Strategies and lessons are reported that were developed by a team researching learning styles of language minority students. The research incorporated work done in the Arlington County, Virginia program, English for Speakers of Other Languages—High Intensity Language Training (ESOL-HILT). The Arlington instructional model for LEP students has evolved from making it the students' responsibility to adjust to the unfamiliar to meeting the students where they are and helping them to broaden their learning horizons. The approach involves integrating learning style theory and instructional strategies to enhance students' opportunities to learn. The experiential 4MAT learning model was used to achieve those goals. This guide, intended to be a springboard for designing more effective learning activities, reviews learning styles theory, learning styles applications (for "innovative," "analytic," "common sense," and "dynamic" learners), and adaptation of the 4MAT system for developing lesson plans. Six detailed lesson plans are presented, each with motivation, concept development, practice, and application components. Contains 17 references, some of which are annotated. (LB)
Integrating Learning Styles and Skills in the ESL Classroom: An Approach to Lesson Planning

by

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The authors of this guide came together to explore the research findings on learning styles in a search for new and better ways to work with their language minority students. As staff of the English for Speakers of Other Languages—High Intensity Language Training (ESOL—HILT) program in Arlington County, Virginia, they were able to form a “tech” team (part of the system’s staff development framework) to discuss these issues, under the leadership of Emma Violand Hainer, who has conducted research on the learning styles of Arlington’s students. Members of the team included Nancy Arnold, Laurie Baker, Theresa Bratt, Barbara Fagan, Soo Jung Kim, Felicia Meier, Shirley Morrow, Shirley Porter, Emma Violand Hainer, and Cornelia Wesson. As they worked through applications in the classroom and developed lesson plans, the group members wanted to share their experiences with others. The guide that follows is an important step in that process. It includes lessons developed by team members and illustrations by Laurie Baker.

At about the same time, staff of the Center for Applied Linguistics (CAL) began collaborating with the ESOL—HILT program on a variety of projects, including the development of this guide. CAL is pleased to have played a role in making available to a national audience the application of learning styles research developed by this dedicated group of teachers.

Figures adapted from B. McCarthy, The 4MAT System® (1990), are used by special permission from Excel, Inc. Those desiring a copy for further reading should contact the publisher, Excel, Inc., 200 W. Station St., Bennington, IL 60010.

Donna Christian
NCBE
Just for a moment think about your reaction to a staff development announcement “inviting” you to a workshop on learning styles. As you read it, what thoughts cross your mind? Do you ask yourself why you should attend this workshop? Does it matter to you who the presenter is? Do you wonder what is meant by learning styles? Do you wonder how relevant it will be to your teaching situation? Do you think the topic sounds interesting? Some of these thoughts will be yours while others may never occur to you. This is not surprising because teachers, like all learners, have their favored learning preferences.

These preferences, or “learning styles,” are the result of a complex interaction of age, educational experience, and cultural background. As is the case with native English speakers, limited English proficient (LEP) students approach learning as total human beings. Their academic success is influenced by emotional, biological, psychological, and cultural factors. In order to facilitate academic success, it is important to provide learning experiences that are accessible to all students with all learning preferences.

The experiential learning model (Kolb 1984), which was developed for native English speaking students, seeks to accommodate, within each learning event, the principal styles that individual students bring to that event. Since LEP students bring a similar diversity of cognitive, conceptual, and behavioral modes into the classroom, such a model promises to build on their experience by learning through preferred styles while expanding the range of styles available to them. (For a comparison of cognitive and learning styles of limited English proficient and English proficient students, see Hainer 1988.) This guide will explore the use of the experiential model in classrooms with LEP students.

A recent status report (Keefe et al. 1982) on learning styles and education recommends that administrators and teachers recognize the philosophical bias of their instructional model by considering two basic questions. Does the approach focus on “helping” students adapt to school demands or on helping students learn through their own styles? Furthermore, if the model focuses on learning styles, does it encourage students to “stretch” and strengthen their weaker areas?

In Arlington, an instructional model for the education of LEP students has evolved from the former to the latter; i.e., from making it the students’ responsibility to adjust to the unfamiliar to meeting the students where they stand and helping them to broaden their learning horizons. Consequently, one of the major concerns has been how to improve delivery of instruction as teachers have come face to face with the ever-growing and ever-changing LEP student population. To meet the differing needs of the LEP students, the ESL program in Arlington
is integrating learning style theory and instructional strategies to
enhance students' opportunities to learn. The goal has been to reach
out to a diverse student population and at the same time find a worka-
ble instructional approach. Teachers found a practical version of the
experiential learning model called the 4MAT® model, with its class-
room applicability as well as its sound conceptual basis, to be an effec-
tive means for achieving both goals.

This guide presents the results of teacher experience. First, learning
style theory and how it can be applied to the ESL classroom are
described, then a set of exemplary sample lessons is presented using
the 4MAT® model. It is hoped that this guide will be a springboard
toward designing more effective learning activities for all teachers con-
cerned with LEP student education.

Learning style can be defined as the usual or characteristic manner in
which a learner goes about the task of learning (More 1987). There are
various approaches to learning style that can be described as processes
on a continuum. These approaches are not mutually exclusive; they
represent different ways of viewing complex phenomena. Among these
processes are:

(a) global/analytical (More 1984)
(b) impulsive/reflective (More 1976)
(c) field dependent/field independent (Witkin et al. 1977)
(d) simultaneous/sequential processing (Kirby 1984).

As style is concerned with very complex issues involving cogni-
tion, conceptualization, affect, and behavior (Guild & Gerger 1985), it
is not surprising that various learning styles models exist. Each model
typically focuses on a single aspect within this multidimensional set of
factors (Guild & Gerger 1985). Given the diverse learning styles mod-
els and instruments (Keefe et al. 1982), a model was sought that had
practical as well as conceptual value. Kolb's experimental learning
model meets both requirements because of the availability of a class-
room application of the model by Bernice McCarthy (1980) in The
4MAT® System: Teaching to Learning Styles with Right/Left Mode
Techniques.

Kolb (1984) acknowledges that his theory is eclectic, and that its
applications are drawn from the work of John Dewey, Kurt Lewin,
Carl Jung, Jean Piaget and Lev Vygotsky. He states further that "learn-
ing styles are the result of our hereditary equipment, our particular past
life experiences and the demands of present environment." Kolb found
that "it is the combination of how people perceive and how people
process that forms the uniqueness of 'learning style'—the most comfortable way to learn.” By combining two dimensions of concrete experience and abstract conceptualization (“how we perceive”) with two dimensions of active experimentation and reflective observation (“how we process”), Kolb established four categories of learning styles based on four learning modes.

According to Kolb, effective learning involves four phases: from getting involved (Concrete Experience) to listening/observing (Reflective Observation) to creating an idea (Abstract Conceptualization) to making decisions (Active Experimentation). (See Figure 1.) A person may become better at some of these learning skills than others; as a result, a learning style develops.

Bernice McCarthy (1980) took Kolb’s learning style descriptions and amplified these to construct the 4MAT® system of developing lesson plans for grades K–12. This system incorporates Kolb’s four learning modes and recent research on right/left brain hemispheric processing. It should be remembered that each person’s learning style is a combination of perceiving and processing information as McCarthy describes four major styles:

Type One—“Innovative Learners”
- seek personal meaning;
- judge things in relationship to values;
- function through social interaction;
- want to make the world a better place;
- are cooperative and sociable; and
- respect authority when it is earned.

Type Two—“Analytic Learners”
- seek intellectual competence;
- judge things by factual verification;
- function by adapting to experts;
- need to know “the important things” and want to add to the world’s knowledge;
- are patient and reflective; and
- prefer chain of command authority.

Type Three—“Common Sense Learners”
- seek solutions to problems;
- judge things by their usefulness;

Learning Styles Applications
Figure 1

Learning by Doing
(*Active Experimentation*)
- Ability to get things done
- Risk taking
- Influencing people and events through action

Learning from Feeling
(*Concrete Experience*)
- Learning from specific experiences
- Relating to people
- Sensitivity to feelings and people

Learning by Watching and Listening
(*Reflective Observation*)
- Careful observation before making a judgment
- Viewing things from different perspectives
- Looking for the meaning of things

Learning by Thinking
(*Abstract Conceptualization*)
- Logical analysis of ideas
- Systematic planning
- Acting on an intellectual understanding of a situation

HOW WE PROCESS
• function through kinesthetic awareness;
• want to make things happen;
• are practical and straightforward; and
• see authority as necessary, but will work around it if forced.

**Type Four—“Dynamic Learners”**

• seek hidden possibilities;
• judge things by gut reactions;
• function by synthesizing various parts;
• enjoy challenging complacency;
• are enthusiastic and adventurous; and
• tend to disregard authority.

Many teachers have already used most of the strategies of the 4MAT® system and will find these strategies familiar. This system provides a framework that organizes and brings together various teaching strategies in a balanced manner ensuring that learners have an opportunity to learn in the mode that they prefer. Furthermore, it gives learners opportunities to develop their facilities in other learning styles.

The 4MAT® system model is based on a “wheel” for the development of lessons which will lead students from concrete experience to reflective observation to abstract conceptualization and finally to active experimentation (from Kolb’s model). The 4MAT® wheel (shown in Figure 2) is divided into four sections which represent four different types of learners: innovative, analytical, common sense and dynamic.

As we look at the wheel, we see that the innovative learners (type one) prefer to perceive new information by sensing and feeling and then reflecting on what they have just experienced. Analytical learners (type two) perceive by watching and thinking and then developing theories based on what they observed. The common sense learners (type three) conceptualize and develop theories but then they must test their theories to make sure they work. The dynamic learners (type four) learn best by sensing and feeling and then experimenting with the new information in different ways.

In addition, each quadrant of the wheel is subdivided into a right and left component to assure a whole brain approach to comprehending new material. The basis for such subdivision stems from the culmination of research findings on brain functions.

Based on recent research, McCarthy (1980) suggests that the two halves of the brain process information differently. Although both
hemispheres are equally important, they carry out differing functions. For instance, speech resides primarily in the left hemisphere while spatial capability resides in the right. At the same time, the two hemispheres differ in terms of the way they process information. For instance, linear, sequential processing takes place in the left whereas more global processing takes place in the right hemisphere. Due to the differences in processing information, the two hemispheres share equal importance in learning. Thus, using both the left and right mode techniques promotes more meaningful learning for our students. These techniques are incorporated into each quadrant of the 4MAT®-based lesson plan.

Many educators want to know if one learning style is “better” than another or if they should teach students using only their favorite learning style. The answer to both questions is NO. Each learning style is special and has its own particular strengths and weaknesses. This means that in order to prepare our students for future challenges, we
must help them to adjust and function in styles that may not be their most comfortable. Developing plans according to the 4MAT® wheel allows teachers to move students in one lesson through all four learning styles giving all students an opportunity to learn through their most favored way while working through others.

The lesson plans in the following section were designed by classroom elementary and secondary ESL teachers. Instead of the lesson plan being a sequential list of objectives and activities, the wheel allows teachers to keep the whole lesson in perspective as each section of the lesson plan is worked out. This allows for more continuity of activities, and it gives the lesson a “flow” so that it can immediately be seen how each part is related to the other sections and how learning is not a series of fragmented strategies for skills taught in isolation. Since each quadrant on the wheel represents a learning style, each quadrant has been renamed so that the wheel follows the parameters of organizing a lesson: motivation, information, practice and application.

- **Motivation**
  The first quadrant addresses the needs of those students who must become actively and personally involved in the lesson. These students need to see why the material they will be learning is relevant to them, and how it relates to information they already have experienced. This quadrant is labeled “Motivation,” since this learning style forms the basis for the initial phase of the lesson plan.

- **Concept Development**
  The second quadrant, “Concept Development,” is designed for students who are interested in gaining new knowledge and who want the information as it is presented in texts and by researchers. This is an integral part for the presentation of the new material in the lesson.

- **Practice**
  The third quadrant is the “Practice” part of the lesson and it is imperative that the students practice and understand what was presented in the information stage. Students need various types of exercises and activities to try out what they have learned in order to make it more understandable.

- **Application**
  The last quadrant is the “Application” stage of the lesson. Here the students are free to see how the new material can be used in other situations and other disciplines. The students in this stage have left the...
practicing and experimenting with the new concept, and have now branched out on their own to see other possibilities for using what they have acquired. This is a vital part of the 4MAT® plan since it is here the students show they have internalized the new material and are now ready to explore new areas with what they have learned.

The model we use is captured by the wheel shown in Figure 3.

Figure 3

Adapted from the 4MAT® System Model by Bernice McCarthy; Excel, Inc.; Barrington, IL. Copyright, 1979.
A selection of lesson plans which illustrate the 4MAT® system is included at the end of this guide. These plans reflect the integration of skills necessary to enhance students' opportunities to acquire knowledge. Each lesson plan includes a wheel, a description of the concepts and skills being taught, and suggested activities for each quadrant. Moreover, each of these plans has been tried and refined with beginning, intermediate, and advanced students in ESL classrooms at the elementary or secondary levels. A review of these plans, then, will allow you to see how skills can be developed and integrated from different perspectives. You can adapt as necessary each lesson to your instructional situation and the needs of your limited English proficient students. Concepts covered and skills emphasized are:

1. Learning About Yourself—Writing Skills.
4. Comprehending a Reading Selection and Applying It to Everyday Life—Reading Skills.
5. Understanding the Similarities and Differences in Nature—Content Skills.
6. Stimulating Creative Thinking and Writing With a Concrete Object—Writing Skills.

It is hoped that the usefulness of designing lesson plans with the 4MAT® system will be clear. Using this system allows the teacher to provide different instructional strategies for everyone when learning new information. Each type of learner is offered an opportunity to learn using this model. Furthermore, each type of learner can acquire the ability to adapt to other learning style situations so as to become a more complete and open-minded person acquiring alternate ways of gaining new information.

The lesson plans which follow are examples of how teachers have adapted 4MAT® as a framework for organizing their instruction for limited English proficient students.
I. Motivation

R. Create the Experience (Right Mode Strategies)

The teacher has a prepared autobiography done on newsprint. The paper can be divided into several sections, and a visual symbol or drawing relating to an important event in the teacher's life is represented in each section. After the students have looked over the pictures on the newsprint, they make guesses as to what the pictures might mean. This activity engages the students' attention immediately and helps to give focus to the lesson.

L. Reflect on the Experience (Left Mode Strategies)

The teacher now tells his/her own autobiography by explaining each picture. The teacher might want to duplicate the pictures on the newsprint in a book and write a sentence describing each picture. The students can talk about their prior predictions or what they now have learned about the teacher.
R. Integrate Reflections Into Concepts (Right Mode Strategies)
Each student will relate the important parts of the teacher's autobiography to himself/herself. Each student will make a visual autobiographical inventory of himself/herself. Students will draw pictures or symbols which will give information about themselves under specific categories. Students will also make their own personal webs which are extensions of the visual autobiographical inventory. The visual imagery of the inventory will help students find appropriate vocabulary to put in their personal webs. The teacher will also use directed questioning to expand students' thinking about themselves. Both the visual inventory and personal web are excellent pre-writing activities. Ideally, the information gathering process will help each student reflect on what makes each of them unique.

Autobiographical Visual Inventory

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>me</td>
<td>family</td>
</tr>
<tr>
<td>friends</td>
<td>house</td>
</tr>
<tr>
<td>pet</td>
<td>food</td>
</tr>
<tr>
<td>activities</td>
<td>things I like</td>
</tr>
</tbody>
</table>

L. Present and Develop Theories and Concepts (Left Mode Strategies)
As a group, the students will make a personal "web" of their teacher. Using his/her own web as created by the students, the teacher will model writing a composition, "The Important Things About Me." The teacher will ask the students' help in constructing the sentences. The students will be able to see how thoughts can be transferred into writing.

Personal Web
III. Practice

L. Practice and Reinforce New Information (Left Mode Strategies)
Students will begin the writing process by transferring their ideas from their autobiographical inventories and personal webs into a descriptive composition about themselves. The students are encouraged to use invented spelling so as not to interrupt their flow of ideas. Vocabulary in their visual inventories and personal webs can now be used as key words. Prior thinking about themselves can now be extended into personal anecdotes and explanations of those key words.

R. Personalize the Experience (Right Mode Strategies)
Students meet in groups of three to share their compositions. Each author reads his/her composition to the group. A “reporter” tells something he/she learned about the author, and a “critic” tells something he/she liked about the composition. Each student in the group will take turns in a role. All students have the opportunity to ask questions of the author. The peer group conference gives the students a chance to interact with each other and share thinking about each other’s writing.

IV. Application

L. Develop A Plan for Applying New Concepts (Left Mode Strategies)
Each student will now sit down with the teacher and go through the process of editing for capitalization, punctuation, and spelling. The student has the responsibility for editing his/her own composition under the teacher’s guidance. When the composition is completed, the student is ready to copy it into a book, illustrating each important event.

R. Do It and Share It With Others (Right Mode Strategies)
The students are now ready to share their books with their classmates or students from another class. The books will be read aloud and the reading partner will have the opportunity to interact with the author by asking questions or expressing appreciation. The completed books can be placed in a classroom library with other books written by the students. Students should be encouraged to read each other’s books.
R. Create the Experience (Right Mode Strategies)

Most students have seen fires. In order to stimulate students' own personal memories about fires, they view visuals on fire (perhaps a filmstrip or pictures). Students need to have the opportunity to talk about their own experiences with fire, their feelings in such a situation, and the dangers inherent in the emergency.
L. Reflect on the Experience (Left Mode Strategies)
The teacher leads the students in a discussion about the steps taken in their countries in the event of a fire, and what is done or should be done locally if a fire occurs.

R. Integrate Reflections Into Concepts (Right Mode Strategies)
The teacher shows a videotape or film about emergency services which teaches what can be done in the United States when there is a fire.

L. Present and Develop Concepts and Theories (Left Mode Strategies)
The teacher presents and drills the oral and written vocabulary for the several different emergencies: emergency, address, accident, ambulance, police, and fire.

R. Personalize the Information (Right Mode Strategies)
Students need more "hands-on" experiences with the teletrainer, so they can make up dialogs about emergency situations and role-play them with the telephones. Pictures are used to initiate this activity, but students will depart from these stimuli to create their own scenarios.

L. Practice and Reinforce New Information (Left Mode Strategies)
Students need time to practice the vocabulary they have learned about emergency situations. They can complete worksheets, list types of emergencies, practice spelling and pronunciation of new words and practice addresses both orally and written.

R. Personalize the Information (Right Mode Strategies)
Students need more "hands-on" experiences with the teletrainer, so they can make up dialogs about emergency situations and role-play them with the telephones. Pictures are used to initiate this activity, but students will depart from these stimuli to create their own scenarios.

L. Develop a Plan for Applying the New Concepts (Left Mode Strategies)
Students must apply what they have learned to real-life situations. Each student will prepare a sticker to be placed on his/her telephone at home. On it, the student must write the 911 number, the emergency words, and their address. The sticker will be taken home, explained to the family and put on or near the home telephone.

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911

My name is Nghihan
I live at 341 5th Ave.
My telephone number is 267-1234

I need the
- fire department
- police
- ambulance
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R. Do It and Share With Others (Right Mode Strategies)

The students visit a local fire station so they can see where calls are received and hear the voice of the dispatcher. They can view the fire engines and ambulances and in this way, they are bringing their experiences to full circle. The lesson can culminate in a student-designed bulletin board based on what they learned from the trip.

Lesson Plan III

Concept:
Planning for the Future

Topic:
To make specific plans for selecting courses for the next school year.

Skill Emphasis:
Functional

Audience:
Intermediate ESL—secondary students

Time Frame:
5 classes (50-minute periods)

Materials:
Graduation requirement for your high school

Suggested by:
Shirley Morrow
I. Motivation

R. Create the Experience (Right Mode Strategies)
Students brainstorm or share experiences about their future plans. It is important that students think about the future and the fact that they have some control over their futures.

II. Concept Development

L. Reflect on the Experience (Left Mode Strategies)
Students write sentences about how they visualize themselves next year or in five years; this forces them to focus on their own futures. The class discussion that follows this activity allows them to reflect on the control they have and the importance of exercising that control by planning wisely.

R. Integrate Reflections Into Concepts (Right Mode Strategies)
Students now create a personal timeline visual, marking points of important events in their past and where important future decisions will be made. Before discussing specific graduation requirements, the students benefit from listening to the experience of someone who has been in their shoes. The ideal presenter for ESL students would be a foreign-born graduate of an American high school who has achieved success in this country. This person's experiences would most clearly parallel their own. Lacking such a presenter, the teacher might rely on a native-born graduate or on himself/herself and his/her own experiences. Students should have the opportunity to question the presenter, to discuss this person's experiences, to apply these experiences to themselves, and to ask for advice.

L. Present and Develop Theories and Concepts (Left Mode Strategies)
The teacher now presents local graduation requirements, and the students are ready to examine specific requirements for graduation from a U.S. high school. They need to understand that in the United States the students have some element of choice, but there are also specific requirements that must be met. After they understand the requirements, they need to examine the elective program in light of their own particular needs, interests and goals.
L. Practice and Reinforce New Material (Left Mode Strategies)
Students are now ready to look closely at their own individual situations to determine what classes they must take in order to graduate. They can now begin to make some tentative plans to take home and discuss with their parents. Throughout the lesson, the role of the parents as helpers and advisors should be emphasized.

R. Personalize the Information (Right Mode Strategies)
Intelligent choices can best be made by students who clearly understand the class offerings in their own school. Students should have an opportunity to visit or discuss as many of the elective courses as possible. Substitute time can sometimes be arranged to allow an art or shop teacher, for instance, to plan a sample lesson for the ESL class. Other classes can be observed by small groups. Teachers and students from elective courses can be invited to visit the ESL class to make presentations about their subjects. Students should have an opportunity to meet and talk with as many of the school staff as possible.

L. Develop A Plan for Applying New Concepts (Left Mode Strategies)
Students should now be ready to make schedules for next year that will be appropriate for them and further their own individual goals. This probably will be done individually with their counselors.

R. Do It and Share With Others (Right Mode Strategies)
Small group discussions after schedules are made allow students to share schedules with each other and to discuss their expectations for the following year. Teacher can prepare specific questions in advance to focus on these discussions.
Lesson Plan IV

Concept:
The Effects of Rain on Climate and People's Lives

Topic:
Compare/contrast rainfall in two geographical regions

Skill Emphasis:
Reading

Audience:
Beginning/intermediate ESL—elementary students

Time Frame:
3–4 classes (50-minute periods)

Materials:
The reading selection "Rain, Rain—Don't Go Away" is found in the High Action Reading Vocabulary B Series published by Modern Curriculum Press. The story is written at approximately a 2.5 reading level and describes how people's lives in two regions are different because of too little or too much rain.

Suggested by:
Barbara Fagan

I. Motivation

R. Create the Experience (Right Mode Strategies)
Students need to understand something about the topic they will be reading shortly. One way to familiarize the students with the topics is to simulate a rainstorm. Different groups of students can pretend they are thunder, lightning, wind and finally the rain. Role-playing the sounds and actions associated with rain greatly awakens their feelings about the topic, and it sets the stage for learning new materials.
L. Reflect on the Experience (Left Mode Strategies)

Students need a chance to sit back and reflect on what they have just experienced and how this either adds or changes what they already know about a topic. The teacher poses such questions as “How did you feel during the rainstorm?,” “What did the trees look like during the storm?,” “What was going on in your mind while you watched the rain?” etc. The teacher must remember to give a “wait time” after posing the questions so students can readjust their thoughts and feelings which they must now express verbally.

R. Integrate Reflections Into Concepts (Right Mode Strategies)

To continue this awareness about the topic, students need to generate vocabulary that can be associated with the topic they will be reading. A web in the shape of an umbrella can be presented and students must either fill in vocabulary words they associate with the topic “rain” or they can choose specific vocabulary that deals with that topic from a list provided by the teacher. This visual representation of vocabulary allows the teacher to see the types of words the students are bringing with them to the lesson. See the figure below:

![Umbrella Diagram]

damp → wet → soft

L. Present and Develop Theories and Concepts (Left Mode Strategies)

The teacher guides students before the reading by asking them to predict what the title of the story might mean. After the students read the first few paragraphs, the teacher asks general comprehension questions and again asks students to make predictions about what may happen next. Predicting is an instrumental part in the reading process since it requires students to take risks or chances which in turn keeps them involved and motivated in the story so they can determine if their predictions were right or wrong. Students will gain new information from reading about the effects of rain on climate and people’s lives.
III. Practice

L. Practice and Reinforce New Concepts (Left Mode Strategies)

This is an opportunity for students to practice vocabulary, specific reading skills that were found in the reading selection, and any other suggested activities that would benefit them. The teacher will probably want to give some form of student evaluation at this point to make certain that students have understood the story.

R. Personalize the Information (Right Mode Strategies)

Students need to make the information learned in the story become practical for them. Since the reading selection also talks about areas which do not have rain, the students can create a new web labeled “dry climate” to generate vocabulary about this topic they found in the story or already know.

IV. Application

L. Develop a Plan for Applying New Concepts (Left Mode Strategies)

Now that the students have completed two webs (rain and a dry climate), they are ready to complete one of the following activities: write a poem about a rainy place or a desert; write sentences describing the rain; write a comparison/contrast paragraph about the two kinds of weather; or create a booklet about things they can do on a rainy day. This activity can be done individually or in groups.

R. Do It And Share With Others (Right Mode Strategies)

Students need the opportunity to share with their peers any new information they have learned about the topic. By explaining their projects to others, students develop an “ownership” of this new concept. When the completed activities are shared, the students in the class gain additional information about the topic. Teacher should display projects in the classroom.
Concept:
Understanding the Similarities and Differences in Nature

Topic:
To recognize and describe similarities and differences among trees. (Content lesson)

Skill Emphasis:
Content Concept Development

Audience:
Beginning/intermediate ESL—elementary students

Time Frame:
4–5 classes (50-minute periods)

Materials:
filmsstrip/photographs about the different types of trees

Suggested by:
Laurie Baker

Recommended book:
The Tree, published by Modern Curriculum Press

R. Create the Experience (Right Mode Strategies)
When working with beginning level LEP students, it is very important not to assume that the students have had prior experience with a particular subject. The teacher must provide the students with an experience upon which they can reflect and later refer back to for first-hand knowledge of facts. Walking with students through the school grounds, the neighborhood, or a nearby nature center, the teacher can give students an experience with trees. The teacher should direct the students’ observations to points that will be useful in later classroom discussions, such as sizes and shapes of leaves, parts of a tree, types of trees.

L. Reflect on the Experience (Left Mode Strategies)
When the class returns to the classroom, the teacher should allow time for reflection and discussion about what the students have seen. To provide
II. Concept Development

R. Integrate Reflections into Concepts (Right Mode Strategies)
The students need a chance to relate their experiences to the major concepts which are to be taught before the teacher presents the core content material for the unit. In order to do this, the teacher should provide the students with an experience which can be compared to an experience from their own lives. In this lesson, the teacher should show a filmstrip, slides, or photographs of a variety of trees from different areas of the world that are both similar and different to those observed on the nature walk. Using vocabulary from the chart and information from their own experience, the students should begin to make generalizations about the similarities and differences among species of trees.

L. Present and Develop Theories and Concepts (Left Mode Strategies)
The teacher follows the students' interpretation of the major concepts to be presented in the unit with a presentation of the vocabulary and content from the book, *The Tree*, by Pamela Nash, or any other content book on trees. The students' understanding of the vocabulary and content can be evaluated by the teacher through oral questioning. Questions should require: the students to locate information in the story; to recall information from the story; to restate information from the story as it applies to the students' previous experiences; to make generalizations from the information drawn from the story and their experiences; and to apply learned information to hypothetical problem-solving situations.

III. Practice

L. Practice and Reinforce New Information (Left Mode Strategies)
The students will have a chance to practice the concepts which have been taught. The students can complete teacher developed activities in the form of worksheets and games which provide reinforcement of the basic vocabulary and concepts in the lesson. The students can also label diagrams of the major parts of trees.

R. Personalize the Information (Right Mode Strategies)
The students can collect leaves from different trees and work in groups to classify the leaves according to the information they learned.

IV. Application

L. Develop A Plan for Applying New Concepts (Left Mode Strategies)
Students need a chance to integrate the material they have learned into their own experiences. Now the students will use the leaves to write and illustrate a book. While the format of the book will be the same for all the students, the content of the book will provide the students an opportunity for individual
interpretation of the basic concepts presented in the unit. This activity provides additional practice in writing sentences comparing/contrasting the leaves the students have included in their books.

R. Do It and Share It With Others (Right Mode Strategies)

Giving the students a chance to share their work with others is a crucial step in bringing the unit to a close. By reading their books aloud to an audience of their classmates or peers and by later displaying the books so that other students and teachers can see them, the students develop a pride in their knowledge and the ability to share it.

Lesson Plan VI

Concept:
Stimulating Creative Thinking and Writing with a Concrete Object

Topic:
The multiple uses of a brick

Skill Emphasis:
Writing

Audience:
Intermediate and advanced ESL—secondary students

Time Frame:
3 classes (50-minute periods)

Materials:
one brick

Suggested by:
Felicia Meier
I. Motivation

R. Create the Experience (Right Mode Strategies)
Students pass a brick around the class. By handling it, they are actively involved in a concrete experience.

L. Reflect on the Experience (Left Mode Strategies)
Students need to reflect on the brick that they held and be able to describe it in terms of its attributes of color, weight, and feel. Some possible student responses are: red, dirty, rough, flat, heavy, broken, and hard. By listing on the board the attributes elicited from the students, the teacher is preparing the information that will be used in quadrant two.

II. Concept Development

R. Integrate Reflection Into Concepts (Right Mode Strategies)
The students are asked to reflect some more about the brick and determine its possible uses. To emphasize the goal of creativity in this lesson, the teacher should try to elicit more "unconventional" uses of the brick: i.e., a doorstop, used for exercising, etc. To organize this information, the students will complete a web. See the figure below:

```
<table>
<thead>
<tr>
<th>BRICK</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHAPE</td>
</tr>
<tr>
<td>COLOR</td>
</tr>
<tr>
<td>FEEL</td>
</tr>
<tr>
<td>USES</td>
</tr>
<tr>
<td>wall</td>
</tr>
<tr>
<td>house</td>
</tr>
<tr>
<td>6 faces</td>
</tr>
<tr>
<td>red</td>
</tr>
<tr>
<td>pink</td>
</tr>
<tr>
<td>yellow</td>
</tr>
<tr>
<td>rough</td>
</tr>
<tr>
<td>hard</td>
</tr>
</tbody>
</table>
```

L. Present and Develop Theories and Concepts (Left Mode Strategies)
The teacher models sentence patterns from the web, and the students continue generating their own sentences about the brick using these patterns.

III. Practice

L. Practice and Reinforce New Information (Left Mode Strategies)
This is when the students use the information and sentences from the web to develop their own creative paragraph about the many different uses of a brick. Students will also need to develop a topic and a concluding sentence for their paragraph.

R. Personalize the Information (Right Mode Strategies)
Students now brainstorm for ideas on how they would use 1,000 bricks. This may be done in small groups or as a class.
L. Develop a Plan for Applying New Concepts (Left Mode Strategies)
Now that the students have brainstormed, they can work on writing a paragraph about how they would use 1,000 bricks. This paragraph can be done individually or in small groups. Students can also illustrate their work. At a lower level, the illustration could be emphasized more and sentences could be used to describe the picture.

R. Do It and Share With Others (Right Mode Strategies)
In order for students to hear all the creative ideas that came out of the brainstorming session and were developed in paragraphs, they should share their work with the class. The students should be able to truly appreciate the creativity of their peers.


This study examines the relationship among cognitive style, oral English proficiency, and developmental variables in predicting school achievement.


A very readable book on learning, teaching and leadership styles.


This dissertation presents a review of the literature and research on cognitive and learning styles of LEP students.


This article gives an overview of the Arlington Public Schools implementation of David Kolb's model and its application to classroom instruction by Bernice McCarthy.


Contains "Rain, Rain—Don't Go Away."

A collection of articles on learning styles and brain research.


Highly recommended for anyone who wants to understand the 4MAT® System.


This book contains forty-six lesson plans for all levels, K–College.


This book provides an explanation of 4MAT® system applied to science education. It includes several lesson plans. Excellent source for any science teacher.


This study explores the relationship between learning styles and the socio-cultural systems of home and community.


This book explores the need for a holistic approach to literacy. The second part of the book has very practical strategies that can be incorporated in class for limited English proficient students.
