mathematics class or a writing class, it draws upon the same writing competencies and skills.

Sometimes the difficulty in solving a problem sum in mathematics is due to inadequate understanding of the language. It is essential for teachers to encourage children to read, write, and speak in all areas of the curriculum. Teachers should take advantage of an opportunity to teach a geography lesson during a reading class, if the need arises, or the other way round. Such teachers are aware that natural learning that continuously takes place in the real world is not fragmented. Such teachers make efforts to integrate the children's learning across the various subject areas, to the greatest extent possible.

A distinction has often been made between two sets of language skills – Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). The abilities of interpretation, expression and negotiation are essential for basic interpersonal communication. Cognitive Academic Language Proficiency, on the other hand, is concerned more with the abilities of thinking and learning effectively from the curriculum processes. There is no doubt that both these sets of language skills need to be nurtured and developed. In reality, however, it is only the Basic Interpersonal Communication Skills that receive some attention in the English language classrooms. Snow, Met and Genesse (1992) suggest that "traditional methods for teaching second language often disassociate learning from cognitive or academic development." Most of the time learners receive little or no help to make optimal use of their limited second language repertoire in the content subject classrooms. They are neither taught how to read reflectively in content areas nor are they encouraged to pick up study skills for effective learning. Those who excel in content areas do so largely because of their personal interest in the subject, aptitude and their own achievement orientation. The less interested depend heavily on rote memory. While most teachers concern themselves with presenting information in their subject, very few help students acquire the thinking strategies they need to actively construct meaning.

Content area literacy advocates are directing their attention toward "creating educational environments in which students are challenged to analyse, reflect, communicate and create. In such environments effective strategies for reading, writing, speaking, listening and thinking are more likely to develop more naturally

and easily than when these are addressed as isolated elements” (Manzo and Manzo, 1993).

Check Your Progress 1

- 1) How do you think language plays a role in learning of Science and Social Science? Discuss this in the light of your learning experience.

.....

.....

.....

.....

.....

3.2 LANGUAGE ACROSS CURRICULUM (LAC): WAYS AND MEANS

Language across the curriculum in the context of school, higher education and teacher education takes on a broader perspective where it is expected to serve two purposes. Firstly, adopting LAC as a language policy or strategy should be seen in the Indian multilingual context, where learners know at least two languages formally in school and are introduced to the third language from grade six under the National Language-in-Education Policy / strategy. Secondly, in making use of the multilingual classroom as a resource to teach-learn languages as well as content subjects. All National Curriculum Frameworks (developed in the years 1977, 1988, 200 and 2005) advocate **mother tongue-based multilingualism** and use of the languages of learners in the classroom processes as a strategy and a resource for teaching-learning of languages as well as content subjects. This brings the teaching-learning and knowledge construction by the learners closer to their environment and also becomes an authentic experience for them.

3.2.1 Whole Language Perspective

Language is central to learning. Learning, we believe, has to be happen in some medium and inevitably language is a medium for learning. Goodman (1989:209-210) believes that language exist for two reasons. *‘First, humans are capable of symbolic thought, that is, they let things represent other things-they can create semiotic systems. The second reason is that humans are social beings, dependent at birth and interdependent throughout their lives. Social communication among people is necessary so language is central to human communication and human thought.’* Being social enables humans to think and to communicate and communication makes language a major, central instrument of thought. According to Halliday (1978), “Language is a social semiotic. It is also the medium of human learning which makes human learning quite different from the learning of other species. Humans can share their experiences and insights through language and thus pool their intelligence.” For Halliday (1984) language learning is **‘learning how to mean’**, because in the process of learning language people learn the social meanings language represents. He describes three kinds of language learning that happen simultaneously: **learning language, learning through language and learning about language**. So he concludes, *we learn*

through language while we learn language suggesting that every activity, experience, or unit is an opportunity for both **linguistic and cognitive** development. Language and thinking develop at the same time that knowledge is developed and concepts and schemas are built. Whole-language perspective postulates that the act of learning a language is integrated in terms of language skills and concepts. In other words, language serves as an instrument for learning of content. Thematic approach activities illustrated in the forth coming sections illustrate how language learning and content learning are integrated.

Check Your Progress 2

- 1) What does Halliday mean when he describes three kinds of language learning that happen simultaneously: **learning language, learning through language and learning about language?** Can you make distinctions between the three?

.....
.....
.....
.....
.....

3.2.2 Content and Language Integrated Learning (CLIL)

Content and Language Integrated Learning (CLIL) came into practice as a means to address the demand of increasing globalization which gave rise to migration of people from one region to another for education, economic and market-based work and also due to political and social turmoil in parts of the world which have forced people to leave their homes/nations. Countries in the west, recognizing the need of their increased multicultural populations have had to devise ways in which they teach subjects (such as Social Science and Science) that are not in the language of their migrant learners. CLIL is nothing but language across curriculum, because it was designed in the non-mother tongue medium context while LAC refers to both the contexts. However, the philosophical underpinnings of both are the same. As Peeter Mehisto, David March and Maria Jesus Frigols (2008:11) assert ‘CLIL is a tool for the teaching and learning of content and language. The essence of CLIL is integration. This integration has a dual focus:

- 1) Language learning is included in content classes (e.g. Mathematics, History, Geography, Computer Programming, Science, Political Science, etc.). This means repackaging information in a manner that facilitates understanding. Charts, Diagrams, drawing, hands-on experiments and drawing out of key concepts and terminology are all common CLIL strategies.
- 2) Content from subjects is used in language-learning classes. The language teacher, working together with teachers of other subjects, incorporates the vocabulary, terminology and texts from those other subjects into his or her classes. Students learn the language and discourse patterns they need to understand and use a variety of content.

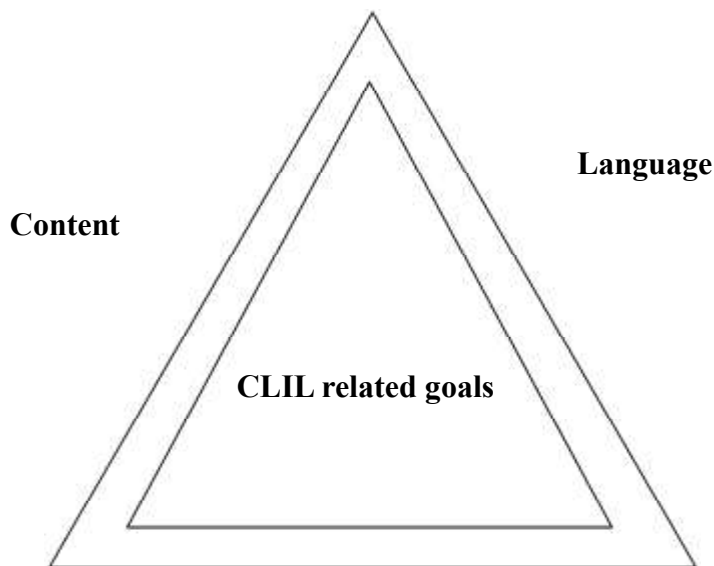


Figure 1 Three goals of content, language and learning skills (Mehisto, P., March, D & Frigols, Maria Jesus, 2008: 12)

There are several benefits of Content and Language Integrated Learning

- i) Learners are exposed to a considerable amount of language through stimulating content. Learners explore interesting content using language dependent activities.
- ii) Content and Language Integrated Teaching (CLIT) supports contextualized learning; languages taught are useful for language that is embedded within relevant discourse contexts rather than as isolated language fragments. Hence students make greater connections with the language and what they already know.
- iii) Motivates students - complex information is delivered through real life contexts for students to grasp well.
- iv) Greater flexibility and adaptability in the curriculum can be deployed as per students' interest.
- v) CLIT is student-centered, one of its goals is to keep students interested and motivated by generating stimulating content, instruction and materials.
- vi) In such classrooms, instead of the lecture method, students learn through doing and are actively engaged in the learning processes.
- vii) Central to CLIL is that learning happens not only through teacher input but through peer input and inaction. Students assume active social roles in the classroom that involves interactive learning, negotiating the information gathered and co-constructing the meaning.

Check Your Progress 3

- 1) Is CLIL a boon or bane for language teachers? Analyze the merits and demerits of CLIL in your context.

.....

.....

.....

.....

.....

3.3 STRATEGIES

As a classroom teacher, both the language and the subject teacher can design activities and tasks which lead to language learning in the content subject classroom as well as enable content subjects be used as tools for language learning in the language classroom. This interdisciplinary perspective makes it possible for language and subject teachers to come together in doing the tasks and activities.

3.3.1 Thematic Approach to Teaching-Learning of all Subjects and Language in the Primary School

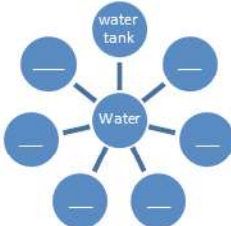
In a way, all learning in the **primary years** of learning is language learning. Vocabulary acquisition is stressed upon the most and serves as the basis for language and content learning. When learners enter school, they know and usually bring at least one language with them as their lived-in experience. This knowledge/skill is used as the basis for further development of language and content. However, the school curriculum is structured in such a way that learners are made to study the languages and subjects as separate entities. Even within language teaching, different languages are taught separately. For example, Hindi teaching has nothing to do with English language teaching-learning. It must be realized that subjects including languages are interlinked. A thematic approach could serve the purpose of bringing together the subjects and break the strict boundaries between subjects and languages as well as between languages. This would make learning authentic. If you take a look at the textbooks at the primary level we can see the syllabus revolves around *the home, neighborhood, my body, friends, my village, town and people in the neighbourhood and their work* and so on. The following thematic activity / unit explains it well:

WATER - for Class III / IV

Learning objectives and indicators:

- i) To familiarize learners of the importance of water for survival of life on earth through experience and tasks;
- ii) To introduce vocabulary (words and word chunks) related to water; and
- iii) To sensitise learners on the importance of water for environmental conservation through songs and stories.

First Language	English as a second Language	Environmental Studies (EVS)	Mathematics
1. A song on water is sung following (i) Choral singing,	1. A song on water is sung following (i) Choral singing, (ii)	1. Asking learners to go around the neighbourhood and find out the water	Activities for familiarising measurement of liquids in

<p>(ii) Snowballing and echo techniques for singing</p> <p>2. Telling a story on water</p>	<p>Snowballing and echo techniques for singing</p> <p>2. Telling a story on water in the first language as well as in the second language.</p> <p>3. Vocabulary building: creating word web on words related to water.</p> 	<p>bodies</p> <p>2. In a group work asking learners to find uses of water for humans, animals, vegetation.</p> <p>3. Difference between liquids and solids.</p>	<p>litre as against kilograms for measuring solid objects.</p>
--	--	---	--

Check Your Progress 4

- 1) How do you think thematic approach makes learning authentic? Illustrate with one such activity.

.....

.....

.....

.....

.....

3.3.2 Language registers

Each subject, say Mathematics, Science, Social Sciences has its own discourse, lexicon and structures which are distinct and unique. Even within a broad subject there could be distinctions, for example with regard to Science, Biology can be stated to be more descriptive than Physics which is more experimental. The language of Mathematics is logical and involves problem solving. Subject teachers need to be sensitive to the nuances of language i.e., towards what is called language registers viz. science register, mathematics register, social science register and so on. This makes it easier to perceive the discourse of the subject which is mostly conveyed through a language and helps in comprehending the ideas. Let's take a look at the language of NCERT's Science textbook of class IX, Chapter 3 Atoms and Molecules. (NCERT, 2006:32)

According to Dalton's atomic theory, all matter, whether **an element, a compound or a mixture is composed of small particles called atoms.** The postulates of this theory may be stated as follows: (i) All matter **is made** of very tiny particles called atoms. (ii) Atoms **are indivisible particles**, which **cannot be created or destroyed** in a chemical reaction. (iii) Atoms of a given **element are identical** in mass and chemical properties. (iv) Atoms

of different elements **have** different masses and chemical properties. (v)
 Atoms combine in the ratio of small whole numbers to form compounds.
 (vi) The relative number and kinds of atoms **are constant** in a given compound.

Take a look at the underlined sentences, phrases or clauses. They are in the passive voice or in simple present tense. This denotes that the Science register expresses neutrality, i.e., that facts have been proved, experimented or tested and accepted universally as truth. This may have been changed by another scientist later. But at the given point of time this is or was the truth. Language of Science presents the characteristics of Science as objective, neutral, amoral and of proven fact which can be tested anywhere in any condition. A Science teacher should be sensitive to the linguistic features which reveals the characteristics of science and scientific processes viz. observation, formulation of hypothesis, testing and so on.

The following is a corpus-based analysis of NCERT Mathematics textbook of class VI which shows how the language of Mathematics operates and where the use of determiners and prepositions are used to convey the mathematical concept of problem solving and abstraction. The most frequently used words are not the ‘content’ words, they are function words like articles, prepositions and so on. The word ‘number’ appears as the ninth most frequently used word. This reveals how the mathematical ideas and thinking are conveyed in language in assumptions, calculations, logical sequencing and thinking. Prepositions, determiners and conjunction play important role in making the calculations effective. For example, ‘into’ matters more when we do a multiplication.

N	Word	Freq.	%	Texts	% mmas	et
2	THE	410	5.19	1	100.00	
3	TO	179	2.26	1	100.00	
4	IS	165	2.09	1	100.00	
5	AND	164	2.07	1	100.00	
6	IN	153	1.93	1	100.00	
7	OF	143	1.81	1	100.00	
8	A	133	1.68	1	100.00	
9	NUMBER	122	1.54	1	100.00	
10	NUMBERS	113	1.43	1	100.00	
11	WE	103	1.30	1	100.00	
12	DIGIT	72	0.91	1	100.00	
13	YOU	63	0.80	1	100.00	
14	ARE	50	0.63	1	100.00	
15	AS	50	0.63	1	100.00	
16	FOR	47	0.59	1	100.00	
17	OFF	46	0.58	1	100.00	
18	IT	45	0.57	1	100.00	
19	PLACE	44	0.56	1	100.00	
20	CAN	43	0.54	1	100.00	
21	THIS	41	0.52	1	100.00	
22	DIGITS	39	0.49	1	100.00	
23	AT	38	0.48	1	100.00	
24	GREATEST	38	0.48	1	100.00	
25	HOW	38	0.48	1	100.00	

Figure Corpus analysis of mathematics textbook: Frequency counts of chapter 1 Class VI.

Check Your Progress 5

- 1) Analyze the language of a Social Science textbook keeping in view the following: (i) Tense and time of the statements (whether they are in present or past tense and active or passive voice) (ii) Whether the doer of the action is given importance or the processes of the action is more important.

.....

.....

.....

.....

.....

- 2) What do you understand by language registers? Explain with an illustration.

.....

.....

.....

.....

.....

3.3.3 Project Work as an Instrument for Promoting LAC

Inter-disciplinary project work engages and motivates learners. Many subjects get integrated and language becomes central in carrying out the task. Let's see how project work works as a cross disciplinary tool to learn the content of many subjects as well as concentrate on language usage.

Sl. No.	Project work Theme / Title	Subjects which can be involved
1.	<p>Conducting surveys among students and adults in and outside school. Language engagement involved:</p> <p>i. Designing survey questions</p> <p>ii. Asking questions / interview</p> <p>iii. Analysing and interpreting</p> <p>iv. Writing the report of the survey</p>	
	a. Use of tobacco survey	Science, Health, Social issues and problems, Mathematics (for calculation using statistical methods), Geography (to find where tobacco is cultivated?)

	b. Eating habits survey	Science, Health, Geography and History (history of the food item)
	c. Pocket money survey	Society, Economics and Health (what do we do with the pocket money)
	d. Sleeping and play routine survey	Health and wellness, science, human body and anatomy and society.
	e. Study habits survey	Health and wellness, Science, human body and anatomy, education and school, and society.
	f. Person of the year survey	Social Science, Politics and Society
2.	Holidays and festivals of the area; Language engagement involved: (i) Reading (about the holidays and festivals) (ii) Speaking to local people, (iii) Documenting, (iv) art and visuals, (v) writing	History, culture, economics, religion and society, art (drawing)

Here is an illustration of a short-term project work in detail.

3.3.3.1 Short Term Project Work

A. Project Work Title: Designing a brochure for tourists visiting your town / village.

Level: Elementary & Secondary

Age: 13 – 18 years

Time: One / Two week(s)

General Aims: To produce a brochure for tourists and visitors to our town / village

Subject involved: History, Geography, Economics and Language.

Language Aims:

- i) To know about the history of the place, different buildings, people, language and cultural activities in the village / town.
- ii) To develop the four language skills and strategic competences by using interviewing techniques, collection of data / information about people, places and economic indicators;
- iii) To learn to use appropriate vocabulary relating to History, Geography and Social life of the area and structures specific to a brochure;
- iv) To learn to write in a poster format.

B) The Process

Teacher has a brain storming discussion with the group about the idea / theme and asks learners to chalk out a plan of action for the project. Learners plan and allocate work to each member of the group and collect required information. They work together to design the brochure based on the collected data. The collected information from various sources-interviews, photos of monuments, facts and figures about the village, etc. is scrutinized and made into a poster / brochure to present it to a visitor. The brochure is made by the group using colorful ink, crayons, etc and the same is presented to the class. The following processes can be involved in carrying out the project work.

- i) **Selecting and briefing:** Projects can be initiated when learners and teachers decide on a topic. It is better to encourage students to bring their own ideas and have a whole class discussion to allot topics to each group. Alternatively, the teacher may offer a list of possible topics. Sometime whole class projects can also be thought of.
- ii) **Planning and language generation:** Having chosen a topic for the project, learners now work together to decide upon how to proceed and what kind of language needs to be used. The teacher has to direct this very carefully and here is where the learners need guidance and support. Some of the initial discussions may take place in the classroom paving way for activities in and outside the school. The work can also be divided among learners.
- iii) **Collection of data /information / details:** Learners gather required data/ information from a number of sources. They can consult encyclopedia, read books, interview people, collect pictures and illustrations, record audio/video, visit internet, watch TV, etc. They can write their field notes to remember and organise the data collected.
- iv) **Planning, writing the draft and editing:** Having collected the required data/ information and ideas, it is time now to plan and organise the data and interpret it to write the draft. Since most of the projects in language(s) will be a written report or creative work like play, songs, essays, chapterisation could also be planned. It is also possible to have projects in which learners work together to script and enact a play or direct a play. Editing is an important part of writing the report. Learners should be made aware of the process approach involved in writing a good piece of work.
- v) **The result and presentation:** The goal of the whole project has been achieved when learners work together to produce a report or do an activity. The final product may be a written report, a play, collection of songs or enactment of a play, designing a poster, etc. Learners are asked to submit it to the teacher and/or present it to the whole class or to the whole school during assembly or on special occasions (in case of play, songs, etc.)
- vi) **Follow Up:** The teacher with the group which carried out the project can think of possible follow up activities that would enable students to use language in different contexts. For example, a project could be about the class newspaper. This could be explored as a continuous feature;some

other group could try the next issue of the newspaper / magazine. Teacher should take care that the project should not hamper the other learning activities of students.

C) Teacher’s role

The teacher is the facilitator throughout the life time of the project. She is a catalyst and makes herself available whenever the learners need helping, prompting, clarifying and delimiting. Consultations with the language teacher or other subject teachers (if needed) are of immense support for learners to accomplish the task. The teachers along with students in the classroom discussions should develop a schedule of activities for each group and number of meetings/ consultations that they can have with the teachers while doing the project. Teachers should be able to suggest activities (i.e. projects) that would suit the interest of particular group of learners.

D) Assessing / Evaluating Project Work

Projects are part of the continuous assessment process. We need to ensure that each learner in the group takes active part in the work and contributes to the successful completion of the task. It is also very important that each learner is engaged with the language (uses the language in various ways) while doing the project. The language teacher may keep a check list or a chart to record what has been happening (who does what and how) during the project. Asking each learner in the group to maintain a diary of their work plan, how the information / data was collected and interpreted, the problems faced and the way the report / the final product was brought out, etc. could be of use for the teacher in assessing individual contribution in the group. This is one part of the assessment. The teacher also has to observe and record how each student in the group and each group as a whole made progress in carrying out the project. A checklist or portfolio may be developed to record the progress made by each student and each group. Descriptors to indicate the work done by each learner could be created collaboratively by students and teacher. We may also have specific guidelines (developed by teachers themselves) for assessing the project work as part of the Continuous Evaluation.

Descriptors in the Portfolio/record may look like this

Criteria for assessing the performance	Selection	Collection of Data	Compilation / Interpretation	Reporting and Presentation	Collaboration in the group
A	Suggested the idea or provided an alternative idea		Ideas elaborated coherently and with clarity		The group worked together well. There was cooperation
B	Supported the idea and provides more evidence				
C	Shown interest in carrying forward the idea generated.				
D	Remained passive or non receptive to ideas.				

Check Your Progress 6

- 1) What do you think are the benefits of project work in promoting language learning as well as content subjects?

.....

.....

.....

.....

.....

3.4 WRITING ACROSS THE CURRICULUM

Much of the writing that happens in the school is within other subject areas. It is therefore important to expose the children to writing tasks from various subject areas, right from the beginning so that they are adequately prepared for later writing tasks in school and in real life.

Since the mid-nineteen seventies, researchers in the western world have repeatedly pointed out a decline in the ability of students to write well. One reason given is that the students are not asked to write enough. Also writing work in other subject areas of the school curriculum is not often viewed as writing. One does not look at the writing of a mathematics problem or the flow chart of a geography lesson, or a report based on diagrammatic or tabular information as ‘writing’. Yet students spend a very large amount of time doing such tasks. These tasks require the ability to present ideas logically, to choose the appropriate style and form accurately; sometimes they also tap the ability to transcode information from a diagrammatic to the written form.

Writing research in recent years has highlighted the need to look at writing across the curriculum. This is because a very large amount of writing that happens in real life or in the later school years in the second language is to do with other subject areas. It is important, therefore to extend the kind of writing tasks we undertake to include activities from across the curriculum.

Writing in Science, Social studies or Environmental studies (EVS)

These subjects present endless opportunities for writing. Much of the learning that takes place in the areas of learning at this early stage is directly related to the children’s experience: **Children observe, collect, classify, experiment, and enquire about a particular subject area from their immediate environment.** They need to then communicate their findings in suitable ways. They can further extend their own understanding through suitably designed creative writing experiences. Suitably planned work cards are one way of allowing children to do their own, independent investigations and presentations based on these. These could either be done as a part of subject teaching or as a part of project work. To allow for individual interests the children could be given a set of work cards to choose from. In a class of very young children, it is sometimes simpler to have all the children working on the same thing, with some amount of individual variation. Much of the investigative work that children do at the primary school level is teacher selected. The best activities are ‘hands on’ experiences. In the

beginning these activities could begin by focusing on the child's skills of observation. Picture books can serve as very good research vehicles. Some samples of the kind of work cards that may be used are given below.

Flowers		
Ask students to collect two different types of flowers and bring them to their next class. Tell them to make the chart given below:		
Observations	Flower A	Flower B
Colour		
Shape		
Width		
Special characteristics		

Ask students to look carefully at the flowers and complete the above chart. Then use the information to write a paragraph that explains how these flowers are alike and how they are different.

Insects	
1	Find out how many legs an insect has.
2	How is an insect different from a bird?
3	How is it the same?
4	Draw a beautiful insect you saw. It could be in a book. Imagine that this insect became your friend. Write a paragraph about what you did together.

Jungles	
1	Name three jungle animals
2	Why are jungles so thick with plants and trees?
3	Write the names of any real jungles.
4	Write the name of a jungle story you have heard.
5	Imagine you went to a jungle. Write a story describing your experiences.

A Mammal	
1	Who do you think is the cleverest mammal in the world? Draw a picture of this mammal.
2	Write a riddle about this mammal and see if your friends can guess it.

My Five Senses

- 1 Name the five senses that you have.
- 2 Does everyone have five senses? What about animals like dogs, cats, cows, and goats?
- 3 If someone gave you a wish that you could have another sense what would you like? Write a funny story about what you would do with your sixth sense.

Kangaroos

- 1 Where do kangaroos live?
- 2 Why do you think a mama kangaroo has a pocket and a mama rabbit does not?
- 3 Supposing your mama had a pocket for you to sit in, write about one day that you spent in the pocket of your mama.

My Family

- 1 Make a list of the people in your family.
- 2 Find out who has the largest family in your class.
- 3 Do animals have families?
- 4 Write about some things you like about your family.

In the above work cards, we have integrated writing activities with other subject areas. The writing can be imaginative, creative or factual. When children are given open-ended activities, it is important that the teacher should guide them about where they will get the information.

3.5 READING IN SUBJECT SPECIFIC CONTENT

When we use the language across the curriculum framework in our subject teaching as well as language teaching, the activities are authentic and practical for the students. This natural process of language learning makes the learner internalize the vocabulary, patterns and pronunciation of words more effectively. Reading promotes language learning implicitly and enables learners to think about and internalize the underlying form i.e., grammar and phonology of the language naturally. The sub skills of reading given below are useful in reading any text, be it a literary text or any subject text.

- i) Recognizing vocabulary, picking out key words.
- ii) Deducing the meaning from familiar lexical items.
- iii) Understanding the background and foreground of the information.
- iv) Understanding and having the ability to determine the conceptual meaning of the text.
- v) Understanding the communicative value (function) of sentences and utterances.

- vi) Recognition of literary devices used in the text.
- vii) Understanding cohesions between parts of a text through grammatical cohesion devices.
- viii) Ability to determine the writer’s purpose, intent and point of view.
- ix) Analysing text by gathering information available beyond the text.

Authors like Lunzer and Gardner (1984) suggest that there are certain ways in which information is organized or structured in content area subjects. Each of the text types has its own characteristic generic headings or **information constituents** and we expect these constituents to go together. This “going together” of related information constituents contributes to coherence or sense of a text. For example, a text that belongs to the topic type **physical structure** will deal with these information constituents – parts, location of parts, properties of parts and function of parts. This topic may be on the structure of a plant. All these descriptions would deal with different parts of the object, what the part looks like, what they are called, how they are made and where they are situated, what the function and purpose of a particular part is and how it works.

Similarly, experiments and practical activities cannot be undertaken without apparatus, material, procedures or steps, results and interpretation. Although the apparatus and materials would vary from experiment to experiment as would the results and interpretation – the information constituents or generic headings would remain unchanged.

Check Your Progress 7

- 1) Read a unit / chapter from the Economic or Geography textbook of class IX and make notes of important points.

.....

.....

.....

.....

.....

.....

3.6 LAC AS A RESPONSE TO INTERNATIONALIZATION OF FOREIGN LANGUAGE INSTRUCTION AND TO PROMOTE MULTILINGUALISM AS A STRATEGY

Language across the curriculum perspective was born out of the compulsion to respond to the needs of learners who were made to study through a foreign language instruction. The need now has been realized in mother tongue medium or any other context too. Countries like India where learners who learn their subject in mother tongue as also in English medium or a regional language (not their mother tongue) need language support. This provides opportunities for learning the language as well as the subject. However, there is an increasing

need for recognizing the centrality of language in subject learning. In the Indian context we need to provide opportunities for our learners to use the languages known to them in meaningful contexts. **Supplementary and complementary roles of languages** known to the learner will be of use to promote learning. This does not mean just one-to-one translation. Using the language of learners as a resource and a strategy to teach-learn the content will lead to language and content learning better. The following activities/tasks illustrate how multilingualism as a strategy could be realized in our classrooms

At the primary school

- i) Telling the same story in two languages (known to children of the class). This helps children to comprehend the story better.
- ii) Thematic vocabulary in two or more than two languages known to children: Asking children in groups to find words relating to a particular theme viz. Home, School in two languages or more. This helps them think about the possible words in the languages.

At the secondary level

- i) Watching a television programme or a serial in the mother tongue and writing an episode wise summary of the same in English or vice versa.
- ii) Collection and translation of folk songs from mother tongue and translation of the same into English.

3.7 ROLE AND PLACE OF ENGLISH IN THE PROCESSES OF LAC IN INDIAN CONTEXTS

The English language has a unique role today in the educational scene of this country. It is taught as a language across the country and it is also the medium of learning in number of schools. There is also an increasing demand for the language (NCERT, 2005). Teaching of Science, Mathematics and Technology through Indian languages medium also present difficulties when translating the terminologies originating from Latin, Greek, and so on. This demands serious attention by the teacher who needs to find ways to use the languages (as a tool) to make learners comprehend the concepts. All the languages available in the classroom come in handy to support learning. The position paper on Teaching of English (NCERT, 2006) while making a case for whole language perspective for teaching-learning of language stresses the need for **supplementary and complementary roles for languages**, particularly for English as a second language. **English does not stand alone**. It needs to find its place

- **along with other Indian languages**

- i) in regional-medium schools: how can children's other languages strengthen English teaching/learning?
- ii) in English-medium schools: how can other Indian languages be valorised, reducing the perceived hegemony of English?

• **in relation to other subjects:**

A language-across the- curriculum perspective is perhaps of particular relevance to primary education. Language is best acquired through different meaning-making contexts, and hence all teaching is in a sense language teaching. In the initial stages contextual meaning supports language use, at later stages meaning may be arrived at solely through language. (NCERT, 2006: 3-4)

Check Your Progress 8

- 1) Can you cite an example for semantic mapping to learn a science concept?

.....
.....
.....
.....
.....

- 2) Write a lesson plan to process based writing for Geography lesson?

.....
.....
.....
.....
.....

Check Your Progress (Overall Assessment)

- 1) Define language across curriculum in Indian language medium context with an illustration. Also illustrate how LAC can benefit learning of languages and subjects in an English medium classroom.

.....
.....
.....
.....

- 2) How does thematic approach benefit learning across the languages and subject?

.....
.....
.....
.....
.....

- 3) Write a lesson plan in Science for class VIII using LAC as one of strategies.

.....

.....

.....

.....

.....

3.8 LET US SUM UP

In real life children do not compartmentalise learning. In fact learning progresses from simpler, concrete, general and more holistic forms initially, to more complex, abstract, specific and fragmented learning at later advanced stage. Boundaries between subject areas have been artificially created purely for convenience. But the reading and writing skills that are available with the learners may not be adequate to do the required tasks in science, mathematics or social science classroom. As language pervades all areas of learning, it is essential for teachers to encourage language skills like reading, writing and speaking in all areas of the curriculum.

Teachers, across different subject areas of the curriculum, need to collaborate with the language teacher to integrate content and language teaching.

3.9 HINTS TO CHECK YOUR PROGRESS

Check Your Progress 1

Language plays a role for learning the content. Any idea has to be conveyed through a medium and the medium may be visual or / and print. Thus, language becomes inevitable in learning the subject. You may narrate your experience in learning content subject.

Check Your Progress 2

Read Section 3.2.1 to answer this question.

Check Your Progress 3

Read section 3.2.2 to answer this question.

Check Your Progress - 4

Thematic approach makes learners work with ideas and language and thus it becomes experiential learning. The interconnectivity of the theme makes learning realistic and authentic. Also read section 3.3.1 to answer the question.

Check Your Progress 5

Read section 3.3.2 to answer the questions 1 and 2.

Check Your Progress 6

Project work makes learners work with the ideas and language and thus it becomes experiential learning. The interconnectivity of the subject makes learning realistic and authentic. Also read section 1.3.3 to answer the question.

Check Your Progress 7

Do it yourself.

Check Your Progress 8

Do it yourself.

3.10 SUGGESTED READINGS

Corson, David (1990). "Language across the curriculum (LAC)". In: Corson, David (ed.), *Language Policy Across the Curriculum*. Clevedon: Multilingual Matters, pp 72-140.

Dewey, John. (1902). *The child and the curriculum*. Chigaho: University of Chigaho Press.

Goodman, Y. (1989) Roots of the whole-language movement. *Elementary School Journal*. 90 pp 113-127.

Halliday, M.A.K. (1975) *Learning how to mean*. London Arnold.

Halliday, M.A.K. (1978) *Language as a Social Semiotic*. London: Arnold.

Halliday, M.A.K. (1984) Three aspects of children's language development: Learning language, learning through language, and learning about language. In Y. M. Goodman, M. Hausslet, & D. Strickland (Eds.), *Oral and Written language development research: Impact on the schools*. Urbana, IL: National Council of Teachers of English. pp 165-192.

NCERT (2006a) *Textbook in Science for class IX*. New Delhi.

NCERT (2006b) *Mathematics Textbook for class VI*. New Delhi.

NCERT. (2005) Position Paper of the National Focus Group on English. New Delhi.

Mehisto, P., March, D & Frigols, Maria Jesus (2008) *Uncovering CLIL: Content and Language Integrated Learning in Bilingual and Multilingual Education*. Oxford: Macmillan Books for Teachers.

Vygotsky, L.S. (1978) *Mind in Society*. M. Cole, V. John-Steiner, S, Scribnet, & Souberman(Eds.) Cambridge, MA: Harvard University Press