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Using food as a content domain in an English-as-a-second-language program

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USING FOOD AS A CONTENT DOMAIN IN AN ENGLISH-AS-A-SECOND-LANGUAGE PROGRAM

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

in

Education:

Teaching English to Speakers of Other Languages

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CHAPTER ONE

INTRODUCTION

Background of the Project

The school experience can be very traumatic for English learners. It is especially frightening for the student and parent when they do not speak the same language as the teacher. Many students in California, and elsewhere in the United States, are exposed to their first full day of English when they come to kindergarten. Although some of these kindergartners may have lived in the USA for a year or more, they have not had the exposure to English that is necessary to help them through this very difficult transition time.

In the State of California, there is talk of making Head Start, or some other preschool program, mandatory before a child can attend kindergarten. The content in Head Start will continue to be mostly academic, but the social and language experiences the children will receive will be extremely beneficial to the second-language learners as they prepare for the years of academia ahead.

Finding a link between kindergarten students' prior knowledge and what they are learning in the classroom is

the challenge of the English teacher. Fortunately, there are numerous links that are effective.

"People all over the world wear different clothes, do different jobs, and speak different languages. But we do something every day that is common to us all. We eat!" (Hopkins & Winters, 1990). One answer is simple: Use food to bring the students together!

A colleague once asked me about my philosophy of teaching. She asked if I believed that anything could be taught through foods. I don't know if I can go so far as to say anything, but my intent is to prove that the use of foods in the classroom can enhance the schooling experience of the English learner as well as enrich the educational environment for all.

The Role of English in the United States

California has undergone a major language transformation over the past few decades. In the 1950s, the majority of Southern California schools were mostly native-English-speaking students. The 1960s brought a few other languages into the macro-culture of Southern California. However, it was not until the 1970s and 1980s that the flood of Asian and Spanish-speaking students occurred.

Teachers have had to adapt and adjust as students from various cultures and languages have arrived.

The Social Context of English Learning

The first few days of kindergarten are difficult for all concerned. For the non-English speaker the difficulties can sometimes continue for many weeks or even months. In most school districts in California, and specifically in Lake Elsinore, bilingual education was "banned" with Proposition 227. The transition for English learners was extreme. Students went from being taught in their primary language to exclusively English instruction overnight. It was a time of sink or swim.

At Elsinore Elementary School today, there is a sixty-five-percent English-learner population. Over seventy percent of the school population is Hispanic. The school is at crisis level in meeting the standards that the state has set. This makes it a "sink or swim" time for the staff as well as the children. Fortunately for the students, the situation has been ameliorated somewhat since the first year of passage of Proposition 227; and although all students are still taught in English, there is an adequate primary-language support in most classrooms.

The Purpose of the Project

Foods, along with their origins and preparations, can play a vital role in the classroom. There are research-based reasons for the success of such concrete topics of instruction. Students are not just learning about the language in their cooking experiences. They are using the language for real communication as they cut, chop, assemble, roll, fry, bake, and decorate the foods they are preparing.

One of Krashen's hypothesis sustained by the cooking experience is the Input Hypothesis. "The input hypothesis claims that language is acquired in an amazingly simple way--when we understand messages" (Diaz-Rico & Weed, 2002). In using foods, recipes, and cooking utensils, the students are using all their senses to help them understand the messages presented. Their vocabulary is growing with each cooking experience, regardless of their level of verbal competence. The students' anxiety level is lowered because of the non-threatening environment and the ultimate success of the project (the food reward at the end).

Recognizing that kindergarten students are not coming to school as blank slates, teachers should try to incorporate their home cultures to enrich the cooking and

overall classroom environment. Parents could be invited to share family recipes and participate in other home-cooking activities with the class.

Holidays play an important role in the cooking classroom. However, it is important to remember "Multicultural experiences should not be limited to a celebration of holidays and should include foods, music, families, shelter, and other aspects common to all cultures" (Hopkins & Winters, 1990). Holidays are a great springboard for cooking in a multicultural classroom, but everyday experiences add just as much to the overall success of the program.

The Content of the Project

This ESL food project consists of five chapters and a unit consisting of six lessons. Chapter One describes the background information on the project and the need for this "hands-on" teaching in the ESL classroom. A review of literature that links food as a teaching tool to the classroom is presented in Chapter Two. In the third chapter, a theoretical framework is introduced, showing how the five concepts described in Chapter Two are linked to food as a teaching tool. Chapter Four details the design of

the curriculum (found in Appendix A); and Chapter Five is an overview of assessments to be used in the six-lesson unit.

Significance of the Project

There are many obstacles to operating an ESL classroom based completely on cooking. There is a sense of uncertainty in colleagues as cooking/teaching strategies are shared. Occasionally, there could be a lack of support from the parents in donating food items. The fire marshal may make mandatory changes in the classroom as well. The aspect that must stay consistent is the passion the teachers feel for what they are trying to accomplish, and the excitement the students show as dishes are created from around the world. Vocabulary and self-confidence can grow within the students. This is an important work that can only improve as ESL teaching skills improve...because almost anything can be taught with food.

CHAPTER TWO

REVIEW OF THE LITERATURE

Food is a universal teacher. Using foods, recipes, and cooking tools, one can learn many things, including measurements, fractions, the science of matter, and reading for information. The list could go on as long as there are subjects to learn. Teaching English to second-language learners using food fits in to a more general domain of the learning with food.

Because food is universal--everyone eats food--it is a great springboard for teaching vocabulary and for helping the English learner to be comfortable in school. Many English learners are immersed in English for the first time in their lives when they enter elementary school. Using appropriate ESL teaching strategies helps them to feel at ease. The use of food as curricular content can be an important way to have the curriculum incorporate students' culture.

Using a constructivist framework, allowing students to acquire new knowledge by using their prior knowledge makes perfect sense in an ESL classroom that incorporates cooking. Differentiated instruction is used in most ESL

classrooms. Allowing students to select the foods they will prepare and eat is part of that process. Thematic instruction as well as project-based learning can also fit in the cooking class.

This review of literature will address constructivism, differentiated instruction, project-based learning, integrated thematic curricula, and the foods of Mexico. These are key concepts that support a food-related curricular unit.

Constructivism

As a builder begins a project with a solid foundation of concrete and steel, so do educators need a firm teaching philosophy as a foundation for teaching children. Construction of a building takes time and a concrete knowledge of the building process. Builders rely on all they have learned to assist in the construction. In education, this would be identified as accessing prior knowledge. It is important in any successful learning environment and is key to the learning philosophy called constructivism.

Constructivist Teaching Theory

Constructivism is a philosophy of learning that is founded on the premise that by reflecting on past experiences, one can construct an understanding of the world (Brooks & Brooks, 1999). Basically, constructivism means that new experiences are internalized by building on past experiences or knowledge constructs previously established (Crowther, 1997). For teachers, this brings a new perspective to teaching. The classroom must not be a place where teachers impart their vast knowledge of the universe, but where the teacher is a facilitator for students' discovery of the world through their own experiences.

Activating Prior Knowledge. Meaning, for a student, is intimately connected with past experience. Students come into a classroom with their own experiences, along with cognitive structures based on those experiences. These structures are either valid, incomplete, or invalid. Using new information or experiences, learners will reformulate existing structures if new knowledge is connected in some way to knowledge already in their memory (Hanley, 1994).

Zahorik (1995) wrote extensively about student readiness and activating prior knowledge. He said, "Since

what is learned is always learned in relation to what one already knows…it is important that this prior knowledge be identified" (p. 14). Both student and teacher must make this identification because it is these structures that guide the perception of the new experience. Either the new learning fits into an existing structure or a new one must be constructed. Often students need a readiness activity to activate or trigger prior knowledge. When teachers are aware of students' prior knowledge of a given topic, they can better plan and provide learning experiences that build on those existing understandings. This can be done in a variety of ways.

Sometimes, simply asking students what they know about a subject may suffice. Using structures such as a K-W-L chart helps teachers in bringing students' prior knowledge into the planning (Diaz-Rico, 2004). Other times, brainstorming the causes of an event or story line is effective. Questionnaires or other written forms of pre-assessment can also work in some situations. If the new knowledge is procedural in nature, the teacher may even have the students attempt to perform the actual skill. This technique can provide useful information for later instruction. The teacher must carefully select the most

meaningful means for activating students' prior knowledge in each given learning environment.

Acquiring New Knowledge. Students create their own new knowledge in a search for understanding and meaning (McClelland, Powell, Rovegno, Rule, Smith, Sunal & Sunal, 2000). Students learn best when they actively construct their own understanding. Fitting new information together with what they already know does this. Cromwell (1989) looked at how the brain organizes and processes new information. He found that the brain organizes new knowledge on the basis of previous experiences and that meaning is developed through those experiences.

A unique feature of the constructivist model for acquiring new knowledge is the view that learning is a holistic manner. A basic assumption of holism is that learners must begin with an understanding of the whole rather than its parts (Green & Gredler, 2002). Rather than learning isolated facts, the process in the holistic classroom focuses on primary concepts, or "the big picture" (Brooks & Brooks, 1993). Zahorik (1995) described how this might look:

> An example is learning to square dance. Rather than painstakingly learning each step, body

> position, rhythm, and dance configuration and then putting them together to experience the dance, the constructivist teacher would show students the dance as practiced by competent dancers. The teacher also might have student attempt to perform the dance in a rudimentary way. Only after some sense of the whole is acquired would the parts that need attention be treated. (p. 16)

This example shows the value of teaching the whole picture rather than focusing on the minute details. The students feel success rather than frustration at learning a new skill. This is a benefit of holistic teaching.

A term known as "scaffolding" found its beginnings in constructivism (Collins, Brown & Newman, 1990). This metaphor alludes to the notion that as a building is built, workers need to support it with a temporary structure to be used as the bricks and steel and mortar are completed. Scaffolding in a classroom can take many forms, but students' prior knowledge is always part of the process. Thus, as students are acquiring new knowledge, the teacher supports them until they can move forward on their own.

Understanding New Knowledge. Once students have been exposed to new information, the process of understanding

begins. They must decide for themselves if the new knowledge fits their existing structures or if the structures must be altered to assimilate the new knowledge. Teachers can assist in this process by providing opportunities for the students to explore thoroughly the new content and share their views of the new content as it relates to their knowledge structures. It has been said that the most effective learning happens when students cycle through information, challenging and refining it (Marzano, 1992).

According to Zahorik (1995), the sharing of emergent knowledge is essential for understanding. For this reason alone, cooperative learning groups are an important element in the constructivist classroom. In a small group, students can discuss problems, compare and contrast ideas, and work out possible solutions. Working together, students can acquire greater understanding of new knowledge.

Using Knowledge. Once students have a basic understanding of new knowledge, they must put it to use so they can retain it. The most effective way for a teacher to assist in this is to provide activities that are interesting, holistic, authentic, social, and long-term (Zahorik, 1995).

To have learning activities that are interesting is just common sense, although there will always be a handful of students who will do the work just to please a teacher, even they would prefer to do something that is interesting and fun. Sylvester and Cho (1992) wrote that interesting activities are those that involve contrast or emotional intensity. Holistic activities have been discussed in the previous section. Authentic problems are those likely to happen in real life. It is that connection between classroom and reality that makes learning relevent to the student. One of the social aspects of using knowledge again involves cooperative-learning groups. This grouping gives students the opportunity to interact with others as they put new knowledge to use.

Reflecting on New Knowledge. In order for students to fully use new knowledge, they must have the time and opportunity to think about what they have learned. This is metacognition: "cognition about cognition" (Wellman, 1995, p. 1) or "learning about learning" (Diaz-Rico, 2004, p. 124). Metacognitive strategies can be used before (planning), during (monitoring), and after (evaluation) new learning. The evaluation strategies teach students how to assess their own performance by using learning logs or

other reflective tools to keep track of their progress (Diaz-Rico, 2004).

It is not enough simply to solve a problem. Ideally, one must be able to understand how one came to the solution. The teacher must provide reflective learning activities to help students achieve this goal. Reflective journaling is one way to accomplish this (Wells & Wells, 1992); simulation or role-play is also an effective technique. Whatever strategy teachers and students choose for reflection, it is important to focus on the new learning and how it was acquired.

Constructivism and Its Theoretical Roots

Constructivism, in its simplest terms, means that when one learns something new, it is internalized through past experiences or past knowledge constructs. This entails a focus on the learner and not on the teacher. The first "educators" to put emphasis on the learner were Confucius and Socrates (5^{th} and 4^{th} centuries B.C.) (Henson, 2003). St. Augustine, in 300 A.D., taught that in the search for truth people must depend on their sensory experiences, yet it was fourteen centuries later that philosopher John Locke introduced the idea of experimental education: the idea that one learns through experience (Crowther, 1997).

Perhaps the first constructivist philosopher was Giambatista Vico, who commented that one can only know something if one can explain it (Yager, 1991). Immanuel Kant elaborated further on this idea when he asserted that human beings are not passive recipients of information. Learners actively take knowledge, connect it to previous learning, and make it theirs by constructing their own interpretation (Cheek, 1992).

Two centuries after John Locke's experimental education theory, an educator named Colonel Francis Parker brought his method to the United States. However, it was Russian sociologist Lev Vygotsky, Swiss psychologist Jean Piaget, and American educator and philosopher John Dewey who shaped the existing learner-centered education into what the world now recognizes as constructivism (Henson, 2003).

Piaget: Focus on the Learner. According to Piaget, the material world is the starting point for learning because it is accessible and contains complexities of which children have never dreamed (Piaget, 1973). He believed that schooling should include spontaneous student experimentation. The teacher must create and organize classroom experiences that challenge students' thinking.

They must also be prepared to provide examples and questions that would lead children to rethink any hastily developed ideas (Ducksworth, 1990).

Piaget focused his attention on the learner as an individual. His work consisted of giving his students (usually his own children) problems to solve that encouraged them to manipulate concrete objects (Henson, 2003). He gave new meaning to the terms assimilation and accommodation as they applied to children's learning. According to Piaget, assimilation is an active response to a minor perturbation, and accommodation is an active response to a major perturbation of the child's existing representation of the world, when new experiences do not conform to the child's internal expectations (Iran-Nejad, 1995) (For a more detailed description, see Piaget, 1973). He was truly a constructivist of the first order and has been called "the father of constructivism" (Berger, 1978).

Vygotsky and the Negotiation of Meaning. Lev Vygotsky was born in Russia the same year as Jean Piaget in Switzerland. During the early twentieth century, he studied children's interactions and saw that when they worked in small groups to solve problems, they were much more able to solve problems (Henson, 2003). He called this social

learning approach "negotiating meaning." He used a system, now known as cooperative learning, to encourage cooperation in each small learning group. In this model, each member of the group has to understand and succeed at the given task. When a child is later asked to solve a problem alone, he or she "must make independent use of the earlier collaboration," thus demonstrating mastery of the learning concept. (Vygotsky, 1934, p. 216).

One cannot write about Vygotsky without addressing the "zone of proximal development." This is a band between what the learner can already manage alone and the lower limit of what can be done with help (Wells & Wells, 1992). Vygotsky noted that it is in this zone that teaching should occur. He wrote (1934) "Instruction is good only when it proceeds ahead of development: it then awakens and rouses to life an entire set of functions which are in the stage of maturing, which lie in the zone of proximal development" (p. 222). This aspect of Vygotskian thought can be summed up with his aphorism, "What the child can do today with help, tomorrow he will be able to do alone." Although the aphorism leads to "scaffolding" as previously discussed, Vygotsky never suggested it as an instructional method (Gredler, 2001). He, instead, used teacher modeling and explaining

(Vygotsky, 1934). Vygotsky addressed the needs of the learners and encouraged them to construct meaning through social interaction and work within the zone of proximal development.

John Dewey and Progressivism. According to Henson (2003), John Dewey used his very long life (1859-1952) to exert more influence on education and philosophy than any other American, before or since. His theory of "progressivism" sought to embody the American ideals of freedom, creativity, and individual rights (Diaz-Rico, 2004). His views found little acceptance in the traditional classroom, so he established his famous Laboratory School at the University of Chicago in 1896 (Spring, 2001). His methods emphasized student activity, student interest, and cooperative group work. Dewey felt strongly that the school had to become a "community of real social relationships" (Dewey, 1897, p. 31). He also believed that education should be problem based and fun (Henson, 2003).

With the spread of Dewey's work, the idea of socialable classroom activity became popular. Many articles appeared in educational journals and books addressing group activities. The topics ranged from arithmetic drills to teaching cooking in small, self-organized groups (Spring,

2001). Although his laboratory schools, once very popular, have been replaced with traditional schools, many of Dewey's theories are readily seen in classrooms today.

Jean Piaget, Lev Vygotsky, and John Dewey, along with many other philosopher/sociologist/educators, have helped to develop constructivism as it is today. It will continue to evolve as teachers implement the various aspects of constructivism.

Using Constructivism in the Classroom

The constructivist teaching model is a bold departure from the traditional/objectivist classroom teaching strategies (see Table 2.1). The students' ability to apply school-learned knowledge to the outside world is favored over memorizing bits and pieces of seemingly unrelated knowledge (Hanley, 1994). This sounds like good, commonsense teaching; yet for many teachers who are rooted in traditional instructional methods, it can be a difficult transition.

Table 2.1 compares components of a constructivist classroom with that of the traditional or objectivist classroom. One can note the many characteristics of Dewey, Piaget, and Vygotsky on the constructivist side.

Table 2.1. Comparison of Constructivist to Objectivist Models

Constructivist Model	Objectivist Model
Emphasizes learning	Emphasizes teaching
Encourages student autonomy	Encourages students regurgitation of accepted information
Employs holistic teaching	Employs teaching by subject
Views teacher as just one source of information	Views teacher as the main source of information
Encourages active listening	Encourages passive learning
Uses life experiences	Uses only textbooks
Taps prior knowledge	Teaches the text
Fosters cooperative learning	Maintains teacher as "expert"

Source: Hanley, 1994, p. 8

Most of the items in the table have been discussed in some detail previously. The constructivist classroom is indeed a very different place than the traditional class setting.

It has been said (Yager, 1991; Sagan, 1987) that all children start out as scientists, full of curiosity and

questions about the world around them. Typical school programs tend to destroy that curiosity by middle school. Many students stop studying math and science as soon as they are allowed to do so. Perhaps the exceptions are those taught in a constructivist classroom wherein the math and science frameworks have meaning in the lives of the students. For English learners, curiosity and desire to learn content is as important as language learning.

The goal of all educators should be to transform oneself into an exceptional teacher; who helps students discover for themselves the wonders around them through self-discovery, accessing of prior knowledge, and hands-on experiences. The tools for constructing that kind of classroom are readily available in hardcopy as well as electronically. The question for educators may be, "How badly do you want it?"

Constructivist Teaching Practices. Brooks and Brooks (1993) wrote that many constructivist practices could be incorporated into any class. They listed many ways to do so. First, they noted that constructivist teachers encourage and accept student autonomy and initiative. Second, constructivist teachers use raw data and primary sources, along with manipulative, interactive, and physical

materials. Third, constructivist teachers, when framing tasks, use cognitive terminology such as "classify," "analyze," "predict," and "create." Allowing student responses to drive lessons, alter content, or shift instructional strategies was another practice described by Brooks and Brooks (1993). Additionally, constructivist teachers allow students to share their own understandings of a concept before imparting their own views. Furthermore, a constructivist teacher allows for wait-time after posing questions, seeks elaboration of students' initial responses, encourages small work groups in accomplishing learning tasks, and engages students--especially during experiences that might cause inner conflict within a student--to challenge initial hypotheses and discuss concepts with others.

These suggestions are repeated by many other researchers in a variety of ways; this suggests that the ideas are not only sensible, but also practical and possible for any teacher wishing to improve the quality of teaching in his or her classroom.

By tapping on students' prior knowledge, constructivist teachers can and will enhance the learning experience of the English learners. Having something

concrete to mentally "hold on to" will give the students the confidence they need to succeed in the classroom. This is the strong foundation that English learners need. The concluding question to educators is repeated once again, "How badly do you want to improve?"

Differentiated Instruction

How many people can recall being in a classroom setting and being completely bored because the material was too simple? Or being in a class and feeling completely lost because the material was too deep? Conversely, who can recall times of complete involvement in a class, with the outcome being a successful learning experience? Each of these has occurred in the lives of most native-English speakers. However, when the content is in a second language, do the students have a positive learning experience, or are most things taught "over the heads" of the second-language student?

The ability to teach to each student--differentiate instruction--is a key facet of English-as-a-second-language (ESL) teaching. Perhaps because it is such an obvious aspect of second-language teaching and should be commonplace in every English language development (ELD)

classroom, there is little documentation available describing differentiation in that context. Differentiated instruction (DI) has been called commonsense teaching (Tomlinson & Eidson, 2003). Tomlinson (1999) further stated that in the context of education, differentiation is defined as teachers reacting responsively to the needs of all learners. This may appear overwhelming. Experts in the field admit that "the bulk of the work is upfront planning" (Hess, 1999, p. 2), but when analyzed into workable components, the results can benefit both teachers and students.

In this section the author will discuss six elements of differentiated instruction as delineated by Tomlinson (1999). The first are qualities that can be found in all students at some level: readiness, interest, and learning profiles. The others are elements the teacher must implement based on those student qualities: content, process, and product. In addition to these elements, a variety of teaching strategies will be discussed with application to the English-language-learner (ELL).

Brain Research and Student Readiness

Both psychology and contemporary brain research offer the theory that individuals learn when they are ready to do

so. Tasks must be at the proper level of difficulty to be, and to remain, motivating: tasks that are too easy become boring; tasks that are too difficult cause frustration (National Research Council 1999). Brain researchers Howard (1994) and Jensen (1998) explained that the best learning occurs when students are neither bored nor overly anxious--neither overchallenged nor underchallenged. Students must be ready to learn what the teacher teaches and the teacher must be prepared to teach in a manner that each student is ready to learn.

Vygotsky (1962, 1978) explained one way learning can take place. He stated that there is a specific point in the learning process where a child can function independently. Beyond that point the child cannot proceed alone. It is there that a teacher needs to scaffold instruction to support the child in moving forward through more complex applications. Without a teacher's input, the child can become frustrated and unable to move forward alone. Hence, the teacher's job is to guide the child through the ZPD (see page 18), coaching the student through complex tasks, and helping achieve a higher level of student independence.

Vygotsky's ZPD sounds familiar to those who have read Krashen's Input Hypothesis and his theory of *i*+1 (Diaz-Rico

& Weed, 2002). Krashen believed that students should be taught at their level of understanding and then one level higher. Further research has shown that "in classrooms where individuals were performing at a level of about 80% accuracy, students learned more and felt better about themselves and the subject area under study" (Fisher, Berliner, Filby, Marliave, Cahan, & Dishaw, 1980, p. 27). Hence, a key factor in students' success is getting them ready for learning using material that interests them.

Finding What Interests the Student

Another aspect of differentiated instruction is student interest. Many researchers and psychologists have found that interest is the gateway to learning. "Linked to motivation, student interest can be a compelling factor in learning, because interest makes tasks engaging, satisfying, and personally challenging" (Bruner, 1961, p. 14). Few students would choose to learn something of little or no interest over that of a high-interest topic in any setting.

Csikszentmihalyi and Csikszentmihalyi (1988) suggested a theory known as flow. Flow is a state where people are so involved in an activity that they lose track of time, weariness, and everything else except the activity itself.

Would not that be an amazing phenomenon in a classroom, if all students were so engaged that they forgot to go to lunch or recess? If teachers would teach what students are interested in, that could very well be the case.

Tomlinson (1999) stated that by giving students some latitude in how they pursue their individual learning tasks, teachers empower them to exercise creative thinking. Of course, there must be parameters for student-interest topics. However, by teaching high-interest topics, teachers will engage students more effectively than by merely teaching "by the book."

Student-Learning Profiles

A learning profile takes into consideration the students' individual learning styles and intelligence preferences, as well as gender and culture. Each of these areas has reference to how children learn, not the speed, depth or particular interests of the children doing the learning. These styles and preferences, as well as gender and culture differences, greatly affect student learning. A differentiated classroom cannot be complete without these considerations.

Much has been written about intelligence preferences and learning styles in both psychology and education.

Gardner (1983) offered theories on multiple intelligences and the importance of teaching to a child's intelligence preferences. Dunn (1996) suggested that individuals vary in their preference for conditions of learning, describing such learning preferences as proclivity toward quiet or noise, formal or informal seating, bright light or low light, time of day best suited for learning, relationship to peers, and degree of mobility in the classroom. When individual needs are met in these areas, the greatest amount of learning can take place.

Numerous studies have been done in respect to gender and cultural differences. In both cases, one must be pre-warned that although there are real differences in the learning styles of males and females, and people of various cultures, one must not stereotype learners because of gender or culture. For example, many theorists suggest (1) that girls prefer group work versus competitive assignments; (2) girls communicate with the intent of establishing a relationship, whereas boys communicate to get what they want or need; and (3) girls tend to want to help others more than boys do. Of course, there are numerous exceptions to these generalizations. Wise teachers will observe their students and address the needs of each

gender as seems fitting for the students in the class (Tomlinson & Allan, 2000).

Culture shapes the intangible aspects of a person's life. Tomlinson and Eidson (2003, p. 9) wrote that "students' cultural backgrounds can profoundly shape both their views of schools and the way they experience them." Benjamin (2003, p. 109) added this: "One of our biggest challenges in differentiating instruction is teaching students whose native language [and culture] is not English." In teaching a multicultural class, differentiating requires a good deal of "homework" on the teacher's part: learning about the students' cultures and languages, and finding ways of addressing those very special needs. Tomlinson's reply to this is "Anything that's worth doing is complicated" (Hess, 1999, p. 2).

Benjamin (2003) made several suggestions for differentiating instruction for the English language learners:

> Teachers who care about their ESL students express an active interest in their culture and language, offering opportunities for them to communicate and make friends, making sure everyone in the class knows how to pronounce

> their names, presiding over an atmosphere of invitation and inclusion...The first and best way to differentiate instruction for your ESL students is to be a gracious host or hostess to them in your classroom. Learn all you can about their interests, their level of proficiency, their family situation, their culture and their language.(p. 110)

Understanding students' culture, helping them to feel comfortable, and recognizing student's individual differences can help teachers to create an environment in the classroom that enhances learning. Knowing and understanding all students should be part of a teacher's job, and if done well, will benefit both students and teacher.

Standard-driven Content

There are numerous ways a teacher can differentiate the teaching of content using a variety of strategies. Content consists of the facts, concepts, generalizations, skills and attitudes pertaining to the subject matter, as well as all the materials they represent (Tomlinson & Allan, 2003). In most instances, the content should remain the same for all students, with the standards dictating the

content. However, as it has been previously stated, it is obvious that not all students assimilate content in the same way. For example, during math, manipulatives can be used with some students and not with others. During reading groups, students can read books geared to their level, and reading buddies can be used in a variety of ways. Computers, audio and video cassettes, and other multimedia tools can assist in delivering content to students in ways that best fit their individual needs.

It is important to consider the way that students gain access to the content, and to align tasks to the learning goals. The instruction must be concept-focused and principle-driven. To differentiate is not to water down the content but to make that content accessible to all students. Once again, the path is not easy, but student success is the result.

The Process of Learning

A familiar synonym for process is activity, and a teacher must gear the activities to fit the needs of the students. Flexible grouping is a hallmark of differentiated instruction. Because the classroom is dynamic, with a number of activities going on at the same time, "a

differentiated classroom may look chaotic, but it's a workshop" (Hess, 1999, p. 2).

The processes or activities must be planned with a clearly defined instructional purpose: they must focus students on one key understanding, cause students to use key skills to solve a problem, and ensure that students will have an understanding of the key points (Tomlinson, 1999). The question the teacher must ask in planning the activity is this, "How can this activity help my students make sense out of the essential ideas and information (content)?"

Yet another hallmark of differentiated instruction is that all students work consistently in respectful activities. This takes much effort on the teacher's part but good classroom management benefits both the students and the teacher (Hall, 2003). Respectful activities are those intended to meet the objectives previously stated. They are not "filler" for those who finished work early, nor are they "baby work" to keep the lower-achieving students busy while in-depth teaching takes place for others. Tasks put before each learner should be interesting, engaging, and feature essential learning (Hall, 2003).

cookies, pancakes, and muffins after reading Laura Numeroff's If You Give a Mouse a Cookie, If You Give a Pig a Pancake, and If You Give a Moose a Muffin will reinforce the cause-and-effect learning from the books and create a learning environment in which all students will want to participate.

Another example of differentiated product in elementary schools is that of a homework menu. The menu is sent home weekly with four or five different subjects listed across the top. Under each subject there are numerous choices of assignments from which the student may select one each night. Some are as simple as playing a card game with a family member and others as complex as creating a puppet theater. Students have autonomy, with the help of parents, to produce whatever meets their individual learning goals.

Rubrics assist both the teachers and the students in creating a quality product. The rubrics must be designed to match and extend students' varied skill levels. Rubrics can, and should be, used in almost all subject areas. They can be easily implemented in writing, art, social studies, science, and creative cooking projects. Aside from rubrics, a final element in student product is allowing students to

work collaboratively or alone depending on their learning preferences. This time can be spent in producing student-created product assignments, if applicable, or carrying out a carefully selected teacher-directed assignment (Tomlinson, 1999).

In planning for differentiated instruction there are many things to know and implement. Fortunately there is a plethora of current information available on the Internet and in the bookstores. Any teacher having a desire to learn more can access information almost immediately.

Differentiated Terms and Applications for English Learners

Differentiated classrooms are the ideal environments for English learners. Many of the strategies addressed herein are also found in ELD curricula like Hampton-Brown's Into English. In Benjamin's Differentiated Instruction (2003), an entire chapter is devoted to terms that apply to DI. This section identifies a few of those terms and applied to the English learner. The definitions are as follows.

Adjusted questioning is when a teacher alters the depth and complexity of a question to accommodate the children in the class. In Hampton-Brown's Into English, each lesson is accompanied by a set of questions for each

of the proficiency levels. For example, in a lesson on transportation, level-one students would be asked to point to the car or the bus. The level-two students would be asked what they ride in to get to school. The level-three students would be asked to give some details about the car or bus that brought them to school. Finally, the students at levels four and five would be asked to give more detail or maybe even write a short essay and read it aloud.

Using alternative assessments is one of the hallmarks of differentiated instruction. Some students respond better to oral assessments than to the standard paper and pencil test. Others are able to show their knowledge through projects or other hands-on activities. Assessing students in ways other than paper and pencil tests is standard procedure for second language students.

Chunking information is another term for accessing students' prior knowledge. For example, teaching the word family "at" beginning with a discussion on cats is a way of chunking similar letters together and will help students make a connection with what is being taught. All students learn better when they have something to connect with the new knowledge. This is especially true of the English learner.

Flexible grouping has been discussed in some detail; the need for it in a language class is well documented. Lower-level students need to be in flexible groups throughout the day. Because California mandates that there be no more than two consecutive language levels during ELD instruction, these students need to be in other groups at other times during the day. The ELD instruction needs to be focused on the language level of the students involved, but those students also need to be grouped with others with better English to hear the language and practice speaking.

Graphic organizers have long been considered an anchor for English learners. These organizers help the students arrange new information visually. KWL charts are just one of many graphic organizers. These charts help teachers see what the students already know, what they want to know, and finally, what they learned.

Scaffolding is a support system for learning, as the metaphor implies. To scaffold a building is to build a protective frame around it until it is strong and secure enough to stand on its own. Scaffolding in education means the same thing. Students are made stronger and more secure as they are taught with plenty of teacher support. As they become stronger, the teacher removes the scaffolding until

students can stand on their own. Krashen and others have said that students learn best when slightly challenged. The change from lost to "finding" new language is achieved with steady teacher scaffolding.

Think-pair-share is a strategy used in cooperative-learning settings. This strategy pairs students, asks them to think about an answer, share with their partner, and then share again the results with others. This is a great exercise in metacognition as it helps students to think about their thinking, and then share those thoughts with others.

Differentiated instruction is a positive teaching method that benefits all students. Its goal is maximum student growth and individual success (Tomlinson & Allan, 2000). Creating a differentiated classroom takes time and effort on the part of the teacher. Tomlinson (1999) estimated that differentiation could take as long as seven to 10 years to institutionalize in most schools.

In summary, differentiated instruction can work in any classroom if the teacher is willing to prepare the content, process and product, as well as learn about students' readiness, interests, and learning profiles. The experts have suggested starting small and working forward with the

end in mind. The way will not be easy, but as Tomlinson has said, it will be worth it.

Project-based Learning

A first-grade classroom has been learning about birds. The students generate the question, "What kinds of birds to we have around our school?" The children divide into groups and begin to discover for themselves the answers. One group makes bird feeders and then records the types of birds that visit the feeder. Another group learns about the flowers and bushes at the school site. Yet another group uses e-mail to find out what types of birds and plants are at other schools nearby. The class plans a field trip to a store and to a plant nursery to see what types of bird food are found and to find out what types of birds are attracted to different types of food. The students then share their findings with other classes at the school (Sunal, Powell, McClelland, Rule, Rovegno, Smith, & Smith, 2000). This is an example of project-based learning in an elementary classroom.

Project work is not new to early elementary education. However, interest in involving children in group projects has been growing over the past few decades. Project-based

learning is used in integrating across the curriculum and gives students the opportunities to question, explore, and share their learning.

What is Project-based Learning?

With the rise in popularity of project-based learning (PBL), numerous definitions have surfaced, all somewhat similar in nature, yet each giving more substance to the term. Sylvia Chard (2001), a noted project-based learning expert, defined a project as an in-depth investigation of a real-world topic worthy of children's effort and attention. Thus, a project must stem from a real problem, not something made up by the teacher, and must be of interest to the students.

PBL gives students opportunities to take on tasks that are consequential (Diaz-Rico, 2004). To be meaningful, a project must make a difference to the lives of the children involved. This keeps them engaged and willing to work until the problem is solved. PBL is an instructional approach that contextualizes learning by giving the students problems to solve or products to develop (Moss, 1998).

A Brief History of Problem-based Learning. The roots of PBL can be traced to the John Dewey's belief that teachers should teach by appealing to students' natural

instincts to create and investigate (Delisle, 1997). Dewey (1916,1944) wrote that, "the first approach to any subject in school, if thought is to be aroused and not words acquired, should be as unscholastic as possible" (p. 154).

Problem-based learning (Forgarty, 1998) was originally designed for students in medical schools. It made a leap to high school when faculty at the University of Alabama developed a program to increase the number of minority students accepted into medical schools. The faculty did not use PBL themselves, but their research into effective science teaching convinced them that PBL would be successful in high school. Howard Barrows, a pioneer in developing PBL, began working with Alabama schools to develop anatomy/physiology courses for high schools. Word of this "new" teaching quickly spread throughout the United States, and it is now known and used in both primary and secondary schools across America (Delisle, (1997).

Phase One. The project, or problem, approach has three basic phases, with the first being that of finding a real-life problem. Diaz-Rico (2004) has stated that schools are often inadequate in preparing students for real life. PBL helps prepare students by providing a "driving question

The following table gives the percentages of time spent in each phase.

Table 2.2 Percentages of Time Spent on Projects

	Phase One	Phase Two	Phase Three
Kindergarten	25%	50%	25%
Third Grade	20%	60%	20%
Sixth Grade	15%	70%	15%

Source: Chard, 1998, p. 35

Phase Three. The final phase of PBL is one of reflection and sharing. The teacher arranges a culminating event through which the children share with others (parents, principal, other classes) some of the things they have learned. The work is reviewed and evaluated and particular items are selected for the presentation, with the emphasis on the communication of learning (Chard, 1998).

A final definition of PBL states that it is a search for solutions to life's messy problems. It is learning by encountering the perplexing. It is an elegant design for learning that begins with an ill-structured or open-ended

problem (Fogarty, 1998). No matter which definition is used, PBL is a teaching scheme that uses a real-life problem of which the students show interest; it involves investigation and research; and the results are shared in some way with others.

Why Use Project-based Learning?

Experienced teachers understand that once students have learned a skill by having to use it, it is theirs. It is not necessary for the students to "cram" for it on a test. PBL is a way of learning information that works because students take ownership of the problem and learn on their own the steps needed to solve the problem.

Motivation. Curtis (2002) tells of a twelve-year-old boy named Ricky who attended an elementary magnet school emphasizing PBL. Ricky recalled working on a project entitled "Red, White and Blue Architecture." He and his classmates completed the project combining social studies and architecture, after having been introduced to the idea when they saw a first-grade project on home construction. The fifth graders were intrigued and wanted to find out more. They conducted research on the Internet, read books, and consulted with experts to learn about the memorials in Washington D.C., as well as some of the heroes for whom the

memorials were built. The students produced a book about their findings using a software-publishing program. The students also drew computer models of the memorials, and made small-scale memorials of their own. The parents helped to raise money for a trip to Washington where the students were able to see, first hand, the memorials they had learned so much about. The class then presented their work to community members at a school-sharing day.

When the project was completed, Ricky and his classmates had fulfilled a wide range of state curriculum standards in math, social studies, technology, and English. They had also gained poise and learned skills such as teamwork, problem solving, analyzing and interpreting data, and meeting deadlines (Curtis, 2002). The students were motivated throughout the project, felt the intrinsic rewards of a job well done, and had created a memory never to be forgotten.

Ownership. Perhaps one of the greatest benefits of PBL is the ownership that the students feel in the problem they undertake. "Project work takes into account children's questions and curiosities about the world around them" (Chard, 1998, p. 11). If children pursue questions or problems that they are interested in, they will much more

will fall short in meeting the needs of the students involved in the project.

Table 2.3 Elements of Collaboration

Using cooperative groups increases student collaboration.
Even when the students work in groups, individualized instructional planning and feedback are provided.
The teacher evaluations and students' self-assessment decide the grades.
The teacher facilitates learning and provides needed feedback.
Real-world significance is provided through authentic settings.
Student reflection is essential to the project, both during and after the process. It is through reflection that people learn and develop.

Source: Diaz-Rico, 2004, p. 379

The Teacher's Role

Each phase of PBL has different requirements for the teacher, although the constant is teacher involvement on the sidelines. Someone once said that a good teacher is a "guide on the side and not a sage on the stage." This is especially true in project-based learning. The students

will not take ownership of a problem if they feel the teacher already has it. A teacher must plan for the project even before phase one begins. She can do this by finding out what the children are interested in and aligning those interests to the standards and curriculum that need to be addressed. An important element to be remembered is that the topic must relate closely to the children's everyday lives (Katz, 1994).

Phase One: Getting Started. During this phase, the teacher should find out about children's prior knowledge about the topics that are under consideration. An initial discussion often brings memories to the minds of the children. A personal story, told by the teacher, may lead the students to share some stories of their own related to the topic (Chard, 1994).

The teacher must pay close attention to the questions being asked by the students. These questions will be the driving force for the project. The teacher can use a K-W-L chart, or some other tool, to help uncover the students' prior knowledge of the topic, and note the questions, as well as misconceptions they have about it (Curtis, 2002).

A topic or a concept web is a good way to begin a project, both in the teacher preplanning phase and in phase

one of the learning process. The web will assist teachers in understanding the students' prior knowledge and will help in seeing the subtopics that will become part of the project. However, "teachers should keep in mind the children's previous experience, interests, knowledge, and the understanding to be acquired when choosing subtopics that would provide the most fruitful project activity" (Chard, 1994, p. 17). Once the web is completed (although it may get additions during the project), the class is ready for the second phase.

Phase Two: Developing the Project Work. During phase two of the project, the teacher's main concerns center on the provision of new firsthand experiences for the children and the collection of resources (Chard, 1994). These resources can be experts in the field, hands-on experiences, field trips, library research, or books, just to name a few.

Another role of the teacher during this phase is to encourage students' independent use of skills they already have, including observation, communication, reading, writing, and research (Katz & Chard, 1989). As teachers observe the students working on the project in phase two,

they can guide (from the side) the students through troubled spots to help ensure a successful project.

Phase Three: Concluding the Project. As the students are concluding their fieldwork in phase two, teachers must be making some decisions for phase three. What kind of culminating event would be most appropriate for this project? What kinds of main understanding should be consolidated and how? What kind of activity would enable students to personalize their newly acquired knowledge? (Chard, 1994). All these questions must be answered by the teacher and then acted upon. The finished product must represent the children's achievement. It should be an event that involves communication, sharing, and some sort of presentation. The students must also have an opportunity to actively reflect on their new learning.

In a first-grade classroom in Lake Elsinore, CA, the culminating activity after an in-depth study on holidays was an evening performance where the students sang, recited poetry, and displayed shadow boxes and posters they had made. Desserts from many holidays in the year were enjoyed at the conclusion of the evening and a cookbook of recipes provided to the parents (Kaas, 2004).

The role of the teacher in the final phase is to help shape and polish the displays, write-ups, and multimedia programs; and to help students draw conclusions or otherwise integrate, consolidate, and elaborate their understanding of the content of the project (Katz & Chard, 1989). In the student work that is being presented, the teacher would want to be sure that each student felt success with the completed project.

Summary

PBL is an excellent way of making learning real for students. It is not a matter of how much students know, but what they are able to do with that knowledge, that makes a difference in the lives of the students. It is human nature to want to participate in something with a beginning, middle, and end. PBL has three very separate and unique phases. As students get involved in the process, they can readily see where they have been, where they are, and where they are going. Self-confidence improves as students work together to see a project through to the final presentation.

PBL takes a large amount of planning on the part of the teacher. Because the students are making the decisions for the direction the project will go, the teacher has no

way of knowing where the project will ultimately end. This forces the teacher to have less control in the classroom. The cooperative groups are usually noisier than traditional individual work settings. Technology is a major element in PBL, so the teacher needs to have a good working knowledge of the computer. With all of these obstacles in the path of PBL, one may ask if it is worth the effort. The answer is a resounding YES! To allow students to have real experiences that will make a difference in real life and make connections to the real world around them is what teaching is all about. Project-based learning is one of the best ways to get there.

Integrated Thematic Curricula

The students in the classroom are listening to Charlotte's Web by E.B. White during the teacher read-aloud time. At a math center they are counting small objects to 514 (the number of eggs Charlotte the spider produced). During language arts they are finding compound words from the chapter they just heard. They are writing a response to the chapter as well. Later in the week they will make "Egg Sac Surprise" as a cooking project (Kaas, 2004). In the next few weeks the class will go on a field trip to a

county fair. The science unit they are studying is about animals and their babies. All this equates to an integrated thematic unit, based on a piece of literature.

According to Lake (1994), integrated curriculum, interdisciplinary teaching, thematic teaching, integrated skills, and synergistic teaching, are all terms that relate closely to one another. Each incorporates the view that the approach to subject matter when teaching a child should be unified, not divided into disciples such as math, reading, social studies, science, and art. With an integrated curriculum, children are better able to interrelate subject matter and view the world in a more global manner.

What is a Thematic Approach?

The use of themes in the classroom has been traced to education reforms in the 1930s—specifically, John Dewey's discussion of meaningful learning (Lipson, Valencia, Wixson & Peters, 1993). These researchers analyzed the underlying rationale for thematic teaching as five-fold: 1) to provide valuable focus in the classroom; 2) to help students understand why they are doing what they are doing; 3) to demonstrate coherent connections among disciplines that allow a transfer of learning from one context to another; 4) to help students grasp the relationship of content to

process; and 5) to facilitate the acquisition of an integrated knowledge base (Ritter, 1999).

A basic definition offered by Humphreys, Post and Ellis (1981) stated, "An integrated study is one in which children broadly explore knowledge in various subjects related to certain aspects of their environment" (p. 11). They see links among the humanities, communication arts, natural sciences, mathematics, social studies, music, and art. Skills and knowledge are developed and applied in more than one area of study.

Shoemaker (1989) enhanced the definition when he stated:

> [thematic integrated curriculum] is organized in such a way that it cuts across subject-matter lines, bringing together various aspects of the curriculum into meaningful association to focus upon broad areas of study. It views learning and teaching in a holistic way and reflects the real world, which is interactive." (p. 5)

There are a variety of terms used for thematic approaches, most notably theme units, theme studies, integrated and cross-curricular activities, and thematic units. These terms represent curricular models with much in

common. Many teachers who use thematic approaches see the positive results in student interest and performance. The use of thematic units provides students with opportunities to expand literacy learning as they actively construct knowledge (Turner, 1996).

Literacy researchers have contended that reading must be meaningful, and that the use of literature for reading instruction must be natural and informal, deriving from the needs and motives of the learners (Giddings, 1992). Using literature units can accomplish these ideals. Through careful selection of themes, teachers and students can work together to experience print-rich and mind-expanding learning.

Teachers, with the help of students, should choose themes that lend themselves to teaching language as well as providing quality content that will be beneficial to the students. Themes should integrate content, language, and culture into each lesson in some way (Haas, 2000). Although creating thematic units takes effort and time, they engage students and provide them with exciting and meaningful context in which to learn language, culture, and deeper thinking skills.

Benefits of Using a Thematic Approach

Research has indicated many benefits gained from thematic literature units. It is important to foreground these advantages because teachers are increasingly being held accountable for all methods used in the classroom (Turner, 1996). Skill development in language, reading, writing, and thinking can all be addressed by the use of thematic units. In addition, student motivation and interest in reading, and connection between children and the characters in the literature are all increased by the use of literature themes (Roser, Hoffman & Farest, 1990).

Using a thematic approach gives children opportunities to learn and explore. It can serve a wide range of pedagogic uses, from meeting the needs of an individual student to the development of overall curricular plans (Gamberg, Kwak, Hutchings, Altheim, & Edwards, 1988). Themes can be narrow or broad, but they must capture the students' interest and stimulate them to gather information.

Literature-based thematic units are especially effective in reading programs. When a teacher establishes a clear schema for content, structure, and function of literature, integrating a variety of literary genres in

literature units promotes students' cognitive development (Turner, 1996). Students' attitudes toward reading, their reading achievement, and their knowledge of content area concepts have improved when thematic approaches were used that combined content information and literature (Smith, 1993).

Thematic approaches are a natural way to combine content areas and emerging literacy skills. Using a variety of theme activities infuses learning with meaning, interest, and function. Students can actually see the purposes for becoming literate (Strictland & Morrow, 1990). Moreover, the way in which children are taught reading can greatly influence the way they view reading. A focus on mastery of an isolated skill makes the learning fragmented. Furthermore, students may not understand the relevance or the connectedness of the act of reading to "real life" (Jones, 1982).

Another benefit of the thematic approach is the opportunity to move students toward higher-order thinking. These units of study allow students to listen to, read, write about, and discuss what they are learning. Students are challenged by the ideas and information presented in thematic units (Hyde & Bizar, 1989). Using Bloom's Taxonomy

as a guide, themes offer children the opportunity to analyze characters' motives or plot development by exploring the presentation of a theme; to synthesize by comparing and contrasting events, situations, and outcomes in literary selections; and to evaluate literary selections using explicit criteria to assess authenticity or morality of characters or stories (Deusen, Donham & Brandt, 1997).

Thematic approaches benefit both students and teachers. They are effective because they allow teachers to teach related concepts, choose and use a variety of materials, and systematically organize activities for learning across content areas. Students benefit because they use all the language arts as they ponder on the relationships that exist within curricular topics. As they analyze and synthesize what they read, write and use, the students become users of information and not just passive bystanders (Turner, 1996).

Integrated Curriculum: An Expansion of Thematic Units

There are numerous sources that define integrated curriculum (IC), each giving a broader meaning to the term. Almost 50 years ago, Dressler (1958) gave one of the most basic definitions:

> In the integrative curriculum, the planned learning experiences not only provide the learners with a unified view of commonly held knowledge but also motivate and develop learners' power to perceive new relationships and thus to create new models, systems, and structures. (p. 3)

Using an IC helps students gain a firmer understanding of new material by assisting in broadening their view of the basic concepts. Dendy (1998) added that IC is a mind-set that can change the way a teacher looks at every student objective.

Yet another definition comes from Joglekar, Bhuiyan & Kishore (1994), who said, "knowledge learnt in isolation is rapidly forgotten" (p. 231). They defined integration as a way to organize teaching matter that interrelates subjects frequently taught in separate courses or departments. Furthermore, they used an example of giving children all the ingredients for cake separately: eggs, flour, sugar, etc. and expecting them to eat it (not an appetizing thought). But when all ingredients are mixed or integrated together, the children will want to partake over and over again.

An integrated curriculum in an ESL classroom can be especially helpful. Diaz-Rico (2004) emphasized the importance of integrated skills in teaching English learners as a way to engage students and teachers in long-range units so that language can be used for many purposes. The most elementary aspects of language learning (speaking, listening, reading, and writing) are not taught as separate subjects, but they are integrated as tools to be used in the quest for something greater: the exploration of the world.

If used correctly, an integrated curriculum can promote language as well as academic development. Students use a variety of communication modalities when they pursue open-ended assignments (Diaz-Rico, 2004). Of course, careful teacher planning is required for a high-quality IC. A teacher must look at the individual needs of the students and plan according to their needs and interests.

Because a successful integrated curriculum can be time-consuming, a key element of the program is teacher collaboration. Working with other teachers on a regular basis to brainstorm ideas, plan themes, and discuss creative ways of implementing those themes can be of great benefit to both teachers and students. These collaboration

meetings can be held as frequently as necessary. Ovando, Collier and Combs (2003) wrote "Collaborative planning with other teachers usually leads to many creative ideas for reaching the specific curricular objectives through authentic and meaningful themes that explore the universal human experience" (p. 164). In this instance, the old adage "many hands make the load light" rings true.

In sum, an integrated curriculum is one in which children broadly explore knowledge in various subjects (Humpherys, Post, & Ellis, 1981). Students participate in long-range units bringing many subjects together, thus broadening students' view of themselves and the world around them.

Meaning Through Integrated Thematic Units

Students construct knowledge in their own minds so that it has meaning to them (McClelland, et al., 2000). Teachers are merely facilitators in the learning process and need to recognize that role by assisting students to make learning more meaningful. Each student is responsible for his or her own meaning.

Integrating subject matter occurs naturally in an elementary-school day. During social studies, teachers play music from the time period they are teaching, students

create mobiles representing the water cycle, or the class makes an art project as a culminating activity at the end of a fraction unit (McClelland et al.). This integration of subject matter gives meaning as students figure out how various ideas, issues and skills are connected (Atwater, 1995).

Integrated instruction, with the goal to help children make learning meaningful, often uses a general structure called the learning cycle (Sunal & Haas, 1993). This cycle consists of three steps that are repetitious or cyclic in nature. First, the teacher helps the students explore a new idea using their prior knowledge. Next, the students explore the idea for themselves, asking questions along the way. Finally, the students expand the use of the skill or idea and see where else it can lead them. This takes them back to the exploration/prior knowledge piece of the cycle.

One can easily see how important it is that teachers have flexibility and openness to new ideas to facilitate an integrated curriculum. A great deal of organization must be in place for integration to be a success. Although the task is great, the reward of knowing that the students have made meaning out of their learning is worth the effort. Using

themes that are integrated across the curriculum is the way to accomplish this.

Choosing Appropriate Themes. Once a teacher has made the decision to use a thematic approach, there are decisions to be made. Selecting the theme is the obvious place to begin. Often themes are chosen from the social studies or science curriculum. One way to organize a thematic unit is to select a central focus that can be fully developed over a period of time (Johnson, 1995). Once a topic or theme has been selected, the next step is to create a web or mind map that visually maps the different aspects of the topic or theme.

Once the theme has been mapped, viability is the next concern. The teacher must ask, "Are there enough books available to support the topic?" (Deusen, Donham, & Brandt, 1997). Finding and skimming books is the next step. There must be a purpose to the skimming: What are the similarities and differences in these books that share a topic or theme? How can all these books be used to support the topic and what is the underlying theme that connects them?

An example of this thematic development came from Deusen et al, (1997). These researchers reviewed picture

books on the topic of historical figures. They looked at various books--Eleanor, The Bobbin Girl, and The Ballot Box Battle. They found a theme--young girls' lives that were influenced by women who were not family members. This theme brought other books to mind where non-family adults in their lives influenced children. Now the topic of historical figures had evolved to the theme of "While our families usually have the biggest influence on us, there is often a pivotal person outside of our family who changes our lives." Similar evolutions can happen as teachers and students build themes. With this tighter focus, students will be more likely to think deeper about their own lives as they participate vicariously in the lives of the characters in the book.

Developing key discussion questions is the next step in building a thematic unit. Thematic units are inductive in structure. The inductive approach aids children in constructing their own generalizations. One great asset of thematic units is that the key questions asked can be posed in ways that help students think more deeply (Haas, 2000).

Preparing for a thematic unit cannot be done haphazardly. The complexity of the unit requires that teachers design instructional activities that allow

students not just to learn, but also to analyze, synthesize, and evaluate what they have read. Following the outlined steps to theme selection will help teachers achieve this goal.

When developing a thematic unit, teachers need to consider several points. Thematic teaching requires a serious commitment of resources and time. The selection of books is crucial to its success. Identifying key learning outcomes and instructional activities, as well as coordinating assessment outcomes, are all necessary components of the program. Often teachers will need to forego traditional, teacher-directed instruction to provide time for proper implementation of the thematic unit (Johnson, 1995).

The development of thematic units can be accomplished in five stages. The first stage is to identify the thematic focus. The second stage, alluded to previously, is to establish learning outcomes and select relevant literature. The third stage consists of brainstorming to develop instructional lessons. This can be done between teacher and students, or among teachers all working with the same theme. Teacher collaboration is an important element of the thematic approach (Ovando, Collier, & Combs, 2003). The

framework highlights a set of questions to guide curriculum planning: Who are the students in terms of characteristics and learning styles? What are the planned activities? How will the classroom setting affect the activities? What materials are needed? What knowledge about subject content and culture will students gain? The answering of these questions will assist teachers in the thematic approach process.

Summary

Shoemaker (1991) said that the integrated curriculum is a great gift to experienced teachers. It is like getting a new pair of lenses that make teaching much more exciting and help them to look forward into the next century. It also helps students take control of their learning.

The very essence of integrated curricula is to assist students in tapping into their prior knowledge and allowing students the opportunity to construct meaning from their own individual knowledge base. Thematic integration takes time, organization, flexibility, creativity, energy, determination, and collaboration on the part of the teachers involved. However, numerous studies have reached the conclusion that an integrated curriculum best meets the

needs of all students: They enjoy the learning more, and ultimately, are able to accomplish much more.

Thematic units are designed to integrate literature with social studies, science, and the arts (Diaz-Rico, 2004). They can be time-consuming and even difficult to carry out. However, with careful and meticulous planning, teachers can build thematic units that will help their students to achieve much more than they could in traditional schooling. Although thematic units take time and effort, this way of teaching engages students and provides them with an exciting and meaningful context in which to learn (Haas, 2000). Isn't that what teaching is all about?

Cultural Connection: Foods of Mexico

The people in the country of Mexico have numerous festivals throughout the year. These festivals, called *fiestas*, are associated with many of the holidays celebrated there. In each of the *fiestas*, food is an integral part of the event. Understanding the various cultures, holidays, and associated foods is as important in learning about Mexico as is the language itself. Rowan (2001) said that the only way to create a multicultural

society is to broaden the concept of what culture is and teach it accordingly. Diaz-Rico (2004) warned that culture is not just a collection of artifacts, nor is it just about the foods and celebrations of any given group of people. However, it cannot be disputed that these are all part of culture. Brown stated that culture is what binds people together (Brown, 1963). In any given culture, this includes the teaching of foods and celebrations.

The Importance of Food in Mexican Culture

A real danger in writing about the foods and celebrations of Mexico (or any other country) is that of stereotyping. The world is diverse and there are no hard-and-fast cultural boundaries for any group of people. However, when reading Mexican history, as well as current information about Mexico, one can see patterns in culture that can be used as a guide. It is not difficult to see the strong relationship between food in Mexico and almost everything else that is part of the rich culture of that country.

A journalist from the Houston Chronicle interviewed Rick Bayless, executive chef of Frontera Grill and Topolobambo restaurants in Chicago and author of three cookbooks, asking him to generalize about Mexican food

(Huynh, 2003). Bayless replied that there is no way to do so. He said that Mexican food is some of the most distinct regional cooking in the world. He added that it is unfortunate that what most Americans know of Mexican food is not really Mexican at all. He explained that it was the vitality of the culture and the people of Mexico that drew his focus to Mexican cooking. Mexican cooking is filled with more than just corn, chiles, and chocolate (all native Mexican foods). Many dishes are passed down from generation to generation and have a story to tell as well as a particular taste for the partakers.

A beautiful and tasteful example of tradition, culture and food can be found in Mexican cookbooks. In Frida's Fiestas: Recipes and Reminiscences of Life with Frida Kahlo (Rivera, 1994), Kahlo's stepdaughter, Guadalupe Rivera, shared stories and recipes from this great artist of the mid-twentieth century. She wrote of Frida's enthusiasm for food and the preparing of many authentic Mexican dishes. Righter (1992) compiled forty-six Mexican recipes and wrote a forward about the history and culture of Mexico in which she said that the foods of Mexico stand out among the world's great cuisines in their diversity and creativity. Salloum (1997) passed on the words of a world traveler who

said that Mexican food excites the passion and seduces the body, which then sends one into ecstasy. In sum, Mexican cooking is much more than just throwing a meal together, as many Americans do today. It is a lesson in and of itself, of Mexican history and culture.

The History and Geography of Mexican Food

Geography has dictated what has been grown and consumed in Mexico over the centuries. Corn has been a staple there since before the Christian era (Righter, 1992). People discovered that corn, or *maiz*, would grow plentifully in the hot, dry areas of Mexico. Early Indian civilizations learned to grow, roast, grind, and cook with corn. Sometime after the discovery of corn, the Indians found that beans and chiles could also survive and thrive. Thus the basis of Mexican cooking was established.

The Aztec was the last of the great Indian civilizations of Mexico. It was during the Aztec empire that chocolate was discovered. Xocoatl was the Aztec name for this "food of the gods." After the conquest of Mexico, high-ranking Spanish rulers kept this exotic food a secret for generations. Used primarily as a drink from its beginnings, chocolate has since conquered the world in the area of desserts and treats. It is also the primary

ingredient of *mole poblano* and *mole negro*, two very popular sauces of Mexico (see www.mexicoinfo.com).

Many other fruits and vegetables find their family roots in Mexican soil. Mexico is the world's largest producer and consumer of avocados, or *aguacate* in Spanish. *Guacamole* is a sauce (*mole*) made from avocados, tomatoes, onions, and garlic--all foods that grow in Mexico. Other delectable edibles that the Spaniards found when they arrived were pumpkins and squash, cashews, sweet potatoes, and vanilla. Is it any wonder they wanted it all? Whereas they chose to hoard the chocolate for many years, Cortez and his conquistadors were eager to take vanilla back to Spain, where it has since become the most popular flavor in the world (www.Mexicoinfo.com.mexicanfood).

Not all foods of Mexico have gained such worldwide popularity as those mentioned. Ant larva and *chapulines* (grasshoppers) still remain mostly a Mexican delicacy eaten only in certain regions of the country. Many varieties of Mexican drinks are also commonplace in Mexico yet foreign to many Americans. *Pulgue* is an alcoholic beverage made from the fermented sap of the century plant. *Tepache* (a pineapple beer) is also a favorite in the southern state of Oaxacan (Salloum, 1997).

The Spanish influence in Mexican cooking has added much to the unique flavors of the country. Until the conquest by Cortez and others, the Indians of Mexico were mostly vegetarian, because little meat was available. The Spaniards brought cattle, pigs, olives, cilantro, wheat, and rice. These foods soon found their way into the very fabric of the Mexican way of life. For example, rice has become the second most important grain in Mexico, following corn in popularity (Righter, 1992). The use of pork in Mexican cooking is now known worldwide as well.

Many foods are regional in Mexico because of the varying climates and the fact that mountains separate the country. There are seven great *moles* in the state of Oaxaca. The state of Puebla is also known for its *mole poblano*. Depending on where one travels in Mexico, the *pozole*, or hominy stew, is made with either red or green sauce. This could be compared to the American versions of clam chowder (New England chowder being distinctly different from Manhattan style, because of the location of origin). One can see that regionality in Mexican foods is not really an oddity, but a logical derivation of location. What can be said of Mexican cooking is that it is unique,

colorful, and fitting of many special occasions both in Mexico and throughout the world, no matter the geography.

Mexican Cooking and Holiday Celebrations

In most cultures, holidays often involve a special food, and that is also true of the many holidays in Mexico. "As they have since the day of the Aztec empire, *fiestas* provide a venue for decorations, processions, and not least, popular food and drink" (Graber, 2003, p. 1). *Dia de los Muertos* (Day of the Dead) is celebrated on the first and second day of November each year. *Las Posadas* occurs each year in December, and *Semana Santa* is a spring holiday where most of the celebrating is done outdoors with many popular foods adding to the festivities.

There are customs, *fiestas*, and foods for each Mexican holiday discussed here. Additionally, each has an American counterpart or parallel holiday. This is not to say that the holidays are the same in each country. Although they are close in the time of year celebrated and may have similar roots, they have many remarkable differences. Understanding each Mexican holiday, and helping students of both American and Mexican cultures to understand and appreciate them, can assist in building strong bonds between cultures.

Dia de los Muertos. The Day of the Dead is really two days set aside to celebrate and honor family members who have died. To Americans, this may sound like a morbid occasion. This, however, is not the case. It is a festive time to share memories of loved ones, to eat food shared between the living and the dead, and to enjoy time together with family and friends. *Dia de los Muertos* is an ancient festival, with some aspects dating back to the Aztec Empire. It also has strong Christian overtones, indicating the influence of the Roman Catholic Church after the invasion of Spain.

The date corresponds closely with Halloween in the USA. Eating sweets and dressing in costumes are similarities between the two holidays. However, from there, their paths diverge. Halloween is rooted in ancient pagan customs, whereas *Dia de los Muertos* is distinctly Mexican (Johnston & Winter, 1997).

The foods of the holiday are truly unique. The families prepare food for many days prior to the celebration. *Pan de muertos* (bread of the dead) is made at the local bakeries, many of which stop production of other pastries during this week to keep up with the demand. In some areas of Mexico, a plastic skeleton is baked into one

of the loaves and it is considered good luck to be the one who bites into it. Skulls made of sugar are also a special treat on *Dia de los Muertos*. In addition to these special holiday treats, the favorite foods of dead relatives are made and eaten picnic-style on their graves.

The celebration may sound odd or even scary to people of other cultures, but Salvador (2003) gave two important statements about the Mexican Day of the Dead. He said that it is a holiday with a complex history, and therefore its observance varies quite a bit by region and degree of urbanization. He added that it is not a morbid occasion, but rather a festive time.

Las Posadas. In Mexico, the Christmas season begins with *Las Posadas*, celebrated for nine days from December 16 and ending on Christmas Eve. Each day represents one month of Mary's pregnancy with baby Jesus. Las Posadas celebrates Joseph and Mary's search for shelter in Bethlehem with candlelight processions that end at various nativity scenes throughout the community. Each evening the same procedure is followed, with children portraying each of the parts of the nativity story. After Joseph and Mary finally find shelter, the party begins for the evening, often lasting all night. Traditional foods, such as *bunuelos* (fried

sugar-coated pastries), *tamales*, and *ponche* (fruit punch) are shared by all the guests. A *piñata* is filled with fruits, nuts and some wrapped candies for the children. Each child takes a turn in trying to break the *piñata*.

Las Posadas, as well as most other fiestas of Mexico, has religious roots dating back before the Spanish invasion of Mexico. The foods and activities share both Indian and Spanish beginnings. The dates of this holiday coincide with the nine days the Aztecs celebrated the birth of their sun god, *Huitzilopchtli*. The foods of *Las Posadas*, moreover, are of mostly Indian origin. The main ingredients for the occasion are corn, for *tamales*, cinnamon (*cannela*) for the *bunuelos*, and fruits indigenous to Mexico. Fortunately for those wishing to celebrate *Las Posadas* in the United States, the ingredients are readily available in most grocery stores.

Semana Santa. This holiday also has a strong culinary tradition; one partakes of the popular food of the streets in a season when everyone seems to be outdoors (Graber, 2003). *Semana Santa* (Holy Week) is second only to Christmas as the most important holiday of the year in Mexico. *Semana Santa*, also known as Holy Week, runs from Palm Sunday to Easter Sunday and is a celebration of the last days of the

life of Christ. Because Mexico is largely Catholic, most people celebrate the holiday. Although individual communities celebrate in their own style, there are certain traditions that are popular among them all. Most people attend mass on Good Friday and Easter Sunday. Also very popular is the breaking of *cascarones* (colored egg shells filled with confetti) over friends and family. In most cities, food tents are erected for the week with fish of many varieties, *aguas frescas* (flavored waters), ice cream, *paletas* (fresh fruit bars), and *raspados* (snow cones). Several villages in Mexico City are well known for presenting reenactments of all of the events leading up to Christ's crucifixion on the cross. This event is called the Passion Play and is usually sponsored by religious or community groups (Graber, 2003).

In a personal interview with Rick Hanson, a native of Chihuahua, Mexico, he reported that the foods of the holiday were mostly *maricosos* and *pescados* (seafood and fish). Because *Semana Santa* is at the end of the Catholic season of Lent, red meat is nowhere to be found. There is also little or no drinking of alcoholic beverages during the Thursday and Friday of the week. Hanson noted that because of the family vacations and the traditional eating

of fish and seafood, unfortunately *Semana Santa* is also the country's highest week for drownings. *Semana Santa* is largely a time to be with one's family. In fact, it is one of the most popular times for families in Mexico to take vacations.

Application of Mexican Foods in the Classroom

"People all over the world wear different clothes, do different jobs, and speak different languages. But we do something every day that is common to us all. We eat!" (Hopkins & Winters, 1990, p. 1). Using the commonality of eating, students can become aware of, and truly come to appreciate, the cultures of others. In Southern California schools there are many cultures represented, but with Mexico so close, the influence of its culture is pervasive. A wise ESL instructor will take advantage of the many opportunities to teach about the Mexican culture by using both the holidays and the foods of Mexico. Doing so will both educate students and affirm their culture in the classroom.

Using the Internet as a source, a teacher can find a plethora of ready-made, easy-to-follow lesson plans for the teaching of Mexican culture using foods and holidays. There are also many books available on the subject. It takes more

than a bit of effort to organize food preparation and consumption activities, but the rewards are worth it. The parents of the students, who are usually more than willing to help in this way, can donate the ingredients for the cooking projects. The students then experience hands-on some of the flare of Mexican cookery.

Dia de los Muertos, *Las Posadas*, and *Semana Santa* are but three of the many holidays celebrated in Mexico. Enjoyment of family, food, friends, and fun are some of the aspects they have in common. Many Mexican Americans celebrate these holidays, keeping their culture alive and vibrant. For those not of Mexican ancestry, the learning about, and celebrating of, these holidays can be an aid in increasing awareness and appreciation for that culture.

The soul of Mexican cooking is the mouthwatering flavor and flair of its recipes. How wonderful it would be to allow all ESL students to experience this firsthand!

Conclusion

The role of the teacher is to help students to learn. There are many ways of accomplishing that goal, some much more successful than others. This review of literature has shown four of the best practices in an ESL classroom. Using

the theories of Piaget, Dewey, and Vygotsky, a constructivist classroom allows students to acquire knowledge in a meaningful way. This leads directly to differentiated instruction. A teacher must always recognize that each student in the class is an individual who will learn at his or her own pace, and address the needs of those students accordingly. Projects with themes help English learners to organize their thinking and retain more than they would without the themes and projects. Using food along the way will not only help the students to acquire English faster, but also allow them to have more fun in doing so.

CHAPTER THREE

THEORETICAL FRAMEWORK

The literature reviewed in the previous chapter described, in detail, five separate teaching tools or techniques. Constructivism, differentiated instruction, project-based learning, integrated themes, and the use of Mexican thematic content, are each unique teaching strategies. However, they are also closely linked in theory and in practice. Each builds upon its the previous one to provide an interesting and educational experience for children. When the element of food is added to the strategies, they become more meaningful, memorable, comprehensible, engaging, and fun.

Conceptual Integration

In building this rich learning environment, constructivism is the base or foundation for all learning. Teachers must allow students to construct their own meaning, finding ways to tap prior knowledge. Recognizing the differences between each student and his/her interests and abilities is a hallmark of differentiated instruction. Acknowledging students' innate differences and then allowing them to work on projects that interest them,

addresses project-based learning. Finally, using a theme that can be integrated across the curriculum, such as Mexican culture and foods, provides students with each of the strategies in the literature review.

The model for this teaching unit brings the four strategies from the review together using food as the combining factor. The fifth keyword from Chapter Two gives a history of Mexican food and its uses in Mexican holidays. This was intended to show, by written example, how to build on that theme in a classroom.

A Model for Using Food in the English-Learner Classroom

The curriculum unit in the appendix has been designed to show how foods can be an integral part of any elementary English learner classroom. Each lesson specifically addresses one of the keywords reviewed in Chapter Two. The model in Figure 3.1 indicates how this can be done. The design is simple, as are the components involved. The base or foundation is constructivism. This is an appropriate beginning since it truly is the foundation of a high-quality learning environment. Chapter Four gives specific information about the design of the curricular unit and

shows once again how to make food part of the elementary English-learner classroom.

The model is designed as a pyramid, with constructivism at the base of the pyramid. It is on this solid foundation that differentiated instruction, project-based learning, and integrated thematic units are built. The top of the pyramid is the cultural connection tying the four together using Mexican foods. Each block in the pyramid is stacked firmly upon its predecessor, indicating the need for the previous learning strategy to complete the picture.

Constructivism and Mexican Cooking

In a constructivist cooking ESL classroom, a teacher could begin by bringing in a variety of foods from Mexico--vanilla, avocados, chocolate, and corn, all of which have their roots in Mexico. The teacher then taps students' prior knowledge by discussing each of the foods and, if the English level of the students is sufficient, asks students to share what they know about each of the foods. The lesson to follow explores the /ch/ diagraph (see Lesson One in Appendix A) because chocolate is the most enjoyable of the Mexican foods presented.

Differentiated Instruction

In differentiating instruction, the teacher needs to know beforehand some information about the class, or spend some time before the lesson getting to know them. Discovering the various cultures of the English learners is part of being in a differentiated classroom. Knowing the likes and dislikes of the students also helps in addressing the needs of each student. When using food this is especially important. For example, a sheltered English class in Lake Elsinore, CA had 20 students ranging in language level from two to five. One child was allergic to peanut butter, another to berries, and another simply did not like anything. The teacher differentiated the cooking lesson (Abraham Lincoln peanut butter logs and George Washington "berry trees") so that each group made the recipe in a slightly different way, allowing for the individual tastes of the students (Kaas, 2004).

Project-based Learning

In project work, a culminating activity is always a part of the experience. Food lends itself completely to project learning. Whether the driving question is about the culture of Mexico (or any other country), the animals of

Africa, or holidays around the world, food can be part of the culminating activity.

Integrated Thematic Units

Using food in a thematic unit is a natural way to address almost any theme. Integrating that theme across the curriculum with food comes almost as easily. For example, using Foods of Mexico as the theme, math skills would be addressed in measuring, doubling, or halving the recipes involved. Using the recipes themselves would address reading and writing. In learning about Mexican culture and the geography of that country, the students would learn social studies and mapping skills. Most reading series in elementary schools have stories from other countries that could be turned into entire thematic units and integrated in the curriculum.

By applying the strategies in the model, beginning with constructivism, teachers of English learners can incorporate food as a content domain to create a rich environment for all students. The connection to Mexican cooking, or any other foods, can help the English learners to feel comfortable, happy, and excited to be a part of the learning experience.

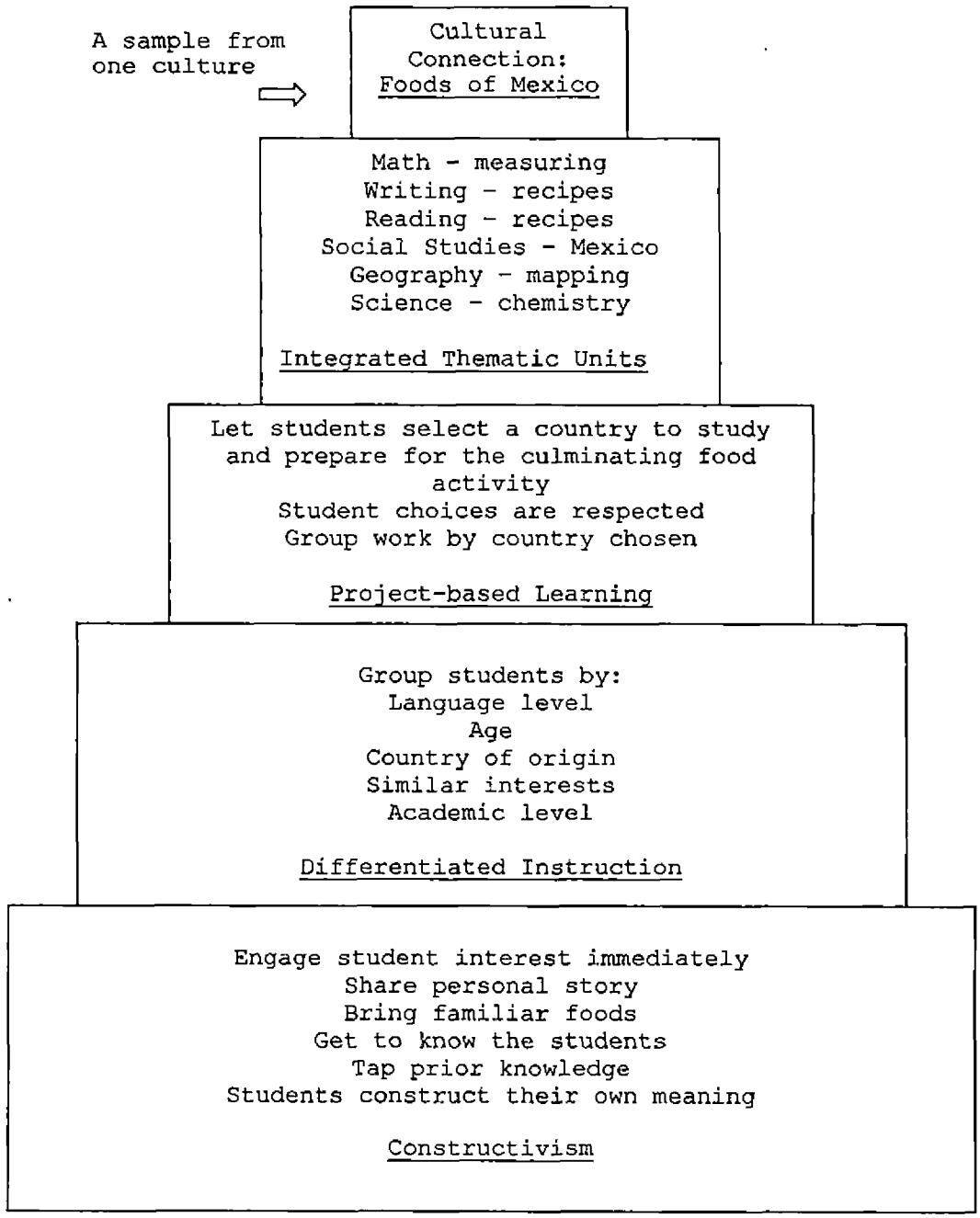

Figure 3.1 Model Guide for the Use of Food in the English Learner Classroom

CHAPTER FOUR

CURRICULUM DESIGN

Using the keywords from Chapter Two and the model in Chapter Three, an instructional unit has been developed for the use in elementary ESL classrooms, grades kindergarten through third. The unit is entitled "Food Connections from Around the World." Constructivism, differentiated instruction, project-based learning, and integrated thematic units are each addressed in one of the lessons. The last two lessons are multicultural lessons that all children may enjoy.

Table 4.1 links constructivism, differentiated instruction, project-based learning, and integrated thematic units together by showing their many similar components. Each is student-centered, with the teacher as a facilitator in the learning process. Each lesson in the unit could be adapted to focus on any one of the learning strategies, depending upon the needs of the students.

Table 4.1 Similar Components of Keyword Strategies

	Constructivism	Differentiated Instruction	Project-based Learning	Integrated Thematic Curricula
Uses student grouping	**	**	**	**
Taps prior knowledge	**	**	**	**
Teacher as facilitator	**	??	**	??
Engaging for students	**	**	**	**
Standards-based	**	**	**	**
Alternative Assessment	**	**	**	**
Can be shown using food	**	**	**	**

Key: Yes- **; Possibly- ??

Content of the Unit

In lesson one "Cho-co-la-te: Teaching the /ch/ Diagraph, constructivism is the main focus. Students share verbally their favorite chocolate foods, discover mystery foods buried in chocolate pudding, and search for new words with the /ch/ sound.

Lesson Two is an example of differentiated instruction in the classroom. The lesson is called, "Say It with a Cookie." Mexican wedding cakes and American chocolate-chip

cookies are made during the lesson by two different groups of students. There are opportunities for the more verbal English learners to speak, as well as positive learning experiences for those with less English.

"It's a Small World where Everyone Cooks Rice" is the name of Lesson Three. This project-based lesson explores the many uses of rice all around the world. Students research various countries and report their findings, and then make three different kinds of rice as a culminating activity.

"Antarctica" is the name of Lesson Four. This lesson integrates social studies, science, language arts, and food preparation as it delves into the animals of Antarctica. Olive penguins are assembled (and eaten) as a culminating activity to this thematic lesson.

Lessons Five and Six are multicultural lessons on Africa and Australia respectively. In "Jambo Means Hello" the children learn about the continent of Africa and make sweet-potato cookies, after watching a sweet potato sprout. "G'day" from the Land Down Under" explores the continent country of Australia and introduces the students to the animals and the unique English of Australia.

Table 4.2 shows the name, number of task chains, components from the model, and the food to be used in each lesson. The sequence of lessons is left up to the discretion of the teacher. If all lessons are used over a period of time, a tasting party from around the world would be a most appropriate culminating activity. Most of the foods prepared during the unit can be frozen to serve at the final activity.

There may be some teachers that have concerns about using food in the classroom because of the cost of ingredients. Most parents, even in the poorest schools, are willing to help by sending ingredients they have at home, if given enough notice. Usually, a note home at the beginning of the week for a cooking lesson on Friday is ample time. The effort is completely worth it in the end.

Table 4.2 Components of the Unit Plan

Lesson name	Tasks chains	Model component	Food to be prepared
1. Cho-co-la-te	1, 2, 3	Constructivism	Chocolate pudding
2. Say it With a Cookie	1, 2, 3, 4	Differentiated Instruction	Mexican wedding cakes & chocolate chip cookies
3. Everyone Cooks Rice	1, 2, 3, 4	Project-based learning	Mexican rice, Hawaiian rice, Chinese rice
4. Antarctica	1, 2, 3, 4	Integrated Theme	Olive penguins
5. Jambo Means Hello	1, 2, 3	Constructivism, Project-based learning	Sweet potato cookies
6. G'Day Mate	1, 2, 3	Integrated theme	Anzac Bickies

The unit found in the appendix incorporates food in each lesson. Each lesson also includes a story or poem to help tap students' prior knowledge and to get them excited about the lesson. Many lessons in English Language

Development, math, social studies, and language arts use food as well. The connection between food and life, in and out of the English classroom, is deliciously obvious. This unit was intended to illustrate that fact and assist the English teacher in incorporating food throughout the curriculum.

CHAPTER FIVE

ASSESSMENT

Purpose of Assessment

Being an assessor of students' progress is an integral part of being a teacher. Students have been given tests as long as there has been formal schooling. Assessment, either formal or informal, is how a teacher notes student progress and sees where there are deficiencies. However, assessments have come a long way from the "old school house" days.

Diaz-Rico (2004) noted several types of assessments which can work well with the model in this study. Standardized tests (tests with predetermined outcome) are used in all public schools. These are often difficult for the English learners and do not typically show what the students really know. Rubrics, teacher-constructed tests, teacher observation, and portfolio assessments are a much better fit in a constructivist-grounded classroom.

The following section will address each of the sections from the model and discuss the assessments that work best in each lesson. In addition to the forthcoming discussion, each lesson in the unit has an assessment piece included.

Assessment for the Curriculum Design

Constructivist Assessments

In a classroom grounded in constructivist theory, assessment can be done in the traditional paper-and-pencil test, but experts in the field have offered suggestions on ways that would be a better fit. They recommend efforts that center on examining the process (as well as the products) of performing complex tasks in typical learning and application contexts (Bauer, 1999; Johnston, 1992). Letting children retell a story, writing a letter to a pen pal, or creating their own recipes are a few examples of this type of assessment. Reflection is a hallmark of constructivism; so reflective journals or other means of self-assessment are also useful in this area.

Differentiated Assessments

The key to assessing in a differentiated classroom is to acknowledge the differences in the students and allow each to be assessed in a manner that best suits the individual. In differentiated classes, initial and on-going assessment of student readiness and growth are essential (Hall, 2003). Examples of assessments are as varied as the students in the class. It is up to the teacher and student to decide which type of assessment works best.

Project-based Learning Assessments

As teachers plan projects, they determine how to measure student learning, both along the way and at the end of the project. Assessment is an integral part of PBL (Solomon, 2003). Because the nature of project-based learning is to share the learning at the end of the project, a variety of people--students, teachers and community members--can provide feedback. Technology is an important element of PBL so teachers should apply a variety of technology-based assessments in a PBL classroom. Self-evaluation is also encouraged.

Integrated Thematic Assessments

Part of the pre-planning in a thematic unit is deciding what type of assessment to use in the end. Because the unit will cover a variety of subjects, the assessments must also be inclusive. The teacher could choose a different assessment for each subject area, or use multiple measures within a discipline to evaluate student progress. In a cooking classroom, one assessment can be the finished product, if the teacher is fast enough to evaluate before it is eaten.

Conclusion

Being a teacher can be a challenging yet rewarding experience. Teaching English-language learners makes the challenge even greater, as well as the rewards. Building a classroom on a strong constructivist foundation is a good beginning for the ESL teacher. Differentiating instruction is essential in the diverse schools of today. Using projects and themes, although creating new challenges for the teachers, enables students to make sense out of their learning while building confidence as they work in small groups to accomplish the task at hand. Food can be incorporated every step of the way. It has been said, and this study has helped to show, that anything can be taught better using food, combined with the key elements of constructivism, differentiated instruction, and thematically integrated project-based learning.

APPENDIX

LESSON PLANS

The Unit Plans

Lesson One: Cho-co-la-te: Learning the /ch/ Diagraph

Lesson Two: Say It with a Cookie

Lesson Three: It's a Small World Where Everybody Cooks Rice

Lesson Four: Antarctica

Lesson Five: Jambo Means Hello

Lesson Six: G'Day, Mate

Lesson One

Cho-co-la-te: Teaching the /ch/ Digraph

Target group: Kindergarten-3rd students at all language levels
Lesson time: Approximately 1 hour if Objectives 2 and 3 are done at the same time in separate groups

Objectives:
1. Students will use all five senses to explore the /ch/ digraph.
2. Students will show mastery of the /ch/ digraph by writing known words and cutting others out of newspaper and magazines.
3. Students will make chocolate pudding with "hidden /ch/ treats" and identify the digraph in each item found.

Content: /Ch/ digraph
Vocabulary: teacher-selected /ch/ words and student-selected and discovered /ch/ words.

Learning Strategies
1. Rote Memory: Chocolate Song
2. Graphic Organizer: The /Ch/ Web
3. Imagery:Isolated senses
4. Cooperative learning groups

Materials:
Focus Sheet 1-1: Chocolate Song
Focus Sheet 1-2: Chocolate Pudding recipe
Task Sheet 1-3: Categorizing Beginning, Middle, End
Magazines, newspapers, etc. for cut-and-paste, glue, scissors
Small mirrors for each student or pair of students
Sample tastes of: chips, chocolate candy, Cheetos, cheese, cherries, chicken, Chiclets, Crunch bar, peach, Jolly Ranchers, Beechnut gum, Cheerios, etc.
Ingredients for instant chocolate pudding

Warm-up:
One teacher will introduce the Chocolate Song. Students should catch on very quickly. Pass out Focus Sheet 1-1 is passed out and students sing and follow along. One asks, "What sound do you hear at the beginning of chocolate?" The

teacher then goes into a "choo-choo" train sound and has the studenets practice making /ch/ sounds before showing the letters. The teacher passes out mirrors and has students make the /ch/ sound while observing their mouth formation in the mirror.

Task Chain One: Five Sense Sorting
WARNING! This is not an introductory lesson of the fivesenses. If they have not been introduced, the teacher could still use the task chain without using the five sense vocabulary as stated.

1. The teacher asks students what letters make the /ch/ sound. After students come to the right answer, /ch/ is then written in large letters on the board.
2. Students sit in groups of 2 or 3.
3. Task Sheet 1-1 is passed to each group.
4. The teacher explains that they will be using their senses to learn about many words with the /ch/ sound. Some words have it at the beginning, some in the middle, and some at the end.
5. The teacher passes around various food items and has students first cover their eyes and use only their sense of smell to figure out what the food is. If unsuccessful, which is most likely, students feel it with their hands, then use their taste and sight.
6. Students are asked which sense helped identify the food the best or easiest.
7. The groups put the sample foods on their task sheet according to where they hear the /ch/ sound.
8. Formative Assessment: Thet monitors where foods are being put on the page and helps where needed.

(Note: Task chain two and three could be done simultaneously if two competent adults are available: teacher and aide or other adult
Task Chain Two: The Web

1. The teacher draws a circle around the /ch/ on the board and makes web lines out to share some words that have the /ch/ sound (student responses will most likely be the foods they have just sampled). The teacher should encourage students to think of words that rhyme with the food words to build more vocabulary. The teacher should accept all correct answers, whether in Spanish or English. Throughout the lesson theteacher should listen

to students as they pronounce the /ch/ words. (Note that in Spanish, there are no words with /ch/ at the end.)
2. Many ELs will have some difficulty with the /ch/ and use /sh/ in its place. The teacher should correct immediately and have student repeat the correct pronunciation
3. After brainstorming with the web, the teacher passes out Worksheet 1-3.
4. Students are to write some their favorite /ch/ food words on the first page.
5. On the subsequent pages, students are to find other /ch/ words, either at beginning, middle or end.

Task Chain Three: Discovery
1. Focus Sheet 1-2 is distributed.
2. Students follow along as ingredients and directions are read.
3. Students assist in the pudding making while singing the Chocolate song again as pudding is mixed.
4. The teacher adds some /ch/ treats (chocolate bits, crunch bar bits, cherries, etc) to the pudding before it sets.
5. Pudding is then poured in single serving containers (Dixie cups work well).
6. After pudding has set, the teacher allows students to eat the pudding while discovering what hidden "charms" are inside.
7. This might turn a bit messy. The teacher should be sure to have Baby Wipes or damp paper towels available along with a separate small cup for each student's treats.

Assessments:
Formative assessment:
1.In warm-up students form the /ch/ sound looking in the mirror. The teacher can model and correct as needed.
2.In task chain one, the teacher can check each group's sorting sheet to be sure that food items are in correct columns.
3.In task chain two, the teacher monitors the words being put on each sheet and correct before glue dries.
4.Students can also be assessed as they make their discoveries in the pudding. The teacher will listen and correct as necessary as students uncover /ch/ foods.

Summative assessment:

1. The Task Sheet 1-1 can be used on an individual basis and the teacher can observe if student has mastered the /ch/ sound.

Homework: Students will take home an empty chocolate kiss sheet and find more /ch/ words on foods or other items in their home.

Focus Sheet 1-1

Chocolate Song

Uno, dos, tres- cho!
Uno, dos, tres- co!
Uno, dos tres-la!
Uno, dos, tres-te!
Chocolate, chocolate
Bate, bate, chocolate!

Poem taken from:
Griego, M. C., & Bucks, B. L. (1990). Tortillitas Para Mama and other Nursery rhymes in Spanish and English.

Focus Sheet 1-2

Chocolate Pudding Recipe

1 large box instant chocolate pudding
3 cups cold milk

Pour milk into large bowl. Add pudding mix and stir with a wooden spoon for 1-2 minutes. Pour into individual serving cups.

Task Sheet 1-3

Graphic Organizer: Categorizing Beginning, Middle, End

Beginning	Middle	End

Lesson Two

Say It with a Cookie

Target Age Group: K-3 students at any language level
Lesson Time: 1 1/2 hour

Mega-Strategy: 9.4 Use the learner's culture and the target culture to teach English

Objectives:
1. Students will build a general knowledge of the many different ways to say "Thank-you"
2. Students will compare and contrast specific cookie recipe and ingredients in Mexico and America
3. Students will make Mexican Wedding Cakes
4. Students will make All-American Chocolate Chip Cookies

Content: Crosscultural lesson on saying thank-you by giving a homemade gift (cookies)
Vocabulary: basic cooking vocabulary: mix, measure, beat, etc.

Graphic Organizers:
Mind Map or Idea Web
Venn Diagram
K-W-L-H Chart

Materials:
Idea Web on transparency
Venn Diagram on transparency
K-W-L-H on transparency
Focus Sheet 2-1: Children All Over the World
Ingredients for Mexican wedding cakes: butter, sugar, vanilla, water, flour, chopped nuts, powdered sugar
Ingredients for chocolate chip cookies: butter, shortening, brown sugar, sugar, vanilla, eggs, salt, flour, baking soda, chocolate chips, chopped nuts
Measuring cups, spoons, large bowl, baking sheets, mixer
Focus Sheet 2-2: Mexican wedding cakes (in both languages)
Focus Sheet 2-3: Chocolate chip cookies (in both languages)

Warm-up: The teacher shows Focus Sheet 2-1 and sings the song for the children all the way through. On the second

singing, the teacher shows pictures of children in the different countries as she sings. The teacher asks, "What are all the children saying?" How do you say "thank-you?"

Task Chain One: Thank-you web
1. The teacher puts the Web on the overhead with Thank-you in the center.
2. The teacher asks students some of the different ways children in the song said thank-you, and writes responses on the web lines.
3. The teacher asks what students would do if they thought a simple thank-you was not enough.
4. The teacher shares a personal story of when someone needed more than just thanks and concludes with the idea that a gift of some sort is an appropriate way to show thanks.

Task Chain Two: Compare and Contrast
1. Thet puts K-W-L-H chart up and asks what the students know go in the making of cookies and writes responses in the K column.
2. The teacher asks if they would like to know more and if they think they have all the ingredients listed on the board.
3. The teacher fills in the W column with what the students want to know about cookies.
4. The teacher shows ingredients for both types of cookies but doesn't say which goes in which cookie. The teacher shows and tells the name of each ingredient, both the Spanish and the English.
5. The teacher passes out Focus Sheets 2-2 and 2-3 and has class read them together
6. Students take turns coming to the front and putting ingredients on separate small tables, sorting by recipe.
7. The teacher shows the Venn diagram and students help fill it out according to their sorting activity.
8. Students and teacher discuss the ingredients the cookies have in common and their differences.

Task Chain Three: Mexican wedding cakes
1. Students wash their hands.

2. Students take turns helping to make the Mexican wedding cakes. They will especially like forming them into balls and rolling them in powdered sugar.
3. The teacher should take special care to involve the ELL students by saying ingredients in Spanish, talking about foods made at home, etc.
4. An extra-special thing to do would be to have a Mexican mom come in and help with the preparation. The recipe could be changed to better meet the needs and requests of the visiting parent. (He/she could select what to make)

Task Chain Four: Chocolate Chip Cookies

1. The class could sing the Cho-co-a-la-te Song as they are working with chocolate: it's a great way to get them involved.
2. The teacher has students take turns coming to help make the chocolate chip cookies.
3. After both type cookies are baked but before they are eaten, the class notes the differences and adds them to the Venn diagram.

Cool Down: The teacher asks students to tell their neighbor which cookie they liked best. The teacher selects a few students to share what they said. The teacher directs students to the KWLH chart and asks what they learned and adds those answers under the L column. The teacher then asks how they know what they learned and puts those responses under the H. The teacher then refers back to the ways to say thank-you and suggests that students take home one of each cookie to tell their moms thank-you for taking care of them.

Assessments:

Formative:

1. Students will be assessed in Task Chain One by their responses to how to say "thank-you" from the words in the song.
2. As the Venn diagram and the KWLH organizers are filled out, the teacher is assessing the students.
3. As the cookies are made the teacher is assessing the students to see that comprehension is working. Corrections are made immediately to insure the success of the cookie experience.

Summative:

1. Students could re-sort ingredients by cookie without assistance from the teacher as a summative assessment at the end of the activity.
2. Another element of the "thank-you" cookie could (and should) be added by having the students write a letter to their mom to go with the cookie. Translation would be necessary for the Spanish-speaking parents.

Focus Sheet 2-1

Children All Over the World

(Words modified)

All over the world each and every day,
All the little children will speak their way,
Each saying thank-you in his own special way,
Saying thank-you, thank-you in his own special way.
Gracias, Malo, Wirdanden dir.
All over the world tender voices hear.
Some say Tak, others Merci, Kansha shimasu,
It's lovely.
Their mothers and fathers hear them,
They understand each tongue.
Their mothers and fathers hear them.
They love them, love them, everyone.

Children's Songbook. (1989). The Church of Jesus Christ of Latter-day Saints: UT.

Focus Sheet 2-2

Mexican Wedding Cakes

1 cup butter
1/3 cup sugar
2 tsp. vanilla
2 tsp. water
2 cups flour
1 cup chopped pecans
1/4 cup powder sugar

Beat butter and sugar together well. Add vanilla and water then add flour. Stir in pecans. Roll into 1-inch balls and place on ungreased cookie sheet. Bake at 325 for 20 minutes. When they are still warm, roll the balls in powdered sugar.

Galletas de Boda Mexicana

1 taza de mantequilla
1/3 taza de azucar
2 cucharaditas de vainilla
2 cucharaditas de agua
2 tazas de harina
1 taza de nueces cortadas
1/4 taza de azucar refinada

Mezcle la manteqouilla y azucar muy bien. Agrege la vainilla y el agua despues las harina. Agrege las nueces y forme bolitas de 1" pulgada y pongalas in una charola sin grasa. Hornear a 325 grados por 25 minutos. Cuando esten todavia calientes agrege el azucar refinada.

Focus Sheet 2-3

Chocolate Chip Cookies

1/4 cup butter
1/4 cup shortening
1/3 heaping cup brown sugar
1/3 heaping cup white sugar
1 egg
1 tsp. vanilla
1 cup flour
1/2 tsp. salt
1/2 tsp. baking soda
1 cup chocolate chips
1/2 cup chopped nuts

Mix together butter, shortening, sugars, egg, and vanilla. Add dry ingredients and mix well. Stir in chocolate chips and nuts. Drop by teaspoon onto an ungreased baking sheet. Bake at 350 for 10-12 minutes.

Galletas de Chocolate Chip

1/4 taza de mantequilla
1/4 taza de manteca
1/3 taza de azucar café
1/3 taza de azucar blanca
1 huevo
1 taza de harina
1 cucharadita de vainilla
1/2 cucharadita de sal
1/2 cucharadita de carbonato
1 taza de chocolate chips
1/2 taza de nueces cortadas

Mezcle la mantequilla, los azucares, el huevo, y la vainilla. Despues agregue los otros ingredientes. Finalmente, agregue los pedacitos de chocolate y nueces y mezcle. Con una agare la masa y pongala en una charola de hornear. Horne a 350 grados por 10-12 minutos.

Lesson Three

It's a Small World where Everyone Cooks Rice

Target Age Group: Kindergarten- 3rd students at stage one or two of second-language acquisition
Lesson time: Approximately 1 1/2 hour

Objectives:
1. Build general knowledge of various cultures around the world and the commonalities they share.
2. Help students to grasp the concept that location and culture change the look of things but the function remains the same.
3. Apply learning to rice-making activity.

Content: Multicultural lesson on people and rice
Vocabulary: Decided by students (guided by teacher to include rice and other words necessary to make the recipe)

Learning Strategies:
1. Rote memory (singing the song repeatedly)
2. Linking to prior knowledge (rice and other articles at home and at school)
3. K-W-L

Materials:

- Focus Sheet 3-1 It's a Small World Song Sheet
- Focus Sheet 3-2 Rice Recipe
- Focus Sheet 3-3 Picture Card of Rice Field
- Task Sheet 3-4 Graphic Organizer--Description
- Poster 3-5 Chinese children
- Poster 3-6 Hawaiian child
- Poster 3-7 Mexican children
- Book: Everyone Cooks Rice by Norah Dooley
- Ingredients soy sauce, Spam, salsa, frozen peas
- Cooking tools: rice cooker, wok, wooden spoon, and knife

Warm-up: The teacher begins by singing along to the song "It's a Small World." Have students join in when and if they feel comfortable. The teacher uses Focus Sheet 3-1 with the children as the song is being sung. Showing pictures of children from around the world during the

second and subsequent "readings" of the song would add much to the success of the lesson. After the students have sung and enjoyed the experience, the teacher asks questions about it:
1. Is the world really small?
2. Where have you been in the world besides right here?
3. Have you been somewhere where they don't speak English?
4. Were the foods or clothes different? How?

Task Chain One: Graphic Organizer- Description
1. The teacher reads the story Everyone Cooks Rice by Norah Dooley
2. The teacher "Thinks aloud" as the story is read, thinking about things from the various cultures that are also in other cultures (pants, shoes, names, animals, etc.)
3. Students are grouped in twos.
4. Students "pair-share" about things they know about each different culture as story is re-read.
5. The teacher labels the description graphic organizer—Task Sheet 3-4--with name of book on the top and then lines down to the different families in the story and an extra line with class name as the final group.
6. Each group is asked to think of ways each group was the same. The teacher ends with the thought that many peoples and cultures eat rice.

Task Chain Two: Strategies-Metacognition
1. The teacher asks students where rice comes from writing all answers on the board and encouraging students to give as many answers as possible.
2. (What they know) Using Focus Sheet 3-3, the teacher helps students to discover that rice comes not from the store, but from a plant.
3. Students pair-share about other foods that come from a plant. Each pair will draw a picture of a food they know comes from a plant and share it with the other groups.
4. The story is re-read, this time it is pointed out how different cultures make rice but it is still rice and it all comes from the same type of plant.
5. t shows large versions of Posters 3-5, 3-6, and 3-7. Each of these children is from a different culture where rice is made differently. The students will find out how differently soon. Even though the children look different, they are still children.

Task Chain Three: Building Vocabulary

1. Teacher writes the word "rice" on the board.
2. Teacher asks questions and leads discussion about rice and how it can look different in different cultures.
3. Focus Sheet 3-2 is passed out and the class discusses how rice is cooked while showing ingredients and tools. Teacher finds out students' prior knowledge of rice, cooking experience, and needed vocabulary.
4. Students "read" the recipe together, tracking each word as they go.

Task Chain Four: Application

(The ideal situation is to put students into 3 groups and make one type of rice with each group. However, for this assignment, we will assume they are all together.)

1. One batch of rice is pre-cooked in the rice cooker to speed things along.
2. Using name sticks, the teacher calls up students to help add the ingredients to the wok. Students put in the egg and butter and onion and then add rice.
3. The teacher explains that each culture makes the same rice slightly different, yet the rice is still rice and the main ingredient in each recipe.
4. The teacher shows the poster of the Mexican child, and then has a student add salsa to 1/3 of the rice.
5. The teacher shows the poster of the Chinese child and then has students add frozen peas and soy sauce to the next 1/3.
6. The teacher shows the poster of the Hawaiian child and has students add the chopped Spam and soy sauce to the last third.
7. The class discusses the differences and similarities between each batch. (What students Learned)
8. Plates, forks (and chopsticks?) and napkins are passed out.
9. As an added manners lesson, the teacher should be sure all students wait until everyone has been served and encourage "yes please" and "thank-you" from each student.

Assessment:

Formative:

1. During the warm-up activity the teacher watches students for involvement and evaluates students' response to questions.

2. During task chain two, the teacher observes the pictures drawn by each student of items at home and at school.
3. During the recipe reading the teacher checks for students' ability to track and repeat words.
4. During the cooking process teacher sees that measuring is done properly and that students are adding the proper ingredients at the proper time. Immediate correction may be necessary.
5. The teacher shows each poster and the three ingredients that makes each rice dish unique and then has students' match the poster of the child to the respective ingredient.

Summative Assessment:

1. The matching activity listed above could be used as a summative assessment if no correction is given after the activity takes place.
2. Eating the rice and making sure the end result was as it should be is the final assessment.

Focus Sheet 3-1

It's a Small World Song Sheet

It's a small world after all.
It's a small world after all.
It's a small world after all.
It's a small, small world.

It's a world of laughter, a world of cheer.
It's a world of hope and a world of fear.
There's so much that we share
That it's time we're aware
It's a small world after all.

It's a small world after all.
It's a small world after all.
It's a small world after all.
It's a small, small world.

There is just one moon and one golden sun.
And a smile means friendship to everyone.
Though the mountains are wide
And the oceans divide,
It's a small world after all.

It's a small world after all.
It's a small world after all.
It's a small world after all.
It's a small, small world.

Focus Sheet 3-2

Rice Recipe

4 cups water	2 cups rice
dash salt	3 eggs
1 cup butter	1 onion, chopped

Cook rice, water and salt in rice cooker or over the stove using a tight-fitting lid. As rice cooks, melt butter in a large wok. Add the chopped onion and saute until soft and yellow. Add the 3 eggs and "scramble" them in the butter. Add the cooked rice and mix well.

For Mexican rice:
Add one cup of salsa to the rice and mix well.

For Hawaiian rice:
Add one can of Spam, chopped into small cubes and 1 TB soy sauce mixed in 3/4 cup water and mix well.

For Chinese rice:
Add 1 cup frozen peas and 3 TB soy sauce mixed in 3/4 cup water.

Task Sheet 3-3

Graphic Organizer- Description

Everybody Cooks Rice

by Norah Dooley

Family	**Country**	**Food Cooked**	**Custom**

Focus Sheet 3-4

Picture of a Rice Field

Poster 3-5

Picture of Chinese Children

Poster 3-6

Hawaiian Girl

Poster 3-7

Mexican Children

Lesson Four

Antarctica

Target Group: 1st- 3rd grade students
Lesson Time: Approximately 1 hour

Objectives:
1. Students will listen and think aloud as Antarctica is read to them.
2. Students will use critical vocabulary while discovering the purpose of blubber on animals that live in cold waters.
3. Students will make penguins in small groups.
4. Students will read "Easy Reader" books about Antarctica in small groups and write or draw about what they learned.

Content: The lesson is an exploration of Antarctica, its climate, and its animal life
Vocabulary: Words from the book Antarctica by Helen Cowcher, along with others the students discover: emperor, penguins, seals, blubber, nestles, huddles, lurks, ferocious, trudges, rookery, chick, journey, helicopters, skuas, explosions, hurled, enemies

Critical Thinking Strategies:
KWLH Chart, making plausible inferences, predictions, or interpretations
Compare and contrast, implications and consequences
Clarify and analyze meanings of words or phrases, thinking independently, critical vocabulary

Materials:
Antarctica by Helen Cowcher
Task Sheet 4-1 KWLH Chart, made into overhead transparency
Small can of shortening
Bag of ice and bowl of water
Towels
Focus Sheet 4-2: Recipe for Penguins
Pastry bag
Ingredients for Penguins: jumbo pitted olives, small pitted olives, tub of softened cream cheese, carrots sliced into circles, cocktail toothpicks, pimentos
Knife

Warm-up:
The teacher shows the children a map or globe and points to Antarctica and asks students if they know anything about it (mapping and continent location have been discussed throughout the year so students should have some knowledge, however general it may be). The teacher then puts up Task Sheet 4-1:KWLH Chart on the overhead, fills in the K-column, and then asks what students would like to know. The teacher may need to assist students using questions to develop their thinking on what they would like to know. The teacher writes student responses on the chart under the W-column. The teacher explains that they will be discovering many things about Antarctica in the lesson today and challenges the class to all find three new things they didn't already know as they read the story and participate in the activities.

Task Chain One: Antarctica by Helen Cowcher
1. The teacher posts the vocabulary words from the book, with plenty of room on the bottom for students to add more to the list.
2. The teacher goes over each word with the class and checks for understanding.
3. Students are placed in small cooperative groups and each group is given one of the action words from the word list. With help from an adult, the group prepares to act out their word for the rest of the class. In this exercise, students will listen to fellow students to gain deeper insights into the words and their meanings.
4. After each group has performed, the teacher shows the cover of the book and asks students what the picture shows. The teacher is looking for some of the key vocabulary words from the story as students describe the book cover.
5. The teacher reads the book, stopping periodically to think aloud about what is happening and asking for student predictions about what will happen next.
6. The teacher has students pair-share about the things they have learned so far. Each pair then shares with the class one of their new facts. These are written on the chart under the L-column.

For Task Chains 2-4, the class will be split into 3 smaller groups.

Task Chain Two: Critical vocabulary and blubber
1. The teacher shows the students the shortening and asks if anyone knows what it is and explains that it is fat and that the students will see how fat or blubber works for animals that live in very cold environments.

2. As the teacher coats each student's finger, they are asked which finger they think will be comfortable in the water longer and why they think so.
3. The teacher asks students to make inferences about why they think what they think.
4. Students dip both fingers in the ice water at the same time and see if their assumptions were correct.
5. The teacher uses towels to remove shortening from each student's finger and has them go and wash their hands.
6. How is the shortening like the blubber on a seal? How is it different?

Task Chain Three:
1. The teacher gives each pair of students the makings for assembling two penguins. How can these things make a penguin?
2. Students experiment with the items to see what they can do to make them into penguins. The teacher observes each group and encourages dialogue between pairs by asking questions that may lead the pair to success and help them to think independently.
3. After students have experimented the teacher shows Focus Sheet 4-2:Recipe for Penguins and reads it with the students.
4. Students then follow directions for assembling their own penguins.
5. The teacher asks, "Could it be done another way?"
6. Students eat penguins, then clean up.

Task Chain Four:
1. Students are placed in pairs and given two or three easy readers that deal with Antarctica, penguins, seals, South Pole, etc.
2. Each pair is reminded of the earlier assignment to learn three new things about Antarctica.
3. Independently, each pair reads the books.
4. Individually, students write or draw about three things they learned during the lesson.

Conclusion:
1. All students are gathered back to the KWLH chart and the teacher selects some of the paper assignments from Task Chain Four to share with the class and adds any new information to the L-column.
2. The teacher then points to the H-column and asks for ideas about what it means (if similar chart has been used in the past, hopefully someone will come up with the word "how").
3. The big question is, "How did you learn what you learned?"
4. The teacher writes all student responses to the question under the H-column.

Assessments:
Formative:

1. The teacher listens to student responses during warm-up activity to assess prior knowledge.
2. Task 4-1 the teacher assesses student understanding of new vocabulary.

Task Sheet 4-1

K-W-L-H Chart

K	W	L	H

Focus Sheet 4-2

Recipe for Penguins

1. 1 can jumbo pitted olives
2. 1 can small pitted olives
3. 1 tub of soft cream cheese
4. 2 carrots sliced into 1/4 inch circles
5. Cocktail toothpicks (the ones with frilled tops)
6. 1 jar sliced pimentos

Directions:

1. Cut a slit from the top to bottom of jumbo olives and set them aside.
2. Put cream cheese into a pastry bag with a round or star tip attached.
3. Pipe cream cheese into jumbo olives.
4. Cut a small triangle out of each carrot slice
5. Press triangle into center of small olive for the beak.
6. Place small olive, hole-side down, over jumbo olive.
7. Carefully insert a toothpick through the top of the head into the body and carrot base.
8. Wrap a pimento around the neck for a scarf.

Lesson Five

Africa-Jambo Means Hello

Target Age Group- Kindergarten to 3rd Grade students at an Intermediate English language level
Lesson Time- Approx. 1 hour

Objectives:
1. Students will count to 10 in Swahili
2. Students will restate three things they learned about Africa and draw a picture of one of them
3. Students will make Sweet Potato Cookies from Zimbabwe

Content:
A multicultural lesson about the people and foods of Africa

Vocabulary:
Africa, Swahili, cooking words to go with the recipe, other vocabulary/student choice

TESOL Standard:

Goal 2 Standard 1- Students will use English to interact in the classroom
Goal 2 Standard 2- Students will use English to obtain, process, construct, and provide subject matter information in spoken and written form

Learning Strategies:
Listening skills
Brainstorming Web

Materials:
Jambo Means Hello by Muriel Feelings
Count Your Way through Africa by Jim Haskins
Focus Sheet 5-1: Numbers 1-10
Ingredients for cookies (see Focus Sheet 5-2)
Misc. realia from Africa
A world map

Warm-up:
The teacher writes "Hello" in the middle of a circle then asks students to think of different ways to say hello. The teacher writes students' responses on lines coming off the circle. After encouraging students to think of as many ways as possible to say hello, the teacher then shows the book Jambo Means Hello, reads the title, and asks, "Can you think of one more way?"

Task Chain One:
1.The teacher tells the students that they will be hearing a book about Africa. The teacher asks if anyone knows anything about Africa and lets them share. Students are asked to listen to the story and see what new things they can learn about Africa. The teacher explains that Africa is a very large continent with many different languages and cultures. Swahili is only one of many languages.
2. The teacher reads Count Your Way Through Africa to the students showing each number and having students repeat the Swahili number
3. The teacher holds up each number, in order first, and ask students if they can say that number in Swahili
4. The teacher holds up numbers out of order and asks again.
5. The teacher makes up a song using a familiar tune to sing the ten numbers to assist students in learning them)
6. A big chart with **AFRICA** at the top and the ten numbers down the side is made. As the students learn more about this continent and make animal projects to go with it, they can be glued or stapled on the big chart.
Formative Assessment:
Verbal assessment: The teacher listens to students say the numbers in Swahili. Level 1-2 students need only to point to the numbers as the teacher says it. Level 3-4 students can respond verbally with added information.

Task Chain Two:
1. The teacher shows the map of Africa again and tells students more about it using the introduction in Jambo means Hello, along with any other information the teacher can gather using the Internet, books, etc.
2. The teacher reads Jambo Means Hello and discusses the pages as it is read. If possible, there should be some realia from Africa to show the students (be sure one is a sweet potato!).

Focus Sheet 5-1

Counting to 10 in Swahili

1/ one/ moja/ MO-jah

2/ two/ mbili/ mm-BEE-lee

3/ three/ tatu/ TAH-too

4/ four/ nne/ NN-nay

5/ five/ tano/ TAH-no

6/ six/ sita/ SEE-tah

7/ seven/ saba/ SAH-bah

8/ eight/ nane/ NAH-nay

9/ nine/ tisa/ TEE-sah

10/ ten/ kumi/ KOO-mee

Focus Sheet 5-2

Sweet Potato Cookies

2 1/2 cups flour
1 1/2 teaspoons baking powder
1/2 teaspoon baking soda
1/4 teaspoon salt
1/2 cup butter or margarine
1/4 cup sugar
1 tablespoon grated lemon peel
1 teaspoon nutmeg
1/4 cup honey
1 egg
1 cup grated, raw sweet potato or yam

1. Preheat the oven to 350 degrees
2. Mix the flour, baking powder, baking soda, and salt in a medium-size bowl
3. Cream the butter with the sugar in a large bowl. Mix the lemon peel, nutmeg, honey and egg. Then stir in the grated sweet potato
4. Blend the four mixture into the sweet potato mixture
5. Place rounded teaspoons of the cookie dough onto an ungreased cookie sheet. The cookies should be spaced at least 1/2 inch apart
6. Bake for 7 minutes. Remove cookies from the cookie sheet and cool on a rack.

Make a lemon glaze for the cookies by blending 1 1/2 cup powdered sugar with 1 tablespoon lemon juice and 2 tablespoons water. Spread the glaze on the cooled cookies.

Lesson Six

Australia- G'Day from the Land Down Under

Target Age Group- First to third grade students at an Intermediate English language level
Lesson Time- Approx. 1 hour

Objectives:
1. Students will name 3 animals found only in Australia
2. Students will compare and contrast the climate and culture of Australia to their native culture and climate
3. Students will make Fairy Bread from Australia

Content:
A multicultural lesson about the animals, people and foods of Australia

Vocabulary:
Australian terms along with their American translations

TESOL Standard:

Goal 3 Standard 1- Students will use the appropriate language variety, register, and genre according to audience, purpose, and setting

Critical Thinking Strategies:
1. Compare/Contrast
2. Target Chart

Materials:
Animals of the World,
Compare/contrast chart on overhead
Target chart on overhead
Ingredients and supplies for Anzac Bickies

Warm-up:
The teacher begins with a hearty "G'day, Mate," then shows the students Australia on a map and repeats the "G'day." The teacher asks, "What do you know about Australia? Do you know any words or phrases or about any animals from Australia? Let's find out some really cool stuff!"

Task Chain One:
1. The teacher passes out 3 x 5 cards with animals from Australia written on one and pictured on another to students. Each student will receive either a picture card or a word card. These would include kangaroos, koalas, platypus, dingos, emus, kookaburra, Tasmanian devils, and wombats.
2. Students mingle and match their picture with the name of the animal.
3. The teacher collects cards and shows each one to the class and explains that all these animals are found naturally only in Australia.
Formative Assessment: The teacher holds up each picture card and asks the students to identify them. For beginning ELL students the teacher would ask for to point to the animal she says. More advanced students would need to verbalize their answers.

Task Chain Two:
1. The teacher shows a globe and points out where Australia is.
2. The teacher asks students to name the four seasons.
3. The teacher shows the class that when it is winter in America, it is summer in Australia.
4. The compare/contrast chart is put on the overhead and labeled with Australia, USA, Native Country.
5. The teacher shares as many facts as possible about Australia, showing pictures, or other visuals to assist in the teaching.
6. Students share ideas of how Australia, USA, and their native country are the same and different. If time allows, students come and write their answers on the chart.

Summative Assessment: Using a target chart with Australia written in the middle, students tell about animals from Australia for the next circle, and other things about Australia for the outer circle.

Task Chain Three:
1. All students wash and dry their hands.
2. The teacher explains to students that many parts of Australia are very "desert-like" referring to the climate and differences in Australia. The teacher explains that because there are so many places in Australia that are primitive, they have some special recipes that don't

require refrigeration, but are non-perishable items like Anzac Bickies (biscuits are cookies in Australia). Many people made these cookies during the War when dairy products were not readily available.
3. Students take turns reading the directions as ingredients and recipe are shown.
4. Students are put into small groups and teacher works with them one group at a time to make the Anzac bickies. The other groups could be listening to Australian music at the listening center or matching Australian animals to their names while the teacher works with other small groups.

Summative Assessment: The teacher should allow the students to make this recipe as much as possible on their own after reading the recipe with them. The success of the cooking experience will be the assessment.

Enrichment: Australian music (Tie Me Kangaroo Down Sport, Waltzing Matilda, I Come from the Land Down Under, etc.) are played to let the students hear the accent the people speak with. Movie clips from Australia could also be shown.

Focus Sheet 6.1

Anzac Bickies

1 cup shredded coconut
1 cup rolled oats
1 cup flour
1 cup sugar
1 tsp. baking soda
1 pinch salt
1/2 cup shortening
2 T maple syrup
2 T water

1. Mix coconut, oats, flour, sugar, soda, and salt in a bowl.
2. Melt the shortening in a sauce pan and add syrup and water.
3. Pour shortening mixture into flour mixture and stir with a wooden spoon.
4. Drop dough onto a greased cookie sheet.
5. Bake at 350 for 15 minutes or until light brown.
6. Cool for 10 minutes before eating.

You can add white chocolate chips to these to make them extra tasty but not quite as authentic.

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