

THE BRIDGE: FROM RESEARCH TO PRACTICE

Content-Based Language Instruction: The Foundation of Language Immersion Education

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he purpose of this issue of the Bridge is to describe what research tells us about contentbased language instruction and to provide a sample lesson. The context for this description and the sample lesson is the CoBaLTT program—Content-Based Language Teaching through Technology. In this program, offered each year at the University of Minnesota, immersion teachers join with other world language teachers representing K-16 settings to learn about content-based language instruction and the technology tools that teachers can use to enhance their content teaching in the language classroom.

We begin with a brief description of the CoBaLTT program, provide background on the research base that underlies content-based instruction, and offer a sample lesson that was developed by an immersion teacher in the CoBaLTT professional development program.

Background: The CoBaLTT Program

The CoBaLTT initiative began in the summer of 1999 with funding from the National Language Resource Center, which is housed in the Center for Advanced Research and Language Acquisition (CARLA). The focus of the program is to affirm and enhance teachers' knowledge of content-centered teaching. This learning takes place through a professional development program and a web resource center.

The CoBaLTT professional development component includes a one-week workshop during the summer and continues with three two-day workshops throughout the academic year. A cohort of 25 teachers joins together to share knowledge and build experiences using content-based instruction. The program supports teachers developing curricula based on content and integrates technology to enhance this same contentbased teaching. The 2000-01 cohort includes K-16 teachers representing a variety of language teaching contexts, from traditional foreign language settings, to content-based FLES, to immersion.

The professional development for participants and others interested in this progression of learning is constructed and extended through the Web Resource Center, an ever-evolving website that offers instructional modules and a wealth of resources to assist teachers in developing technology-enhanced, content-based second language instruction. The interactive instructional web-based modules will be developed around the following themes:

- Content-Based Teaching Strategies,
- Principles of Content-Based Curriculum Development,
- National Standards,
- Performance Assessment, and
- Technology-Enhanced Instruction.

The Web Resource Center is currently moving from a conceptual map to a physical location to include the aforementioned modules. Additionally,

the practical resources will include a Content-Based Lesson Plan Room (which showcases the lessons/units developed by teachers in the CoBaLTT professional development program), a room containing technology resources, a Rubric Room, where teachers can download samples of rubrics and create their own, and chatroom facilities. Past, present, and future CoBaLTT participants culminate their learning and application of content-based instruction through the submission of units or lessons. Students participating in this year's program are currently completing their units and lessons, which will be posted on the web site during the summer. Look for more details about the CoBaLTT program at http://carla.acad.umn.edu/cobaltt.html.

The Context of Content-Based Instruction

Content-based language instruction is hardly a new phenomenon, although it is most often associated with the genesis of language immersion education in Canada in 1965. Using a second language as the vehicle to deliver content instruction has been practiced by cultures throughout the world for thousands of years. We know that "until the rise of nationalism, few languages other than those of the great empires, religions, and civilizations were considered competent or worthy to carry the content of a formal curriculum" (Swain & Johnson, 1997, p. 1). This can be seen in the evidence

that Latin was used as the medium of education for a thousand years after the fall of the Roman Empire. Since those early days, the thread of teaching language through content has been visible through a variety of program models, most notably immersion and bilingual education, and has had an increasing presence in other second language education contexts.

In the past decade expectations for teaching and learning among and across all content areas have changed. In some situations, these modifications attend to a higher cognitive level of functioning. In other settings, there has been an increased attention to accountability and minimal levels of competency for all learners. For these environments and many more, including immersion and bilingual classrooms and English as a second language (ESL) settings, teaching content through language has been an increasing part of the curriculum. Yet the balance between language and content varies depending upon the setting. In immersion and bilingual settings the "success of these [contentbased] programs is critically dependent on students' mastery of the academic content to the same degree and level as students in native-language classrooms" (Genesee, 1998). In other programs, academic content may serve as the medium for language instruction, but greater emphasis is placed on the acquisition of language skills than the academic or cognitive skills associated with the content being taught (Snow et al., 1989). This attention to both cognitive strength and linguistic proficiency is related to, and a significant tenet of, the national Standards for Foreign Language Learning developed by the American Council on the Teaching of Foreign Languages in 1996 (Standards for Foreign Language Learning, 1996). We are, therefore, seeing the principles of content-based language instruction integrated in language teaching in a broad range of settings, including traditional foreign language classrooms.

The transition from language learning as a subject area to content-based instruction is as varied as the learners and teachers. Changes in pedagogical approaches and paradigms are often met with many more questions from stakeholders in second language

education than research can answer. The majority of research and analysis related to this shift in instructional strategy comes from investigations in immersion, bilingual, and ESL settings. Since the empirical conclusions encompass so many variables, such as learner background, age, and purposes for second language acquisition, it is not easy to simply look at what has been found and apply it as a whole to new environments. Nevertheless, the research in immersion and bilingual education as well as content-based ESL has consistently demonstrated that using language as the vehicle for learning content makes sense and is effective.

General Principles and Research Bases of Content-Based Instruction

It has long been established in the research on immersion education that content-based language instruction works. That is, students who participate in immersion programs not only become proficient in the immersion language, they also achieve academically as evidenced by their performance on standardized achievement tests.

Why is this so? What do we know about content-based instruction and its effectiveness?

- •Research has shown that contentbased instruction results in language learning, content learning, increased motivation and interest levels, and greater opportunities for employment (where language abilities are necessary)—the research has emerged in ESL K-12 contexts, FL K-12, postsecondary FL and ESL contexts, and FLAC programs (Grabe & Stoller, 1997)
- •Natural language acquisition occurs in context; natural language is never divorced from meaning, and content-based instruction provides a context for meaningful communication to occur (Curtain, 1995; Grabe & Stoller, 1997; Met, 1991)
- Facts and skills taught in isolation need much more practice and rehearsal before they can be internalized or put into long term memory; coherently presented information (thematically organized) is easier to remember and leads to improved learning (Grabe & Stoller, 1997)

- Context-free/content-free materials aren't sufficiently rich to sustain students' interest (Wong-Fillmore, in Curtain, 1995)
- •Second language acquisition increases with content-based language instruction, because students learn language best when there is an emphasis on relevant, meaningful content rather than on the language itself (Curtain, 1995; Met, 1991)
- •Time; there is not enough time to isolate the content and language—postponing content instruction while students develop more advanced (academic) language is not only impractical, but it also ignores students' needs, interests, and cognitive levels (Curtain, 1995; Grabe & Stoller, 1997; Met, 1991)
- •Second language acquisition is enhanced by comprehensible input, which is a key pedagogical technique in content-based instruction; however, comprehensible input alone does not suffice—students need form-focused content instruction (an explicit focus on relevant and contextually appropriate language forms to support content learning) (Swain, 1985, in Grabe & Stoller, 1997; Lyster, 1987; Met, 1991)
- Content-based instruction provides for cognitive engagement; tasks that are intrinsically interesting and cognitively engaging will lead to more and better opportunities for second language acquisition (Grabe & Stoller, 1997)
- Content-based instruction is motivating because language is the vehicle for meaningful and developmentally appropriate content (Genesee, 1998; Grabe & Stoller, 1997; Met, 1991)
- Content-based instruction emphasizes a connection to real-life, real-world skills (Curtain, 1995)
- In content-based classes, students have more opportunities to use the content knowledge and expertise they bring to class (they activate their prior knowledge, which leads to increased learning of language and content material) (Grabe & Stoller, 1997)
- •Both form and meaning (content) are important and work together naturally; to separate them is unnatural (Met, 1991)
- Content-based instruction promotes negotiation of meaning, which is

known to enhance language acquisition (students should negotiate for communication related to both form and content) (Grabe & Stoller, 1997).

- •It promotes the use of "private speech" (problem-solving, reflection, rehearsing strategies), which is thought to contribute to language acquisition (Grabe & Stoller, 1997).
- •It provides a forum for teaching more complex language; more sophisticated, complex language is best taught within a framework that focuses on complex and authentic content (Grabe & Stoller, 1997).
- It lends itself to successful learning approaches—cooperative learning, strategy use, extensive reading—all known to improve language abilities (Grabe & Stoller, 1997).
- •The presentation of coherent and meaningful information leads to deeper processing, which results in better learning (Grabe & Stoller, 1997).
- •Information that has a greater number of connections to related information promotes better learning (it is more likely that content will have a greater number of connections to other information) (Grabe & Stoller, 1997).
- It allows for greater flexibility to be built into the curriculum and activities; there are more opportunities to adjust to the needs and interests of students (Grabe & Stoller, 1997).
- •It lends itself to the incorporation of a variety of thinking skills, which lead to rich language development, e.g., information gathering skills—absorbing, questioning; organizing skills categorizing, comparing, representing; analyzing skills—identifying main ideas, identifying attributes and components, identifying relationships, patterns; generating skills—inferring, predicting, estimating (ASCD, Dimensions of Thinking, in Curtain, 1995; Met, 1991).
- Content-based instruction develops a wider range of discourse skills than does traditional language instruction (because of the incorporation of higher cognitive skills—see bullet above) (Grabe & Stoller, 1997).
- Content-based instruction ensures that classroom activities are cognitively demanding (thus enriching students' cognitive development) (see Cummins, 1981, in Met, 1991).

- Language learning becomes more concrete rather than abstract (as in traditional language instruction where the focus is on the language itself) (Genesee, 1994; 1998).
- •The integration of language and content in instruction respects the specificity of functional language use (it recognizes that meaning changes depending upon context) (Genesee, 1994).

Teacher Characteristics in **Content-Based Language** Instruction

The following characteristics are embodied in successful second language teachers who incorporate a content-based approach in their teaching. Such teachers

- •use the target language consistently (or a combination of L1 and L2 in bilingual contexts); make use of English when the purpose calls for it;
- •recognize that learners are active constructors of meaning and plan accordingly;
- provide meaningful, communicative, significant contexts for language learning to occur;
- •create concrete experiences so that students are doing;
- •emphasize comprehension at beginning stages;
- •include reading and writing as tools even in early stages of language development;
- •assess performance frequently and regularly;
 - •base planning on themes;
- •follow a communicative syllabus yet are aware of the need to focus on form in the context of content instruction (with a focus on communication; grammar emerges through and for language use; they understand that an emphasis on comprehensible input isn't enough; demanding comprehensible and, when appropriate, accurate output is also key: total lack of attention to language structures does not help students to develop accuracy in their language proficiency (e.g., Lyster, 1987); best practice involves deliberate and systematic planning for and carrying out instruction in, through, and about the TL but always with emphasis on meaning;

- gear activities towards students' interests, developmental levels, experiences, various learning styles, and needs;
- •know that effective vocabulary instruction is key and involves (1) determining students' understanding and knowledge of vocabulary and concepts, (2) preparing students for the concepts/ vocabulary to be introduced in a lesson, that is, developing "pre-task" activities linked to students' prior knowledge, and (3) adapting lessons/assignments by providing multiple examples, guidelines, and procedures (Boutin, 1993);
- •come together to develop an overall plan for language development in sync with content development—they integrate the two syllabi by systematically planning for language instruction in the context of content instruction; culture, content, and language objectives (both content-obligatory and contentcompatible) need to be included (Snow, Met, & Genesee, 1989);
- •pay attention to both form and function when considering language and content instruction;
- •emphasize tasks that are cognitively engaging and intrinsically motivating;
- •make increased use of visuals and realia:
 - provide hands-on involvement;
- •increase the number and vividness
- establish clear and meaningful contexts for learning;
- •draw upon learners' past experiences and knowledge as well as previous experience from the curriculum;
- •build in rephrasing and repetition (and spiraling!);
- make tasks more cognitively engaging by:
- -relating tasks to those found in general curriculum -making use of processes and skills
- in general curriculum —practicing language communicative and problem-solving

situations;

- maximize student output and provide for opportunities for students to produce extended discourse (Genesee, 1994) ("long, transactional turns", Brown & Yule, 1983)
- provide for student-centered activities (activity-based learning and individual choice in activities) (Genesee, 1994);

•step out of the role of "teacher as expert" and are willing to learn with and from students.

Conclusion

The first two years of the CoBaLTT program have included cohorts of talented, enthusiastic language teachers interested in creating change in second language education. These modifications have already been evident at personal, school, and district levels. Participants have formed strong working relationships with other educators across Minnesota

and Wisconsin. The conversations and learning about content-based instruction is truly a process and one that will continue well into the future. Creating motivating, challenging content-based learning doesn't occur by chance. It requires attention to the principles for the approach, a high mastery of the content, and superior proficiency in the target language. Using content-based instruction requires more work initially. As lessons and units are developed, used with learners, and then refined, the framework of this process is in place. The

CoBaLTT website is a wonderful place for finding those initial ideas and building a base of research and practical understanding. It also provides teacher developed content-based lessons/units that can be downloaded and used in your classroom. The following lesson by CoBaLTT participant Terri Geffert demonstrates this bridge between theory and practice. We hope to build the collection of lessons appropriate for the immersion context by welcoming increasing numbers of immersion teachers to the CoBaLTT program. Come join us!

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Sample Lesson Plan

This lesson is adapted from a lesson prepared by Terri Geffert.

Plantas: Las Partes y El Ciclo de Vida

Audience and Level: Primary Immersion, 2nd grade

Purpose: Students will learn about the parts of plants and their functions.

Objectives:

Content:

Students will

- •identify the 6 main parts of plants (root, stem, leaf, flower, seed, fruit).
- •explain the functions of these 6 plant parts.
- •identify at least 2 roots, 2 stems, 2 leaves, and 2 fruits that we eat.
- •identify the origin (old vs. new world) of selected plants.

Skills/Learning Strategies:

Students will

•work cooperatively in groups at each station.

Cultural:

Students will

• explore the interchange of plants between the "Old World" and the "New World."

Language-Content Obligatory:

Students will

- •use the appropriate words in describing plant parts and their function (ex: raiz, tallo, aspiradora, pajilla).
- •use the phrase "Es la/el" to identify and classify plant parts.
- •use the phrase "Es como un/una" to write similes to describe the plant parts.
- •use descriptive words to write similes.
- •use at least 8 terms to identify some plants (and their parts) that we eat (ex: zanahoria-raiz, lechuga-hoja, fresa-fruta).

Language-Content Compatible:

Students will:

- •use the following phrase to classify plant parts: Yo creo que es....
- write similes using accurate gender agreement.

Time Frame: Four days (25 minutes daily)

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Materials Needed: There should be enough materials at each station for up to 8 students.

Station 1

- Hyperstudio (computer software) teacher presentation
- Worksheet to check comprehension
- Folder to collect student work

Station 2

- Large drawing of a plant (posted on wall or bulletin board)
- Small pictures or drawings of plants we eat (with masking tape on back)
- Answer key
- Student worksheets with same large drawing and plant pictures
- Folder to collect student work

Station 3

- Two large pieces of mural paper
- •List of plants (in Spanish) from the "old" and "new world"
- A variety of Spanish picture dictionaries

Station 4

- Examples of plant parts we eat: roots (radishes, carrots), stems (celery, asparagus), leaves (lettuce, cabbage), seeds (peanuts, sunflower seeds)
- Jeweler's loupes or magnifying glasses for each student
- Colored pencils and paper for each student

Description of the Task: The lessons are designed to be carried out in a station format. That is, students will rotate daily through stations in small groups (6-8 students). Each small group completes one activity per day. To help prepare the students for the station activities, I set the stage as follows. On the white board at the front of the classroom, I have drawn a square divided into four parts. Each part lists a station activity. On top of this square, I post a paper circle. The circle is also divided into four parts and lists the names of people in each of four groups. I rotate the circle each day until each group has completed all of the activities.

The stations are located in various parts of the classroom. At each station is a plastic bin that contains all of the materials necessary to complete the station activity (worksheets, maps, visuals, etc.) as well as a folder for storing completed work.

At the beginning of the year, students and I work extensively on station expectations (low voice levels, quality work, leaving a station as clean as it was found, using the immersion language). During the second half of the year, I also use a "passport" system at stations to encourage use of the target language. Each student has a paper

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passport with flags of countries where Spanish is spoken. They receive stamps on the flags when either a chosen student monitor or I observe consistent use of Spanish that day.

Station 1

I am fortunate enough to have four computers in my classroom, so with a group of eight, students are paired at each computer in Station 1. I have created a presentation using a Hyperstudio stack that shows the parts of a plant and their function. It uses similes for each plant part (ex: the roots are like a vacuum because they suck the water out of the earth). It also shows examples of each plant part that we eat (ex: carrots, radishes, beets as roots). At this station, students view in pairs the stack, which contains some cards that require them to answer certain questions before advancing in the stack. They then complete a worksheet to check their comprehension. Finally, they view the stack a second time to check their worksheet responses. The Hyperstudio stack will be available via the CoBaLTT Web Resource Center in Summer 2001.

Stattion 2

At this station, students have a large poster of a plant showing the 6 main parts. Students work as a group to place the pictures of the plants we eat next to the correct plant part on the poster. As they place a picture, they use the phrase "Yo creo que es....." For example, a student might have a picture of a carrot and state "I think it's a root" as s/he places the picture next to the root on the poster. After the group has classified each plant on the poster, they check their answers with the key and make corrections as necessary. They then use the poster as a guide as they create their own mini versions of the poster. Their miniversions are collected in the work folder and later sent home to be shared with parents.

Station 3

Before completing the work at this station, students will already have participated in a whole-group discussion about Christopher Columbus and the "Día de la raza." They will have some familiarity with the interchanges that occurred between the "old world" (Europe) and the "new world" (The Americas). In this station, students will divide into two groups (old and new) and each will have to create a mural showing the plants that originated in each geographic region. Each group will use the list of words (provided in Spanish) to illustrate on their mural the plants that originated in each part of the world. If a word is unknown to them, they will use the Spanish picture dictionaries. Students need to illustrate the plants and identify them in writing. Murals should be displayed in the hallway.

Here are some of the plants that students need to classify according to their geographic origin: potatoes, tomatoes, pineapples, corn, avocados, chocolate, peanut, peppers, cashews, vanilla, pumpkins, beans, sunflowers, blueberries, sunflowers, black-eyed Susans,

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marigolds, wheat, barley, sugar cane, onions, lettuce, peaches, pears, watermelons, bananas, olives, lilacs, daffodils, tulips, daisies, dandelions.

Station 4

The teacher should be at this station to review the parts of a plant and their Spanish names. She should then show some authentic examples of each of these parts. Students will use jeweler's loupes or magnifying glasses to look closely at these plant parts, and then will draw what they see with colored pencils. After drawing, they will write similes to describe what they see (ex: Es como la nariz de una bruja. It's like a witch's nose.). During a later class activity, students will share the similes that they have created with their classmates. They will read their similes, and classmates will try to guess which plant they are describing.

Assessment: Assessment is built into Stations 1 and 2, with materials provided for students to check their work. The teacher should also check their work to verify that students have understood the content. In Station 3, the teacher should check students work, and students will get 1 point for every correct answer placed on the mural. The quality of students' similes (Station 4) should be assessed with a rubric such as the following.

| | Holistic Rubric for Quality of Similes |
|---|--|
| 4 | Student has used the target language and phrase <i>Es como</i> in all descriptions. Student has used gender agreement (<i>el/la</i> or <i>un/una</i>) in all descriptions. Drawings are detailed. Students similes are creative. |
| 3 | Student has used the target language and phrase <i>Es como</i> in most descriptions, but with inconsistent gender agreement. Drawings are detailed. Similes are somewhat similar to teacher examples. |
| 2 | Student has not consistently used the target language or phrase in descriptions (English inserted into some similes). Drawings lack detail. Similes are very close to teacher examples or those of other classmates. |
| 1 | Student has not consistently used the target language or phrase in descriptions (English inserted into some similes). Drawings are rudimentary. Similes are the same as teacher examples. |