Learning strategies are techniques that can be used to assist in any type of learning task. Many elementary teachers are familiar with reading strategies such as prediction and inference (using context to guess at word meanings). The usefulness of learning strategies, however, extends beyond reading to all areas of the curriculum. For example, prediction is also used in science (hypothesizing) and in mathematics (estimating).

Children develop learning strategies as they engage in challenging tasks, both in and outside of school. Some children acquire effective strategies at an early age and refine these strategies through practice and maturation. Good strategy users adapt their strategies to fit the task, and the result is that the task is accomplished successfully. However, not all children are good strategy users. Some children may not realize that the strategy they are using is not succeeding, and they may simply repeat it without trying out a different strategy that might be more successful. Other children tend to see each task as a totally new challenge, and do not access strategies they may have used for similar tasks in the past. Teachers can and should show their students how to choose and use learning strategies that will make them better learners of both language skills and content material. (For a review of research on language learning strategies, see Chamot, 2001).

This article describes the research conducted with elementary language immersion children by the National Capital Language Resource Center (NCLRC) and its current project in developing and field-testing The Elementary Immersion Learning Strategies Resource Guide.

Research Background

The NCLRC is a collaborative project operated by Georgetown University, the George Washington University, and the Center for Applied Linguistics, all in Washington, DC. Currently in its twelfth year of operation, it is one of nine such Language Resource Centers (LRCs) funded by Title VI to “improve the Nation’s capacity to teach and learn foreign languages effectively” (U.S. Department of Education, 2001, p. 2).

As one of its research activities, the NCLRC conducted a six-year (1993-1999) study designed to identify the learning strategies of both good and poor language learners in elementary (Grades One through Six) immersion classrooms. Participating schools included two full-immersion schools (one French, one Spanish) and a Japanese partial immersion school.

The immersion teachers in participating classrooms ranked their students as “good,” “average,” or “poor” language learners. From these lists, we randomly selected three “good” and three “poor” language learners from each class. These students were interviewed once a year for the duration of the study.

During the interviews, we asked each child to think aloud before, during, and after a reading task. Then we had them choose a picture as a prompt for writing a story, and we asked them to describe their thoughts during this task as well. Children were allowed to think aloud in either the target language or English, or in a combination of the two languages. The think-aloud interviews were tape recorded, transcribed, and analyzed for indications of learning strategy applications.

Differences were more apparent between younger and older students than between more and less effective language learners. Older children used more metacognitive strategies and top-down processing strategies, while younger and less-effective language learners used a greater number of decoding strategies, which are typical of bottom-up processing.

An important finding of this study was the identification of a developmental sequence of strategy use by younger and older learners. Differences between types of strategies found at different ages allowed us to establish a developmental sequence of strategies that could be taught to immersion students at different grade levels. (For more information about the study, see Chamot, 1995, 2001; Chamot & El-Dinary, 1999; Chamot, Keatley, Barnhardt, El-Dinary, Nagano, & Newman, 1996.)

This sequence of learning strategies became the nucleus of our current...
Guidelines for Teaching Learning Strategies

The sample lessons in The Elementary Immersion Learning Strategies Resource Guide are constructed following the framework of the Cognitive Academic Language Learning Approach (CALLA), an instructional model designed to integrate the teaching of content, language, and learning strategies (Chamot & O’Malley, 1994; Chamot, Barnhardt, El-Dinary, & Robbins, 1999). The CALLA instructional model includes five recursive phases:

1. Preparation, in which the teacher provides an overview of the lesson, elicits students’ prior knowledge, including their use of learning strategies, and teaches key vocabulary;

2. Presentation, in which the teacher explains the new learning strategy (and content and language, if appropriate), models it, names it, and demonstrates its usefulness;

3. Practice, in which students practice the new or review strategy (or strategies) with content and language tasks from their grade-level curriculum;

4. Self-evaluation, in which students are asked to reflect on what they have learned, how they learned it, what strategies they used, and how helpful the strategies were; and

5. Expansion, in which students are given opportunities to apply the strategies in new contexts, including other subjects and at home.

Conclusion

This article has provided a rationale for teaching learning strategies in elementary immersion classrooms and described two studies conducted by the National Capital Language Resource Center that identified appropriate strategies to teach and developed sample immersion lessons that include learning strategy instruction. One of these lessons (Fantastic Frogs) is provided as an example.

Developmental Sequence of Learning Strategies

In general, younger children prefer more concrete learning strategies that are supported by visuals, real objects, and gestures and movements. Older children can successfully use strategies that require more analysis and top-down processing and strategies that require well-developed literacy (such as note-taking). Learners of any age can benefit from strategies that help them make associations between new material and their own prior knowledge and those that help them focus their attention on a particular aspect of an oral or written text. Table 1 presents a sample of learning strategies, their definitions, and a suggested grade level for each to be introduced. Once introduced, a strategy should continue to be practiced in subsequent grades until the student is able to use it automatically.

This framework provides balance between teacher direction and student application. It is flexible, so that the teacher can return to an earlier phase as warranted during the lesson. The CALLA framework emphasizes explicit and scaffolded teaching to help students understand strategies and learn how to use them independently.
REFERENCES


### Table 1: Some Learning Strategies, Definitions, and Suggested Grade Levels

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>DEFINITION</th>
<th>GRADE LEVELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activating Background Knowledge</td>
<td>· Think about or tell what you already know about the topic.</td>
<td>Grades 1 – 5</td>
</tr>
<tr>
<td>Directed Attention</td>
<td>· Pay attention.</td>
<td>Grades 1 – 5</td>
</tr>
<tr>
<td></td>
<td>· Concentrate don’t be distracted!</td>
<td></td>
</tr>
<tr>
<td>Cooperation</td>
<td>· Work and share with your classmates.</td>
<td>Grades 1 – 5</td>
</tr>
<tr>
<td>Acting Out / Using Manipulatives</td>
<td>· Act out the story or other text.</td>
<td>Grades 1 – 5</td>
</tr>
<tr>
<td></td>
<td>· Use toys or pictures to tell a story or explain an idea.</td>
<td></td>
</tr>
<tr>
<td>Using Imagery (Visualization)</td>
<td>· Make a picture in your head, use a picture in the book, or draw a picture to help you understand.</td>
<td>Grades 1 – 5</td>
</tr>
<tr>
<td>Using Rules (Deduction)</td>
<td>· Apply a rule (spelling, sounding out words, grammar patterns, etc.)</td>
<td>Grades 1 – 5</td>
</tr>
<tr>
<td>Asking Questions to Clarify</td>
<td>· Ask your teacher or classmate to explain.</td>
<td>Grades 2 – 5</td>
</tr>
<tr>
<td></td>
<td>· Say what you understand and ask if that is right.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>· Ask for examples.</td>
<td></td>
</tr>
<tr>
<td>Classification / Grouping</td>
<td>· Make groups of similar things (shapes, animals, rocks, events, etc.).</td>
<td>Grades 2 – 5</td>
</tr>
<tr>
<td>Personalizing</td>
<td>· Ask how the information in the lesson is important to you and your life.</td>
<td>Grades 2 – 5</td>
</tr>
<tr>
<td>Predicting</td>
<td>· Use clues (title, picture, what you already know) to guess what will happen next.</td>
<td>Grades 2 – 5</td>
</tr>
<tr>
<td>Setting Goals</td>
<td>· Decide what you will learn or do this lesson (or day, week, etc.)</td>
<td>Grades 2 – 5</td>
</tr>
<tr>
<td>Evaluating Yourself</td>
<td>· Tell what you did well and what you could do better.</td>
<td>Grades 3 – 5</td>
</tr>
<tr>
<td>Making Inferences</td>
<td>· Use context (pictures, words, gestures) to figure out the meaning.</td>
<td>Grades 3 – 5</td>
</tr>
<tr>
<td>Selective Attention</td>
<td>· Focus on important words and ideas.</td>
<td>Grades 3 – 5</td>
</tr>
<tr>
<td></td>
<td>· Find specific information.</td>
<td></td>
</tr>
<tr>
<td>Talking Yourself Through It (Self-Talk)</td>
<td>· Tell yourself you are doing a good job.</td>
<td>Grades 3 – 5</td>
</tr>
<tr>
<td>Using Resources</td>
<td>· Look up information in a dictionary, the Internet, an encyclopedia, an atlas, the library, magazines, a poster, newspapers, etc.</td>
<td>Grades 3 – 5</td>
</tr>
<tr>
<td>Asking If It Makes Sense (Self-Monitoring)</td>
<td>· Ask yourself if you understand.</td>
<td>Grades 4 – 5</td>
</tr>
<tr>
<td>Evaluating Your Strategies</td>
<td>· Tell what strategies you used.</td>
<td>Grades 4 – 5</td>
</tr>
<tr>
<td></td>
<td>· Tell if a strategy helped or not. Why?</td>
<td></td>
</tr>
<tr>
<td>Note-Taking</td>
<td>· Write down key words and ideas.</td>
<td>Grades 4 – 5</td>
</tr>
<tr>
<td>Organizational Planning</td>
<td>· Make a plan of what you need to do.</td>
<td>Grades 4 – 5</td>
</tr>
<tr>
<td></td>
<td>· Make an outline or web before you write.</td>
<td></td>
</tr>
<tr>
<td>Substituting</td>
<td>· Use another word that has about the same meaning.</td>
<td>Grades 4 – 5</td>
</tr>
<tr>
<td>Checking Goals</td>
<td>· Ask yourself if you did what you planned to do in the lesson.</td>
<td>Grade 5</td>
</tr>
<tr>
<td>Making Rules (Induction)</td>
<td>· Use examples to figure out a pattern.</td>
<td>Grade 5</td>
</tr>
<tr>
<td>Managing Yourself</td>
<td>· Learn how you study and learn best.</td>
<td>Grade 5</td>
</tr>
<tr>
<td>Summarizing</td>
<td>· Say or write the important parts of the story or other text.</td>
<td>Grade 5</td>
</tr>
<tr>
<td>Using Cognates (Linguistic Transfer)</td>
<td>· Use words in one language to help you learn similar words in another language.</td>
<td>Grade 5</td>
</tr>
</tbody>
</table>

Notes: These are suggested grade levels only. Younger children can often use strategies identified for higher grade levels, and some older children may need to learn strategies listed at lower grade levels. Some strategies tend to work together. Thus, selective attention is needed for effective note-taking and summarizing, and creating a graphic organizer may combine selective attention, note-taking, and using imagery. Similarly, activating background knowledge may be needed in making predictions.
Sample Lesson Plan

This lesson was adapted from the original created by Monica Urtecho, Elementary Immersion Teacher, Fairfax County, VA.

Fantastic Frogs

**Level:** Second Grade

**Content Area:** Science

**Content Objective:**
Students will identify the series of changes that a frog goes through in its life cycle. Students will review that frogs camouflage themselves for protection and hibernate in the winter.

**Language Objective:**
Use sequence in narration primero, después, luego, más luego, finalmente (first, then, after, finally) to explain the life cycle of a frog.

**Learning Strategy:**
Activate Background Knowledge

**Strategy Rationale:**
Activate Background Knowledge brings to mind information students already know about a topic that will be helpful in learning new information.

**Strategy Objective:**
Students will activate their background knowledge of life cycles to prepare to learn about the life cycle of the frog.

**Materials:**
- chart showing the life cycle of a frog
- short reading that describes the frog's life cycle and that uses sequence words such as those below
- picture of the frog's life cycle stages that are not in the correct order
- scissors
- glue
- pencils and crayons
**Vocabulary:**
- huevo  egg
- renacuajo  tadpole

**Language Structure:**
**Sequence in narration**
- primero  first
- después  then
- luego, más luego  after
- finalmente  finally

**Procedures**
**Preparation:**
Remind students of the strategy Activate Background Knowledge that they have learned and used previously by asking them to brainstorm other times they have used this strategy. Write these other instances on the board. Remind students that this strategy is important in many different subjects because it helps us understand new information better by connecting what we already know to what is new in that subject. Explain that they are going to use the strategy Activate Background Knowledge to help them learn about the life cycle of frogs.

**Presentation 1:**
1. Ask students to Activate Background Knowledge to tell what they already know about frogs. Elicit from students that frogs usually live in or around water.

   Model Activate Background Knowledge to get them started: “Let’s see... what do I already know about frogs? Frogs jump, they can be green, they are hard to catch, they swim...”

2. Relate students background knowledge to the term habitat and ask them: ¿Cuál es el hábitat de las ranas? (What is the habitat of frogs?) Tell them that frogs live in wetlands. Explain to students that frogs have life cycles just like crickets, butterflies, etc. Tell students that they can help themselves learn about the life cycle of a frog by using what they already know about the life cycle of the cricket, butterfly, or whatever previous life cycle they have studied.
Practice 1:
1. Ask students to practice using Activate Background Knowledge to remember what they know about the life cycle of crickets, butterflies, etc. Ask students to draw a picture of the previous life cycle studied. Students should number the stages of the life cycle on their drawings.

2. Review the life cycles of the creatures chosen.

Presentation 2:
1. Elicit the stages of the life cycle of a frog by asking students to refer to their drawings of the other creatures. Emphasize the sequence of events by using appropriate sequence words primero, después, luego, más luego, finalmente (first, then, after, finally). Elicit from students that there is an egg and that a baby frog will have a very different form from the adult frog (there will not just be a change in size).

2. Using a chart of the life cycle of frogs, explain/read a description of the life cycle. Emphasize the sequence of events.

Las ranas viven in lugares húmedos, charcas. Tienen patas fuertes y pueden saltar grandes distancias. Pueden nadar rápido. Las ranas tienen una lengua larga y pegajosa con la que pueden atrapar a los insectos.

Primero, las ranas nacen de huevos gelatinosos. Luego, estos huevos se convierten en renacuajos. Después, les crecen las patas traseras. Más luego, les crecen las patas delanteras. La cola se hace más corta a medida que crecen las patas y los pulmones. Cuando la cola termina por encogerse ya es una rana joven. Finalmente, la rana crece y se convierte en una rana adulta. El ciclo de vida de las ranas hasta la adultez tarda aproximadamente 16 semanas.

(Frogs live in wet places called wetlands. They have strong legs and can jump far. They can swim quickly. Frogs have long, sticky tongues that they use to catch insects.

First, all frogs start as eggs. Then, these eggs become tadpoles. Next, the tadpoles grow two back legs. Later, they grow two front legs. Their tail becomes shorter as their legs and lungs grow. When their tails finally shrink away, they then become young frogs. Finally, they grow more and become adult frogs. The life cycle of the frog from birth to adulthood takes approximately 16 weeks.)
NOTES

Practice 2:
Give students copies of the picture of the frog's life cycle stages out of order. Ask them to cut apart the pictures and rearrange them in the correct order by gluing them on another blank sheet of paper. Ask students to write a sentence for each stage and to use the appropriate sequence words.

Evaluation:
1. Using a checklist, evaluate students on how well they were able to both correctly order the stages in a frog's life cycle and how well they used the sequence words. Discuss your evaluations with students, indicating when necessary whether they need to reconsider their ordering or the sequence words they chose. Allow students time to self-correct, then check back with them again.

2. Have a short discussion with students asking them how the strategy Activate Background Knowledge helped them to learn about the life cycle of frogs. Remind them that it is important to Evaluate Your Strategies so that they can choose the strategies that work best for them. Ask them if they will use this strategy again and when they might use it to help them learn new information. You can have students keep a learning log of strategy use over the next several weeks (this log can contain all the strategies they have been taught, including Activate Background Knowledge, listed down the left-hand side and the days of the week listed across the top). Students can keep track of their use of this strategy by making a check mark next to Activate Background Knowledge each time they use it. They can also write a short sentence telling when they used the strategy.

Expansion:
1. After several weeks of learning log use, ask students to review their learning log and to give examples for the rest of the class of times when they used the strategy Activate Background Knowledge. Make a chart for this strategy listing examples of student strategy use.

2. Ask students to find out from other family members how they use this strategy and report on the results.