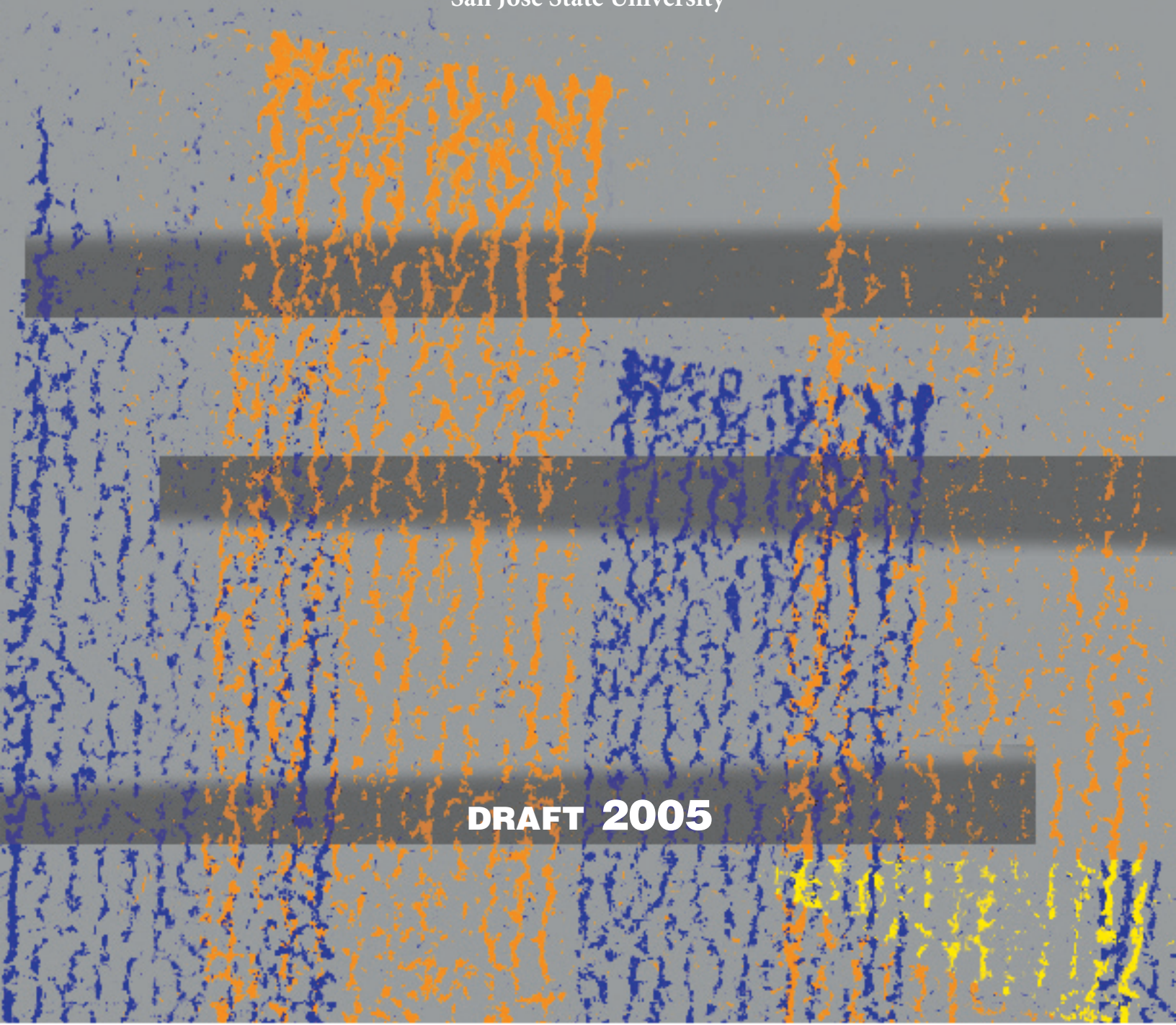
Review of Research and Best Practices on Effective Features of Dual Language Education Programs

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This review of research and best practices was written to serve as a background and companion for the document Guiding Principles for Dual Language Education, which is intended to help guide Dual Language Programs with planning and ongoing implementation. These principles are based in large part on the Dual Language Program Standards developed by Dual Language Education of New Mexico (www.duallanguagenm.org). The companion Guiding Principles document can be found at www.cal.org.

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Introduction

Designing, implementing, and refining dual language programs that successfully promote bilingualism, biliteracy, multicultural competence, and academic achievement in student participants requires considerable effort and support. This review of literature related to dual language programs examines reports of research and best practices for features that are consistently associated with programs that are effective in promoting positive academic outcomes in students.

Methods for Selecting the Literature

There is a considerable amount of scientifically-based and sound research on the education of ELL students that should be examined in discussions of programs, instructional approaches and strategies, assessment, professional development, and literacy instruction appropriate for the education of ELL students (see Genesee et al, in press). In particular, a substantial body of literature has been created about school or program effectiveness in regular mainstream education and in various types of dual language programs. Effective programs are defined as programs that are successful in promoting academic achievement or other academic outcomes (e.g., language proficiency, school attendance, motivation) in ELL students. This review includes all relevant reporting of research and studies that would inform dual language programs; that is, it reviews research relating to effective schools, studies of particularly effective schools that serve "at-risk" or "low-performing" students, and English language learners (ELLs), and studies of effective dual language or other bilingual or immersion programs.

Most of this review is based on research focusing on the characteristics of programs or schools that are considered effective in promoting the language proficiency and achievement of ELL students. The review also includes research and program evaluations that have linked certain features to higher student achievement, such as teacher quality or professional development (Darling-Hammond, 2000; Doherty, Hilberg, Pinal, & Tharp, 2003; Wenglinsky, 2000; Willig, 1985). Also included in the review are data obtained from one focus group meeting that was held with experts in dual language education. This Panel of Experts consisted of experienced teachers, resource teachers, program coordinators, principals, district administrators, and researchers – some of whom were parents of students in dual language programs. Further, sources include articles published in peer-reviewed journals, research-based reviews of literature, studies written in published chapters and books, and reports prepared for the U.S. Department of Education.

There is tremendous consistency between the factors that define exemplary dual language programs and practices that are found in effective mainstream schools, although different labels may be used. For example, Marzano (2003) categorizes features according to School-Level (e.g., collegiality and professionalism, viable curriculum, parent involvement), Student-Level (e.g., background knowledge, home environment), and Teacher-Level (e.g., instructional strategies, classroom curriculum design) factors. Though Corallo and McDonald (2002) present some of the same characteristics, they talk about "collegiality" and "professionalism" with respect to what Marzano would call "teacher-level" factors. This review will categorize the characteristics in a way that seems appropriate for considering dual language education programs, but the particular way of labeling the features is not as important as the features themselves.

An examination of the investigations reviewed here points to a set of consistent factors that tend to contribute to successful student outcomes in schools in general and dual language education programs in particular. The importance of these factors is evident from the frequency and consistency with which they are found in programs that produce successful student outcomes. These factors are organized into seven categories: assessment and accountability, curriculum, instructional practices, staff quality and professional development, program structure, family and community involvement, and support and resources.

One point that was made by the Panel of Experts in the focus group meeting for this review, and which is important in understanding and implementing the following features, is that context is an important lens through which to understand one's own program. What works in one community or with a particular population of students or teachers (e.g., developing a 50:50 program with simultaneous literacy instruction through two languages beginning in kindergarten) may not work as effectively in another community (Christian et al, 1997). Program administrators must keep context in mind as they think about the design, implementation, or refinement of their own program.

Assessment and Accountability

Effective Features: Assessment and Accountability

Assessment is:

- ***Consistent and systematic.***
- ***Used to shape and monitor program effectiveness.***
- ***Aligned with appropriate standards.***
- ***Aligned with vision and goals of bilingualism, biliteracy, multiculturalism.***
- ***Carried out with multiple measures.***
- ***Measured in both languages.***
- ***Interpreted accurately.***
- ***Data is disaggregated:***
  - ***Measured and reported according to student progress***
  - ***Track students over time***
  - ***Considers staff development in assessment***
  - ***Disseminated to appropriate constituents***

One of the tenets of the standards-based reform movement is that all children, including ELLs, are expected to attain high standards. In particular, Title I of the Improving America's Schools Act (U.S. Department of Education, 1994) mandates that assessments that determine the yearly performance of each school must provide for the inclusion of ELL students. In addition, the No Child Left Behind Act (U.S. Department of Education, 2001) establishes annual achievement objectives for ELLs and enforces accountability requirements. The rationale for including ELLs in high-stakes tests is to hold them to the same high standards as their peers and to ensure that their needs are not overlooked (Coltrane, 2002).

Most research on effective schools, including effective bilingual and dual language programs, discusses the important role of assessment and accountability. A substantial number of studies have converged on the significance of using student achievement data to shape and/or monitor their instructional program (August & Hakuta, 1997; Berman et al, 1995; Corallo & McDonald, 2002; Reyes et al, 1999; Slavin & Calderon, 2001). Effective schools use assessment measures that are aligned with the school's vision and goals and appropriate curriculum and related standards (Lindholm-Leary & Molina, 2000; Montecel & Cortez, 2002). Dual language programs require the use of multiple measures in both languages to assess students' progress toward meeting bilingual and biliteracy goals along with the curricular and content-related goals. Solano-Flores and Trumbull (2003) argue that new research and assessment practices that include providing the same items in English and the native language need to be developed and will lead to more valid and reliable assessment outcomes. Further, studies show that it is important to disaggregate the data for identifying and solving issues of curriculum, assessment and instructional

alignment (Corallo & McDonald, 2002; Lindholm-Leary, 2001; U.S. Department of Education, 1998; WestEd, 2000) and for accountability purposes (No Child Left Behind Act of 2001, 2002).

Clearly, it is important to analyze and interpret assessment data in scientifically rigorous ways to achieve program accountability and improvement. In order to appropriately interpret the data, there must be professional development for administrators and teachers that is focused on assessment, including the interpretation of assessment data (Levine & Lezotte, 1995; Montecel & Cortez, 2002). Part of the correct interpretation of assessment outcomes involves an understanding of research in dual language education and establishing appropriate expectations for students being instructed and tested in two languages. In addition, because of the significance of assessment for both accountability and program evaluation purposes, it is important to establish a data management system that tracks students over time. This requires the development of an infrastructure that can ensure that:

- Assessment is carried out in consistent and systematic ways and is aligned with appropriate standards and goals.
- Assessment outcomes are interpreted correctly and disseminated with appropriate constituents.
- Professional development is provided to enable teachers to develop, collect and interpret assessment data appropriately and accurately.

Obviously, with the need for an infrastructure focused on assessment, a budget is required to align the assessment component with the vision and goals of bilingualism, biliteracy, academic achievement, and multicultural competence.

Curriculum

Effective Features: Curriculum

A curriculum must be developed to ensure that it:

- ***Aligns with standards and assessment.***
- ***Is academically challenging and integrates higher-order thinking.***
- ***Integrates technology.***
- ***Is thematically integrated and meaningful.***
- ***Is enriched, not remedial.***
- ***Aligns with the vision and goals of bilingualism, biliteracy, and multiculturalism, including language and literature across the curriculum.***
- ***Reflects and values students' culture(s) and considers characteristics of assessment instruments and students.***

Planning related to curriculum:

- ***Horizontal and vertical alignment***
- ***Materials***
- ***Large variety and types of materials***
- ***Meet vision and goals of bilingualism, biliteracy, and multiculturalism***

Studies show that more successful schools and programs have a curriculum that has been developed so that it establishes a clear alignment to standards and assessment (Corallo & McDonald, 2002; Levine & Lezotte, 1995; Montecel & Cortez, 2002); is meaningful, academically challenging and incorporates higher order thinking; and is thematically integrated (Berman et al, 1995; Doherty et al, 2003; Montecel & Cortez, 2002; Ramirez, 1992). Research on effective schools has also shown that successful outcomes result from a curriculum associated with an enriched (see Cloud et al, 2000), not remedial, instructional model (e.g., Darling-Hammond, 2000; Montecel & Cortez, 2002). A high quality and enriching, rather than remedial, curriculum is critical in dual language programs with ELL students, as Garcia and Gopal (2003) have pointed out that remedial programs have led to high failure rates in ELL students' ability to pass high school exit exams.

Because of the vision and goals associated with bilingualism and biliteracy, language instruction is integrated within the curriculum (American Council on the Teaching of Foreign Languages, 1996; Cloud et al, 2000; Genesee, 1987; Short, 2002; Teachers of English to Speakers of Other Languages, 1997). However, language objectives should be incorporated into the curriculum planning (Lyster, 1990, 1994, 1998) and language and literature should be developed across the curriculum (Doherty et al, 2003) to ensure that students learn the content as well as the academic language associated with the content. Further, since the vision and goals also include multicultural competence and equity, the curriculum needs to reflect and value the students' culture(s) (Berman et al, 1995; Corallo & McDonald, 2002; Lucas et al, 1990; Montecel & Cortez, 2002; Reyes et al, 1999).

As mentioned previously, a clear vertical and horizontal alignment in the curriculum is typically associated with more effective programs (Corallo & McDonald, 2002; Education Trust, 1999; U.S. Department of Education, 1998). Guerrero and Sloan (2001), in looking at high-performing Spanish reading programs, noted that student performance was better when the Spanish (bilingual) and English (mainstream) reading programs were aligned with one set of literacy expectations for all students, regardless of the language of literacy instruction.

A large variety (bilingual books of many genres) and types of materials (visual, audio-visual, and art materials) are required to meet the goals of bilingualism and biliteracy (Montecel & Cortez, 2002). Also, effective programs integrate technology into curriculum and instruction (Berman et al, 1995; Castellano et al, 2002) in both languages. Dixon (1995) reported that ELL and native English-speaking middle school students could work together effectively using computers in spatial visualization tasks. Further, in some of the exam tasks, ELL students who received instruction that integrated technology scored higher than students who experienced the traditional textbook approach, and they performed equivalent to the English proficient students.

Effective Features: Instructional Practices

The program features:

- ***A variety of techniques responding to different learning styles and language proficiency levels.***
- ***Positive interactions between teachers and students and among students.***
- ***A reciprocal interaction model of teaching – genuine dialog.***
- ***Cooperative learning or group work situations, including:***
  - ***Students work interdependently on tasks with common objectives,***
  - ***Individual accountability, social equity in groups and classroom***
  - ***Extensive interactions among students to develop bilingualism***
- ***Language input that***
  - ***Uses sheltering strategies to promote comprehension***
  - ***Uses visual aids and modeling instruction, allowing students to negotiate meaning***
  - ***Is interesting, relevant, of sufficient quantity***
  - ***Is challenging to promote high levels of language proficiency and critical thinking***
  - ***Language objectives are integrated into curriculum, including:***
  - ***Structured tasks and unstructured opportunities for students to use language***
  - ***Language policy to encourage students to use instructional language***
  - ***Monolingual lesson delivery***
  - ***Needs of all students are balanced***
  - ***Students are integrated for the majority of the instruction***

Good instruction is associated with higher student outcomes, regardless of the type of educational model that is used (Levine & Lezotte, 1995; Marzano, 2003; Wenglinsky, 2000). This is clearly evident in studies with ELL or high-risk students as well (Berman et al, 1995; Corallo & McDonald, 2002; Doherty et al, 2003; Echevarria, Short & Powers, 2003; Goldenberg & Gallimore, 1991; Ramirez, 1992; Sloan, 2001). In fact, Wenglinsky (2000) found that the strongest effect on student achievement (eighth grade math achievement), after taking into consideration the students' social class, was related to classroom practice. However, good instruction is even more complicated in dual language programs because of the added goals of bilingualism, biliteracy, and multicultural competence, and the constant need to integrate and balance the needs of the student groups. Thus, it is even more important to use a variety of techniques that respond to different learning styles (Berman et al, 1995; Doherty et al, 2003; Sloan, 2001) and language proficiency levels (Berman et al, 1995; Echevarria, Short & Powers, 2003; Montecel & Cortez, 2002).

Promotion of positive interactions between teachers and students is an important instructional objective (Levine & Lezotte, 1995). When teachers use positive social and instructional interactions equitably with both ELLs and proficient English speakers, both groups perform better academically (California State Department of Education, 1982; Doherty, Hilberg, Pinal & Tharp, 2003). In addition, research suggests that a reciprocal interaction model of teaching is more beneficial to students than the traditional teacher-centered transmission model of teaching (Cummins, 2000; Doherty, Hilberg, Pinal & Tharp, 2003; Tikunoff, 1986). The basic premise of the transmission model is that the teacher's task is to impart knowledge or skills to students who do not yet have these abilities. In the reciprocal interaction approach, teachers participate in genuine dialogue with pupils and facilitate, rather than control, student learning. This model encourages the development of higher-level cognitive skills rather than just factual recall (Berman et al, 1995; Cummins, 1986; Doherty, Hilberg, Pinal & Tharp, 2003; Wenglinsky, 2000) and is associated with higher student achievement in more effective schools (Levine & Lezotte, 1995).

A number of strategies under the rubric of cooperative learning have been developed that appear to optimize student interactions and shared work experiences (e.g., Cohen, 1994). Studies suggest that when ethnically and linguistically diverse students work interdependently on school tasks with common objectives, students' expectations and attitudes toward each other become more positive, and their academic achievement improves (Berman et al, 1995; Cohen, 1994; Johnson & Johnson, 1990; Johnson, Johnson, & Holubec, 1986; Qin, Johnson & Johnson, 1995; Slavin, 1995). Also, language development is facilitated by extensive interactions among native and nonnative speakers (Long & Porter, 1985). However, in a review of the literature on the English language development of ELL students, Saunders (in press) reported that merely having ELL students interact or work in groups with EP students does not necessarily enhance language development. Rather, Saunders states that activities in which ELL and EP students are interacting require that teachers consider the design of the task, the training of the EP students in working with and promoting the language development of ELLs, and the language proficiency level of the ELL students.

It is important to point out that many years of research on cooperative learning show that for cooperative learning to produce positive outcomes, the grouping must be based on particular operating principles. Many schools and teachers purport to use cooperating learning, but the grouping may not follow the necessary preconditions for successful cooperative learning. Perhaps this is why the literature on effective schools does not point to any specific grouping arrangement that is particularly effective (Levine & Lezotte, 1995). However, research does show that in successful schools there is an emphasis on helping low achievers not by slowing down instruction, but rather by accelerating instruction. Considerable empirical evidence and meta-analysis studies demonstrate the success of cooperative learning in promoting positive student outcomes. Researchers also caution that successful grouping requires students working interdependently, with clearly conceived

individual and group accountability for all group members, and social equity in the group and in the classroom (Cohen, 2002; Cohen & Lotan, 1995; Johnson, Johnson, & Holubec, 1986; Qin, Johnson & Johnson, 1995; Slavin, 1994).

Language Input

Lindholm-Leary (2001) points out that optimal input has four characteristics: it is adjusted to the comprehension level of the learner, it is interesting and relevant, there is sufficient quantity, and it is challenging. Accomplishing this objective involves careful planning in the integration of language instruction and subject matter presentation to ensure ELL students access to the core curriculum (Berman et al 1995).

In the early stages of second language acquisition, input is made more comprehensible though the use of:

- slower, more expanded, simplified, and repetitive speech oriented to the "here and now" (Krashen, 1981; Long, 1980),
- highly contextualized language and gestures (Long, 1980; Saville-Troike, 1987),
- comprehension and confirmation checks (Long, 1980), and,
- communication structured to provide scaffolding for the negotiation of meaning by L2 students by constraining possible interpretations of sequence, role, and intent (Saville-Troike, 1987).

Echevarria and Short and their colleagues (e.g., Echevarria, Short & Powers, 2003; Short, 2002; Short & Echevarria, 1999) built on this base of research on sheltered instruction to develop the sheltered instruction observation protocol (SIOP), which provides a lesson planning and delivery approach. The SIOP model comprises 30 items that are grouped into eight components for making content comprehensible for ELLs. These sheltering techniques occur in the context of a reciprocal interactive exchange and include various activities as alternatives to the traditional transmission approach. Sheltered techniques include:

- the use of visual aids such as pictures, charts, graphs, and semantic mapping,
- modeling of instruction, allowing students to negotiate meaning and make connections between course content and prior knowledge,
- allowing students to act as mediators and facilitators,
- the use of alternative assessments to check comprehension,
- portfolios,
- use of comprehensible input, scaffolding, and supplemental materials, and
- a wide range of presentation strategies.

Echevarria et al (2002) reported that students who were provided with sheltered instruction, using the SIOP model, scored significantly higher and made greater gains on an English writing task compared to ELLs who had not been exposed to instruction via the SIOP model. While this model was developed for use by ESL teachers with ELL students, the concepts are clearly applicable to second language development for all students.

Balanced with the need to make the second language more comprehensible is the necessity for providing stimulating language input (Kowal & Swain, 1997; Swain, 1987), particularly for the native speakers of each language (Valdés, 1997). There are two main reasons why students need stimulating language input. First, it facilitates continued development of language structures and skills. Second, when students are instructed in their first language, the content of their lessons becomes more comprehensible when they are then presented with similar content in the second language.

As noted earlier, immersion students, and foreign language students in general, have difficulty in producing native-like speech in the second language. Part of this difficulty stems from an absence of the opportunity to speak with fluent speakers in the language they are learning. According to classroom research, immersion students get few opportunities to produce extended discourse in which they are forced to make their language coherent, accurate, and sociolinguistically appropriate (Lindholm-Leary, 2001; Swain, 1985, 1987). This is even true in dual language programs in which teachers do not require students to use the language of instruction during group work. Thus, promoting highly proficient oral language skills necessitates providing both structured and unstructured opportunities for oral production (Saunders, in press). It also necessitates establishing and enforcing a strong language policy in the classroom that encourages students to use the instructional language and discourages students from speaking the non-instructional language (Lindholm-Leary & Molina, 2000; Panel of Experts).

Considerable controversy exists about the importance of explicit second language instruction in the process of second language learning (Long, 1983; Swain, 1987). Because many immersion programs were grounded in the natural approach, which eschews formal skills instruction in the immersion language, two important but incorrect assumptions were made. The first assumption was that students would simply learn the language through subject matter instruction, and the second was that students would achieve more native-like proficiency if they received the kind of language exposure that is similar to first language learning (see Swain, 1987).

As some immersion researchers have discovered (e.g., Harley, 1984, 1996; Lyster, 1987; Swain, 1985; Swain & Lapkin, 1986), the fluency and grammar ability of most immersion students is not native like and there is a need for formal instruction in the second language. However, this does not mean traditional translation and memorization of grammar and phrases. It is important to utilize a language arts curriculum that specifies which linguistic

structures should be mastered (e.g., conditional verb forms) and how these linguistic structures should be incorporated into the academic content (e.g., including preterit and imperfect forms of verbs in history subject matter and conditional, future, and subjunctive tenses of verbs in mathematics and science content).

Monolingual lesson delivery (i.e., different periods of time devoted to instruction in and through each of the two languages respectively) seems to be superior to designs that rely on language mixing during a single lesson or time frame (Dulay & Burt, 1978; Legaretta, 1979,1981; Swain, 1983). This is not to say that language mixing itself is harmful; clearly, the sociolinguistic skill of language mixing or code switching is important in bilingual communities. Rather, it appears that sustained periods of monolingual instruction in each language help to promote adequate language development. Because teachers need to refrain from language switching, they must have high levels of proficiency in the language for the content about which they are instructing. Teachers, instructional assistants and others who help in the classroom should not translate for children in the classroom. Some children in partial immersion programs have developed the strategy of looking confused when they have to respond in the second language because they have been reinforced for their confusion with some well-meaning adult who translates for the "poor child". Instructors who react in this manner discourage students from developing listening strategies in the second language.

Balancing the Needs of Both Language Groups During Instruction

There is considerable variation in how the English time is used in 90:10 two-way education programs. Unfortunately, not enough attention has been paid to English time in many school sites where English time has been used for assemblies, physical education, or other activities that do not provide a good basis for the development of academic language proficiency in English. It is important that teachers understand what language skills they need to cultivate at each grade level so that they develop the academic English language skills necessary for literacy, particularly for language minority students who do not receive literacy training in the home. This is one clear example that requires the cross-grade coordination planning that will be described subsequently in the section on Program Structure.

Heterogeneous or homogeneous grouping also becomes a major consideration in dual language programs, where ELL and language majority students can be at very different levels of English language proficiency. The argument in favor of heterogeneous grouping is that it is consistent with the remainder of the day, wherein students receive all of their instruction in heterogeneous groups, including language arts in the non-English language. The counter-argument, in favor of homogeneous grouping by language background, is that each group's needs can be better met, particularly providing second language learning activities and approaches for the non-English language speakers. There is no research

suggesting that one grouping strategy is more effective than another for English language development. However, in successful dual language programs, there is often a combination of the two strategies. For portions of the week, non-English language speakers receive English Language Development (ELD) instruction and the English speakers work on further English language development. For other portions of the week, the students are kept together and given English oral input through content areas.

Effective Features: Staff Quality

Select and/or train high quality teachers who:

- ***Have appropriate teaching certificate, knowledge of subject matter, curriculum and technology, instructional strategies and classroom management.***
- ***Have academic background and experience.***
- ***Are fully credentialed bilingual and ESL teachers have knowledge of bilingual education and best practices .***
- ***Are native or native-like ability in the language(s) of instruction.***
- ***Are bilingual and fully biliterate.***

Monolingual English speakers who provide English model MUST understand non-English language in early grades

Teachers in language education programs, like in mainstream classrooms, should possess the typical teacher qualities associated with high levels of knowledge relating to the subject matter, curriculum and technology, instructional strategies, assessment, and the importance and ability to reflect on their own teaching (Darling-Hammond, 1998). These teacher characteristics have been linked to higher student outcomes (Darling-Hammond, 2000; Montecel & Cortez, 2002; Wenglinsky, 2000). Darling-Hammond (2000) found that the proportion of well-qualified teachers was by far the most important determinant of student achievement at all grade levels, even after taking into consideration the special needs of students in poverty situations and ELL students.

Effective dual language education programs require additional teaching and staff characteristics (Cloud et al, 2000; Day & Shapson, 1996; Met & Lorenz, 1997; Montecel & Cortez, 2002). These characteristics are important to consider in recruitment and continued professional development. Montecel and Cortez (2002) reported that successful bilingual programs selected staff based on their academic background and experience. Teachers in language education programs need appropriate teaching certificates or credentials, good content knowledge and classroom management skills, and training with respect to the language education model and appropriate instructional strategies (Cloud et al, 2000; Lindholm-Leary & Molina, 2000; Met & Lorenz, 1997). Montecel and Cortez (2002) found that fully credentialed bilingual and ESL teachers continuously acquired knowledge regarding best practices in bilingual education and ESL and other best practices in curriculum and instruction. Similarly, Lindholm-Leary (2001) found that teachers with both bilingual and ESL credentials had more positive ratings of language instruction, classroom environment, and their teaching efficacy. In addition, with more teaching experience and more types of teaching certifications (ESL, Bilingual), teachers were more likely to perceive that the model at their site was equitable, was effective for both groups of

students, valued families from both language communities, and provided an integrated approach to multicultural education.

These results are important in developing a successful program because they demonstrate the significance of teachers understanding bilingual theory, second language development and theory, and strategies in establishing a positive classroom environment with appropriate language strategies. When teachers do not have background in bilingual theory or bilingual education, then they risk making poor program structure, curriculum, and instructional strategy choices, which can lead to low student performance and the perception that bilingual education does not work (Clark et al, 2002). However, one cannot assume that because a teacher has a bilingual credential that s/he has current knowledge, understands, or supports the dual language program.

Teachers in dual language education programs need native or native-like ability in either or both of the language(s) in which they are instructing. Montecel and Cortez (2002) reported that successful bilingual programs selected staff using screening measures to ensure full written oral proficiency in both languages. Native or native-like proficiency is critical for two reasons. First, research on language use in classrooms demonstrates that children do not receive cognitively stimulating instruction from their teacher (e.g., Doherty et al, 2003; Lindholm-Leary, 2001; Ramirez, 1992). To provide cognitively stimulating instruction and to promote high levels of bilingual proficiency in students, teachers need a high level of language proficiency in both languages. Clark et al (2002) reported that many of the teachers that were instructing in bilingual programs did not have sufficient Spanish proficiency to participate in college level courses conducted in Spanish.

Second, teachers, although bilingual, may assume monolingual roles when interacting with students. In reality, because of the shortage of bilingual teachers, some English model teachers (providing English instruction only) are English monolinguals. It is important that these teachers be able to at least understand the child's mother tongue in the initial stages of language learning. If the teacher does not understand the native language, then s/he cannot respond appropriately in the second language to the children's utterances in their native language. In this case, comprehensible input, as well as linguistic equity in the classroom, may be severely impaired (Swain, 1985).

Effective Features: Professional Development

Consists of:

- ***Educational pedagogy***
- ***Standards-based teaching***
- ***Literacy instruction***
- ***GLAD***
- ***High standards for all students***
- ***Parent and community involvement***
- ***Assessment***
- ***Technology***
- ***Critical thinking***

Administrators and teachers need training in:

- ***Dual language models***
- ***Bilingual education theory and research, second language development***
- ***Biliteracy***
- ***How to use content pedagogy in context of vision and goals of bilingualism, biliteracy, and multiculturalism***
- ***Educational equity***

Provides:

- ***Mentor teachers, teachers as trainers***
- ***Staff development with instructional assistants, office staff***
- ***Links with teacher training institutions to provide training and experience in the dual language model***
- ***Links between elementary and middle schools and between middle and high schools for professional development***

Under No Child Left Behind, children are to be educated by high quality teachers. Yet, according to Policy Analysis for California Education report, only one out of every three ELL students in California is taught by a teacher trained in second-language acquisition methods, and 80% are taught by monolingual teachers.

The research literature is replete with studies demonstrating the importance of training to promote more successful administrators, teachers, and staff (Levine & Lezotte, 1995; Met & Lorenz, 1997; National Staff Development Council, 2001; U.S. Department of Education, 1998, 2001). Effective programs tend to align the professional development needs of faculty to the goals and strategies of the instructional program (Corallo & McDonald, 2002; Elmore, 2000). Researchers and educators have discussed the importance of specialized training in language education pedagogy and curriculum, materials and resources (Cloud

et al, 2000; Day & Shapson, 1996; Met & Lorenz, 1997), and assessment (Cloud et al, 2000). Guerrero & Sloan (2001) report that teachers need professional development in Spanish to develop higher levels of proficiency.

Educational equity is an important point on which to provide professional development as well (Darling-Hammond, 1995; Wenglinsky, 2000), given the large amount of literature showing that teacher expectations influence student achievement (Levine & Lezotte, 1995). This is especially important considering that students who are ethnic or cultural minorities, language minorities, immigrants, and of lower socio-economic backgrounds are more likely to suffer from lower expectations for achievement (Darling-Hammond, 1995; Olneck, 1995); and because children as young as first grade are able to distinguish between perceived "smart" and "dumb" kids in the classroom by noting how the teacher responds to various children (Weinstein et al, 1987).

Participants in the Focus Group on Dual Language Education felt that essential training, which is important for any teacher, includes educational pedagogy, standards-based teaching, literacy instruction, sheltered instruction, high standards for all students, and parental and community involvement. To effectively administer and teach in a dual language program, administrators and teachers also need professional development related to the definition of the dual language education model and to the theories and philosophies underlying the model. Teachers must be trained in second language and biliteracy development so they understand and incorporate knowledge of how languages are learned into their teaching. To support the acquisition of language and literacy, teachers need to use content pedagogy methods and choose strategies that fit with the goals and needs of dual language students. If teachers are not trained and do not understand the philosophy behind dual language education, the program cannot succeed. Likewise, if any of the teachers within a dual language program are strongly opposed to the two-way model, the program cannot succeed.

When encouraged to rank the needs for professional development, focus group participants stated that program participants must first understand the bilingual education, immersion and bilingualism theories that underlie dual language programs. In adhering to these beliefs they can develop appropriate instructional strategies that meet the diverse needs of the students in their classrooms. Each teacher's own beliefs and goals need to be examined and unified with the school vision of dual language programs.

Focus group participants stressed that training should also include critical thinking and reflective practice. Teachers must work as teacher-researchers in their classrooms to analyze data collected during the lesson itself and to reflect on its success and shortcomings. Teachers must understand how to develop a repertoire of strategies and recognize that certain strategies may work in certain contexts, but not in other contexts.

It is the role of on-site leadership to make professional development manageable and to support both new and experienced teachers. This must be carried out with a dual language education focus. Examples were noted of schools in the Ysleta and San Antonio School districts that talked about motivation theory when it came to second language theory. This discussion aided teachers in understanding how to apply motivation theory within the context of the dual language education experience.

For pre-service training, it was recommended that program leaders start a dialogue with university teacher training institutions to incorporate discussion of dual language education programs and to provide internships (Clark et al, 2002). This pre-service training would enable new teachers to enter dual language programs with a much better understanding of the theories and philosophies underlying bilingualism and biliteracy in dual language programs. Several of the dual language schools have had interns who learned about the model during their internship and were later hired by the school as new teachers. These new teachers already understood and were partially trained in the dual language model.

For in-service training, one idea was to create teacher study groups. Teachers at the same grade levels benefit from group planning in understanding language objectives and content objectives. Some experienced teachers added that an effective method is to go on a retreat together and collaborate to formulate curricula and make decisions regarding implementation of a model. This affords opportunities to recommit to and maintain the integrity of the program and set the direction of the school.

Another suggestion for in-service training was to assign more advanced teachers as teacher trainers – in-house experts who teach about the writing process, reading strategies, and other important elements. Veteran teachers mentoring with novice teachers is a very effective way to assist new teachers with model implementation.

Along with the training of teachers, training of staff is an important component to a successful program. An effective program cannot have office staff who only speak English if a significant number of parents do not speak English. Several focus group participants noted that office staff often are the first contact a parent has with a program, so these staff must understand the model so that they can answer parents' and other community members' questions accurately. As one individual summarized, "You need to be inclusive with the front line."

As a particularly effective vehicle for integrating professional development and articulation, Castellano et al (2002) reported that some effective schoolwide reform sites shared professional development activities with their feeder middle schools. That way, the middle school teachers could assist their students in making connections between what they were learning in middle school and what they would be required to learn in high school.

Effective Features: Program Structure

A cohesive school-wide shared vision and set of goals that:

- ***Provide commitment to and instructional focus related to bilingualism, biliteracy, and multiculturalism.***
- ***Establish high expectations for achievement for all students.***

Equity at district, school, and classroom levels with respect to treatment of students, families, and teachers, providing:

- ***A safe and orderly environment.***
- ***A warm and caring community.***
- ***Facilitated learning.***
- ***Availability of support and resources.***
- ***Additive bilingualism for all students.***

Effective leadership is in place

- ***Instructional leadership is provided by the principal, program coordinator, and management team, including***
- ***Program advocacy and liaison with central administration***
- ***Oversight of model development, planning, and coordination***
- ***Staff cohesion, collegiality, and development, and***
- ***Funding.***

A language education model is in place that upholds

- ***Second language development***
- ***Bilingual and immersion (for two-way programs) theory and research***
- ***Instructional methodologies and classroom practices***
- ***Belief in and commitment to dual language education model***

There is a program for ongoing, continuous planning with a

- ***Focus on vision and goals of the program***
- ***School-wide vertical and horizontal articulation***
- ***Proper scope, sequence, and alignment with developmentally appropriate practice and students' language proficiency levels***

The significance and consequence of the organizational work involved in establishing an effective program that promotes student achievement cannot be understated. As Chubb and Moe (1990) note:

> All things being equal, a [high school] student in an effectively organized school achieves at least a half-year more than a student in an ineffectively organized school over the last two years of high school. If this difference can be extrapolated to the normal four-year high school experience, an effectively organized school may increase the achievement of its students by more than one full year. That is a substantial effect indeed (p. 140).

If this reasoning is carried over to kindergarten through eighth grade, the effect of a more organized program structure is even more substantial.

There are several characteristics associated with high quality schools and programs that emerge from the literature. These characteristics, addressed in this section, include vision and goals, equity, leadership, and processes for model design, refinement, planning, and implementation.

Vision and Goals Focused on Bilingualism, Biliteracy, and Multiculturalism

Studies of effective schools consistently and conclusively demonstrate that high quality programs exist when schools have a cohesive school-wide shared vision and a set of goals that define their expectations for achievement, as well as an instructional focus and commitment to achievement and high expectations that are shared by students, parents, teachers, and administrators (Berman et al, 1995; Corallo & McDonald, 2002; Fullan & Stiegelbauer, 1991; Gándara, 1995; Levine & Lezotte, 1995; Marzano, 2003; Montecel & Cortez, 2002; Reyes et al, 1999; Slavin & Calderón, 2001; Teddle & Reynolds, 2000; U.S. Department of Education, 1998; WestEd, 2000). The importance of these shared values is reinforced in studies of mainstream schools (e.g., Levine & Lezotte, 1995; Marzano, 2003), low-performing schools (Corallo & McDonald, 2002; Reyes et al, 1999), and dual language and other bilingual programs serving ELL students (e.g., Berman et al, 1995; Montecel & Cortez, 2002; Slavin & Calderon, 2001).

Further, in dual language programs, the need for a clear commitment to a vision and goals focused on bilingualism, biliteracy, and multicultural competence has been demonstrated in studies and advocated by dual language education teachers and administrators (Berman et al, 1995; Lindholm, 1990; Lindholm-Leary, 2001; Montecel & Cortez, 2002). Research on effective schools has also shown that successful outcomes result from a program model that is grounded in sound theory and best practices associated with an enriched — not remedial — instructional models (e.g., Darling-Hammond, 2000; Levine & Lezotte, 1995; Montecel & Cortez, 2002). Ramirez (1992) and Willig (1985) reported that the better the implementation of the dual language education model, the stronger the results favoring primary language instruction over English-only instruction. Tellez (1998) found that ELL students who participated in a hodgepodge of different programs received the lowest outcomes of all. Thus, a consistent sustained program of dual language education is important.

Ensuring Equity and a Positive School Environment

Research on effective schools has consistently pointed out that students are more successful when they are engaged in a positive school environment (Battistich, Solomon, Watson &

Schaps, 1997; Darling-Hammond, 1995; Gándara, 1995; Levine & Lezotte, 1995; Marzano, 2003; Reyes et al, 1999) – that is, one that is orderly and safe, has a warm and caring community, and facilitates learning. Research shows that students and teachers benefit when the school (and classroom) is a caring community, particularly in schools with a large number of low-income, ethnic-minority, or ELL students (Battistich et al, 1997).

An environment that facilitates learning requires equity among all groups (Darling-Hammond, 1995; Levine & Lezotte, 1995). Equity--which means the treatment of all participants with justice, fairness and lack of prejudice--must be incorporated at several different levels: the district, school, and classroom levels, and with respect to the treatment of students, families and teachers. Establishing a vision of bilingualism and multicultural competence requires a clear understanding of and equitable treatment directed toward the needs of culturally and linguistically diverse students, as well as integrating multicultural themes into instruction (Lindholm, 1990; Lindholm-Leary, 2001; Molina, 2000). While important in other schools, equity is crucial in the dual language program model with its emphasis on integrating students of different ethnic, language, and social class backgrounds. Thus, effective schools have faculty who share the commitment to "breaking down institutional and community barriers to equality" (Stedman, 1987, p. 219); they demonstrate awareness of the diverse needs of ELL students, have staff trained in multicultural understanding, use multiethnic materials and curriculum, integrate students' cultural values into the classroom, and non-English languages are celebrated and encouraged. In addition, the shared belief that "all children can learn" is a central operating principle, which empowers especially ELL students (Garcia, 1988, 1991; Lucas et al, 1990; Tikunoff, 1983).

This vision of bilingualism and multiculturalism for a dual language program necessitates the concept of *additive bilingualism* – that all students are provided the opportunity to acquire a second language at no cost to their home language (Cloud et al, 2000). Additive bilingual programs are associated with content area achievement and proficiency in the second language and the home language (Lindholm-Leary, 2001; Ramirez, 1992; Thomas & Collier, 2002), and improved self-esteem and cross-cultural attitudes (Cazabon et al, 1998; Kirk Senesac, 2002; Lindholm, 1994; Lindholm-Leary, 2001; Lindholm-Leary & Borsato, 2001; Lindholm-Leary & Borsato, in press). Conversely, subtractive bilingual contexts – meaning that a second language replaces the native language -- have negative effects on the school performance of many ELL students. That is, research shows that native language loss is associated with lower levels of second language attainment, scholastic underachievement, and psychosocial disorders (Hernandez-Chavez, 1984; Lambert, 1984). Thus, there are more positive outcomes for ELL students associated with developing both the home language and the second language simultaneously (see Lindholm-Leary & Borsato, in press). Successful language development programs not only prevent the negative consequences of subtractive bilingualism, but also effectively promote the beneficial aspects of additive bilingualism.

In many schools, research shows that a social class gap exists, with the native English speakers coming from middle class and educated families, and the ELL students coming from working class and undereducated (by U.S. standards) families (Lindholm-Leary, 2001). These differences, if they exist, must be acknowledged and addressed to ensure equal educational opportunities in the classroom for students. These differences must also be recognized and addressed in the professional development, parent training, assessment, and interpretations of the evaluation results (Corallo & McDonald, 2002; Lindholm-Leary, 2001).

Effective Leadership

Most studies that have looked at the issue of leadership have demonstrated that successful schools have effective leadership (e.g., Berman, Minicucci, McLaughlin, Nelson & Woodworth, 1995; Castellano et al, 2002; Levine & Lezotte, 1995; Reyes et al, 1999; Tikunoff, 1980). As Castellano et al (2002) point out in a study of whole-school reforms: "Strong principals and other leaders did not and possibly cannot force change; but they have been critical in setting an agenda and the tone for change" (p. 36). This point was reiterated in a review of research on the principal's role in creating inclusive schools for diverse students (Riehl, 2000), in the focus group discussion, and by Clark et al (2002):

> Before Mrs. Lozano came to our school we had several leaders who made it very obvious that they were not interested in the bilingual program. We didn't have support … We lacked a lot of things in comparison to the monolingual classrooms. Our students didn't have the materials that they needed. We [teachers] had to scrounge for things. We had to buy a lot of our own materials, out of pocket … Even in reference to dictionaries, our dictionaries would date back to 1964, and this was 1992 (p. 7).

The principal must be the main advocate for the program, providing guidance for an equitable program (Riehl, 2000) that is of high quality and has school-wide support. However, the principal may be too busy with the needs of the whole school to provide the necessary instructional leadership for the language education program. If the principal cannot fulfill a prominent role for a program, the responsibility may come from a vice principal, program coordinator, resource teacher, or a management team composed of teachers. In fact, it is probably most advantageous to have a team with a designated leader coordinate the program, rather than one person. As Castellano et al (2002) point out, effective principals are usually "strong leaders and agents of change," and thus are often lured away by new challenges. Or, some particularly effective principals are moved to a new post by a district administration. If a program relies on one person for leadership, even the most successful program can collapse if that leader is drawn away.

There are various titles for a program's support person or group, but the responsibilities are quite similar, regardless of the job title. At least three major tasks are required for program leaders: they must act as program advocate and liaison; supervisor of model development, planning and coordination; and facilitator of staff cohesion, collegiality, and development.

To carry out these responsibilities, it is important that this individual or group has extensive knowledge of the language education model being implemented at the site, second language development, bilingual and immersion education theory and research, instructional methodologies, effective classroom practices, and the belief that the selected language education model can work.

An effective leader serves the critical role of spokesperson for the program with the local school administration, the local Board of Education, the parents and the community. In addition, an effective leader is in charge of developing, planning, implementing, and evaluating the model at the school site. This role necessitates a clear understanding of the theory underlying the model in order to make appropriate instructional decisions when implementation questions arise. Once the instructional model is developed and implemented, it is important that leadership continues in the capacity of model development, as research shows that a higher level of planning and coordination across grades is almost always a feature of more successful programs (Levine & Lezotte, 1995; Met & Lorenz, 1997). A key factor in planning any major reform in the curriculum and school structure involves the leadership's ability to acquire the necessary financial and instructional resources for the program (Castellano et al, 2002).

Effective leaders assure that there is a high degree of faculty cohesion, collaboration, and collegiality (Castellano et al, 2002; Darling-Hammond, 2000; Marzano, 2003; Montecel & Cortez, 2002; Reyes et al, 1999; Troike, 1986). This means that in schools with a dual language education strand and one or more other strands, all teachers and staff are engaged in promoting achievement for all students, and thus, teachers are integrated for school-wide planning and coordination, and the non-dual language education teachers are supportive of and knowledgeable about the dual language education program. In addition, effective leadership oversees staff training (Levine & Lezotte, 1995; Montecel & Cortez, 2002; Reyes et al, 1999; Tikunoff, 1986); the leader does not simply send teachers off to various unrelated in-service training courses, but focuses training on the topics most necessary for ensuring the success of the teachers and students in the program. The leader also ensures that the training is strongly aligned with the goals and strategies of the program (Corallo & McDonald, 2002; Elmore, 2000) (see sections on Curriculum and Instructional Practices).

Ongoing, Continuous Program Planning

The amount of planning within and across grade levels varies by school site, but a higher level of planning and articulation is associated with more successful programs (Corallo & McDonald, 2002; Education Trust, 1999; Levine & Lezotte, 1995; Met & Lorenz, 1997; Montecel & Cortez, 2002; U.S. Department of Education, 1998). Strong planning processes should be in place that focus on meeting the goals of the program (in dual language, this means promoting the students' bilingualism, biliteracy, and multicultural competence) as well as improving all students' achievement (Corallo & McDonald, 2002; Darling-

Hammond, 2000; Levine & Lezotte, 1995). While programs need to be flexible in understanding how the model can be adapted to their community and students, decisions about modifications should be based on student outcomes, research, and best practices. That is, there should be a clear rationale for modifications, rather than dabbling with whatever new and unproven curricular or instructional approach bandwagon emerges.

Program articulation should be both vertical across grade levels and horizontal within grade levels and should include proper scope, sequence, and alignment with developmentally appropriate practices and language proficiency levels in both languages (Montecel & Cortez, 2002). If the dual language program is a strand within the school, then the program planning should be schoolwide and not only include the dual language program teachers (Berman et al, 1995). As Castellano et al (2002) point out with remarks concerning school-wide reform, if teachers do not engage in joint curriculum development and planning, then "curriculum integration is more piecemeal and dependent on individual teacher initiative" (p. 35).

Special Considerations in Program Development and Refinement

- **A needs assessment:**
- **Read research and reviews of literature on effective dual language education models**
- **Include teachers and parents in selection and design of the program**
- **Sustained instruction through non-English**
- **Duration of at least 6 years**
- **At least 50% non-English language throughout**
- **Literacy instruction should provide strong instruction in non-English language to promote biliteracy**
- **Should have balanced numbers of native English speakers and English learners**
- **Research shows African American students do well**
- **Students with special needs do well**

Considerations for Developing or Refining a Dual Language Program

The selection of an appropriate model design for a dual language program should include a needs assessment to provide a solid basis for informed decision-making about program development and instructional issues (Corallo & McDonald, 2002; Kotter, 1990) that support successful student outcomes. Once the data from the needs assessment are analyzed and interpreted, a realistic plan can be developed (Corallo & McDonald, 2002; Chrispeels et al, 1999). Montecel and Cortez (2002) found that in successful bilingual programs, teachers and parents participated in the selection and design of a bilingual program that was consistent with the characteristics of the ELL student population.

The needs assessment process should include systematic reviews of literature on effective dual language education models, to build a knowledge base of theory and various models, and to establish a rationale for decisions about a model and other program choices that need to be made.

Research to date shows that the duration of the program is a significant factor. It is important to point out, however, that this research does not include evaluations of dual language programs that have followed the principles recommended here—i.e., programs that were standards-based or that systematically integrated language and content instruction for the duration of the students' participation. Current research suggests that dual language programs lead to higher student outcomes when they are provided to the participating students for a period of at least 6 years. This is the average amount of time required to reach native-like proficiency and grade-level achievement, as confirmed by a number of evaluation studies on immersion and bilingual programs (Collier, 1989; Cummins, 1981; Saunders, in press; Swain, 1984; Troike, 1978; Lindholm-Leary & Borsato, in press). In its review of foreign language programs, the National Commission on Excellence in Education (1983) concluded that achieving academic proficiency ordinarily demands from 4 to 6 years of study. A study of 1.3 million ELL students in California showed that after seven years of instruction (grade 6), only half of students had been reclassified from English Learner to English Proficient (Hill, 2004).

In a review of the research on bilingual education, Lindholm-Leary and Borsato (in press) reported that the most successful outcomes in English achievement, as measured by norm-referenced standardized tests, occurred among students who received primary language instructional support over a longer period of time; that is, the longer the ELLs had participated in bilingual education instruction, the more positive were the results in English when compared to matched groups who were in English mainstream programs (Collier, 1992; Curiel et al, 1986; Ramirez, 1992; Thomas & Collier, 2002).

The research consistently demonstrates the advantage of some form of a dual language education program that is sustained and consistent (e.g., August & Hakuta, 1997; Cazabon et al, 1993; Christian et al, 1997; Christian & Genesee, 2001; de Jong, 2002; Howard, Christian & Genesee, 2003; Howard, Sugarman & Christian, 2003; Kirk Senesac, 2002; Lambert & Cazabon, 1994; Lindholm-Leary, 2001; Lindholm-Leary & Borsato, 2001, in press; Ramirez, Yuen & Ramey, 1991; Ramirez, 1992; Thomas & Collier, 2002; Willig, 1985). For example, in a review of the peer-reviewed empirical research on effective programs for EL students by Lindholm-Leary and Borsato (2003), the studies converged on the conclusion that educational success is positively influenced through sustained instruction through the ELL student's primary language. In both the descriptive and comparative program evaluation studies, almost all results showed that by the end of elementary school and into middle and high school, the educational outcomes of bilingually-educated students (in late exit programs, dual language programs) were at least comparable to, and usually higher than, their comparison peers who did not participate in bilingual education. There was no study that included middle school or high school students and found that bilingually-educated students were less successful than comparison students. In addition, most long-term studies reported that the longer the students stayed in the program, the more positive the outcomes. These results were true whether the outcomes included reading achievement, mathematics achievement, GPA, attendance, school completion, or attitudes toward school and self.

In designing the model, another consideration is the ratio of the English language to the non-English language used in instruction. There are only three investigations, summarized below, that assess whether the amount of primary language instruction is a significant factor in promoting achievement for ELLs. These studies have compared student outcomes from different variations of the same program model (late exit schools with more/less Spanish in the later grades; 90:10 vs. 50:50 dual language immersion programs). It is important to note that these studies were not designed to specifically examine this issue; thus, the comparison may yield results that are influenced by many factors other than the amount of primary language instruction. However, the results are still helpful as they present evidence that is contrary or consistent with results presented in the other parts of this program factors section.

The first of these three studies, reported by Ramirez (1992), compared late-exit programs to determine whether outcomes were better for programs that used more Spanish or more English in the later grades. Results showed that students with the most use of Spanish and those in the school with the most use of English ended sixth grade with comparable levels of skills in English language and reading. However, in mathematics achievement, though the students' scores were comparable in Grade 1, by Grade 6 students in the two late-exit schools that used more Spanish had higher levels of growth than students who had higher levels of English instruction. There was a difference in growth with respect to catching up to the

norming group according to the amount of Spanish in the curriculum. At the late-exit school that abruptly moved into English (more similar to early exit), the students showed a marked decline in their growth in mathematics skills over time relative to the norming population; these students appear to have lost ground relative to the norming population. In contrast, in the late-exit program (particularly in the implementation that was most faithful to the late-exit instructional model), the growth curves for students from first grade to third grade and from third grade to sixth grade showed "continued acceleration in the rate of growth, which is as fast or faster than the norming population. That is, late-exit students appear to be gaining on students in the general population" (p. 25).

In a follow-up to Ramirez's study, Collier (1992) conducted a synthesis of studies that assessed the academic achievement of ELLs over a period of four or more years for early-exit, late-exit and two-way programs. Collier concluded that students who received higher amounts of primary language instructional support achieved superior levels on achievement tests in English compared to matched groups who were in English mainstream programs.

In two studies of two-way programs, Christian et al (1997) and Lindholm-Leary (2001) compared the achievement of students in 90:10 vs. 50:50 two-way immersion programs (in a 90:10 model, 90% of instruction in the primary grades is in the minority language, and 10% is English, with a gradual increase in English to 50% in the upper elementary grades. In a 50:50 model, instruction in the majority language and the minority language is divided evenly at all grade levels). Lindholm-Leary's (2001) results showed that students in 90:10 programs were more likely to be fully proficient bilinguals, and they scored similarly in English reading and mathematics achievement compared to students in 50:50 programs. Christian et al (1997) reported that the student outcomes of 90:10 and 50:50 programs did not differ substantially with respect to language proficiency or academic achievement in English or Spanish, although the results were not disaggregated by students' language background — which might have impacted the outcome.

Although there is no research to date to determine the best ratio of English to the non-English language that will promote bilingual proficiency and grade level achievement in dual language programs, we can draw on expert recommendations and on research we discussed above (see pages 43-44). These sources agree that students need significant exposure to the non-English language to promote high levels of proficiency and achievement in that language. We define significant exposure as half of the students' instructional day, a percentage which is neither refuted nor specifically supported by research, but is agreed upon by experts. With respect to the amount of English that is necessary to promote bilingualism and achievement, again, based on program evaluations of effective programs and on opinions of experts in dual language education, students need at least 10% but no more than 50% of their instructional day devoted to English. However, for programs that offer students 10% of their instructional day in English, there must be incremental increases over the students' elementary school years to a 50% level in English to allow for the effective integration of language and content.

In developing a dual language program, another issue to consider is related to literacy instruction in the two languages: Should children be taught literacy in their native language first, and then have the second language added later? Can children be taught literacy simultaneously in two languages, or will they be confused? These are not questions that have received much empirical attention. However, there is considerable evaluation research and experience to draw on concerning this issue. (See Calderón & Minaya-Rowe, 2002 and Cloud et al, 2000, for a discussion of these issues and helpful implementation guidelines).

Research demonstrates that the less socially prestigious and powerful language in a society is the one most subject to language loss (Pease-Alvarez, 1993; Portes & Hao, 1998; Veltman, 1988). To promote the prestige of the non-English language and counteract the dominant status of the mainstream society's language, the non-English language must receive more focus in the early stages of an immersion program. For 90:10 dual language education programs in which students are receiving almost all of their instruction through the non-English language, it is important that literacy begin in that language for all students. This recommendation is based on two bodies of research. The first is the bilingual education literature, which shows that students who receive considerable native language literacy instruction eventually score much higher on literacy tests in English -- and in their native language -- than students who have been provided literacy instruction largely or entirely in English (Ramirez et al, 1991; Willig, 1985; for a literature review on the empirical research in this area, see Lindholm-Leary & Borsato, in press). Furthermore, some ELL students do exceptionally well in English because their parents can provide the necessary literacy-related experiences in the home. Such assistance may not be available for other ELL students. For these students, research suggests that they should first receive literacy instruction in their native language (Cloud et al, 2000; Escamilla, 2000; Goldenberg, 2000; Howard, Sugarman & Christian, 2003; Lindholm-Leary, 2001).

The second body of literature, from Canada and the United States, focuses on the language majority students and shows that teaching literacy through the second language does not place language majority students at risk in their development of the two languages. By third or fourth grade they usually score at least as high as native English speakers from monolingual classrooms on standardized tests of reading achievement (Genesee, 1987; Lambert, Genesee, Holobow & Chartrand, 1993; Lindholm-Leary, 2001; Lindholm-Leary & Molina, 2000). These results hold true for low- and middle-income African American students in French immersion, and in Spanish and Korean dual language immersion programs (Holobow, Genesee & Lambert, 1991; Lindholm-Leary, 2001). Thus, the literature on bilingual and immersion education programs clearly supports early literacy instruction through the non-English language (Cloud et al, 2000).

There is another very important reason for promoting literacy in the non-English language from the beginning. Experts in dual language programs note that dual language students will often read for pleasure in the non-English language in first and second grade, but that

once they are able to read in English, they tend to read for pleasure primarily in English. One reason may be that English is the societal and prestigious language; thus, there is considerably more literature to choose from in English (Lambson, 2002). The lack of available literature in the non-English language becomes more pronounced as the children move into the higher grades (grades 5-12). If children do not begin reading in the non-English language until second or third grade, after they have begun reading in English, they may never choose to read for pleasure in the non-English language.

In studies of two-way immersion students in 50:50 and 90:10 middle school programs, Lindholm-Leary and Ferrante (2003) found that in the 50:50 program, while the majority of students said they read "well" in Spanish (69% of students) and write "well" in Spanish (75% of students) for students at their grade level, only 35% said they love or like to read for pleasure in Spanish, and 65% said they don't like or hate to read for pleasure in Spanish. In the same study, 77% of the students said they love or like to read for pleasure in English, though 21% said they don't like or hate to read in English for pleasure. In contrast, in the 90:10 program, a similar percentage of students as in the 50:50 program say that they like or love to read for pleasure in English (75%), but unlike the 50:50 students, 73% of students also say they love or like to read for pleasure in Spanish. Further, the performance of the 90:10 students on the Spanish and English reading achievement tests was associated with their attitudes toward reading for pleasure in the two languages. If students do not like to read for pleasure in the non-English language, it will clearly impede any efforts to develop high levels of literacy in the non-English language.

Unfortunately, there is little research involving two-way education programs that are 50:50 and teach literacy in both languages compared to 90:10 programs that provide reading instruction in the non-English language for all students. Lindholm-Leary (2004a) examined the reading achievement outcomes of grade 5 and grade 7 ELL students in three types of dual language programs: 90:10, 50:50 successive literacy (taught reading first in L1, then added on reading in L2), and 50:50 simultaneous literacy (taught reading in both languages from kindergarten). In each program, there was standards-based literacy instruction in both languages, considerable program planning and professional development focused on reading/language arts. Results showed that by grade 5, ELL students from similar SES backgrounds scored equivalently, regardless of program type on norm-referenced standardized achievement tests in reading assessed in English, and by grade 7, students from the different models score similarly and at grade level in reading achievement assessed in English. Reading achievement in Spanish, though, was higher in the 90:10 than either 50:50 program.

Only one other study described three different programs and their varying approaches to literacy instruction (Christian, Montone, Lindholm & Carranza, 1997). However, because relevant comparable assessment results between 50:50 and 90:10 models at the three sites were not available, it could not be determined whether particular approaches to literacy resulted in better outcomes than others. Christian et al (1997) concluded that: "These

variations in program models reflect both differences in community needs as well as the distinctive populations served by the schools … Understanding the population to be served is certainly an important prerequisite for a site in determining which model may be most effective at a particular school site" (p. 116).

Little research has been conducted to determine the best classroom composition for bilingual education programs in general or dual language programs in particular. To maintain an environment of educational and linguistic equity in the classroom and to promote interactions between native and nonnative English speakers, the most desirable ratio is 50% English speakers to 50% non-English language speakers. To ensure that there are enough language models of each language to promote interactions between the two groups of students, there should be no more than two speakers of one language to one speaker of the other language.

The populations represented in the dual language education model vary considerably by school site. Many times the English-speaking and non-English language populations are not comparable in important ways — briefly described below — and these differences must be addressed in the program structure, program planning, curriculum, instruction, assessment, professional development, and home-school collaborations.

In programs in which the non-English languages include, for example, Korean or Chinese, there is often diversity with respect to immigration status and socioeconomic status (U.S. Census Bureau, 2000). However, ELL students in these language groups (particularly Chinese, Korean, and Japanese) are more likely to be middle class and to come from homes with educated parents (Lindholm-Leary, 2003, 2004b). As a group, Spanish-speaking children in dual language programs in the Southwest can be characterized as largely immigrant and with parents who are working class and have 5-6 years of formal education (Lindholm-Leary, 2001; Lindholm-Leary & Borsato, 2001; Lindholm-Leary & Ferrante, 2003). It is important to note that there is variation within this group as well. Some Spanish-speaking students are U.S.-born or have parents who are highly educated and middle class, while others live in poverty conditions. Some of these students' parents are very involved in their children's education and understand how to promote achievement in their children; other parents are not involved for various reasons or have no formal education that would enable them to help their children with their schoolwork (Lindholm-Leary, 2001).

The English-speaking population, like the Spanish-speaking population, is also diverse in social class and parental education, as well as in ethnic composition. In some schools, the English speaking population includes middle and working class European Americans, African Americans, Hispanics, and Asian Americans. In other schools, most of the English speakers are middle class and European-American. In still other schools, the majority of English speakers are African American or Hispanic students living in the inner city.

Some educators have questioned whether low-income African American students should participate in dual language education programs, because of the achievement gap that often exists between this group and European Americans. While there is little research on the literacy and achievement of African American children in immersion programs, there is some research to indicate that these children are not negatively affected, and may, in fact realize positive outcomes in their achievement and attitudes (Holobow, Genesee & Lambert, 1991; Lindholm, 1994; Lindholm-Leary, 2001).

Consistent with immersion education (Genesee, 1987), students with special education needs or learning disabilities are typically accepted in dual language programs (Cloud et al, 2000; Lindholm-Leary, 2001). The only caveat is the scenario in which students have a serious speech delay in their native language; in these cases, the decision for admittance is carefully conducted on an individual basis. Further, according to the Panel of Experts, students are typically not moved from the dual language program because of special education or learning disability needs.

Effective Features: Family and Community Involvement

The program:

- ***Incorporates a variety of home/school collaboration activities***
- ***Maintains a welcoming environment for parents and community***
- ***Values bilingualism and biliteracy***
- ***Hires office staff who speak non-English language***
- ***Makes announcements are in both languages***
- ***Posts signs are in both languages***
- ***Values multiculturalism***
- ***Fosters a sense of belonging***
- ***Establishes parent liaisons who***
  - ***Are bilingual and reach out to parents and community in both languages,***
  - ***Arrange parent training to assume advocacy and support for dual language, program,***
  - ***Know dual language education theory and model, and***
  - ***Contribute to other parent topics as determined by needs assessment.***

Another important feature of effective programs is the incorporation of parent and community involvement and collaboration with the school (Berman et al, 1995; Marzano, 2003; Reyes et al, 1999). When parents are involved, they often develop a sense of efficacy that communicates itself to children with positive academic consequences — especially in the case of language minority children (Cloud et al, 2000; Met & Lorenz, 1997; Tizard, Schofield, & Hewison, 1982). In fact, most parents of ethnically and linguistically diverse students have high aspirations for their children and want to be involved in promoting their academic success (Julian, McKenry & McKelvey, 1994; Lindholm-Leary, 2001; Stevenson, Chen & Uttal, 1990; Wong Fillmore, 1985). Activities such as reading and listening to children read are both feasible and practical, and contribute to improved scholastic achievement (Bus, van Ijzendoorn, & Pellegrini, 1995; Goldenberg, 2000). Effective programs tend to incorporate a variety of home/school collaboration activities. The general outcomes on the part of students are heightened interest in schoolwork and improved achievement and behavior (Berman et al, 1995; Lindholm-Leary, 2001).

In two-way immersion programs, Lindholm-Leary (2001) found that parents perceived medium levels of support from the district. Parents with lower levels of education and with children at school sites that enrolled mostly ethnic minority and low socio-economic level students perceived lower levels of district support, but gave school staff higher marks for promoting diversity than parents at more middle class sites and parents with a college-level education. This lower level of district support is consistent with literature reporting that

low-income parents and minority parents feel alienation, distrust and discrimination from school personnel (Hidalgo et al, 1995; Kozol, 1995). Thus, effective programs make the school environment a welcoming and warm one for parents of all language and cultural groups, where bilingualism is valued and there is a sense of belonging for students and their families (Berman et al, 1995; Reyes et al, 1999). Parents of all ethno-linguistic groups are treated equitably, and, in two-way programs, English-speaking parents do not dominate the advisory committees to the exclusion of the non-English-speaking parents (Lindholm-Leary & Molina, 2000). In addition, according to the Panel of Experts, when parents come to the school, they must see a reflection of the vision and goals associated with bilingualism and biliteracy — for example, signs are in both languages and front office staff members are bilingual.

As the Panel of Experts pointed out, one way of providing a warm and welcoming environment is to provide a parent liaison who speaks the languages of the program and understands the needs of the parents in the community. A parent liaison plans for parent education based on the parents' needs (e.g., to help their students with homework) and the model, so that they can become advocates for the program and school.

Support

Support is important to schools in any community. The support a school receives influences its funding, materials, teacher training, program model, planning, parent involvement — and thus ultimately student achievement. For dual language and other language education programs, research has shown that administrative support includes strong support for the program by the school district and the local Board of Education (Troike, 1986). State and local policies can support or hinder implementation interventions (Fullan & Stiegelbauer, 1991). This support is demonstrated in the structural and functional integration of the program within the total school system, the vision that the program is not temporary — even if there is only temporary funding from an outside source (business or government) — and equitable allocation of resources for training of staff and for purchase and development of materials in each language (Montecel & Cortez, 2002; Troike, 1986).

When the community and administrative attitudes toward bilingualism and language minority students are negative, then it is unlikely that language education programs will be implemented unless laws require it. If language education programs are developed only because they are required, the programs may receive fewer resources, untrained and inexperienced teachers, and the expectation for success may be minimal. This configuration of factors will tend to result in lower levels of academic achievement and language proficiency on the part of program participants (Troike, 1986; Willig, 1985).

In schools with successful programs, the district administration does not regard bilingual education as remedial or as merely a temporary program, but rather makes a commitment to providing an equal education for ELL students even beyond any external funding and ensures that the program is an integral part of the basic program in the school system (Troike, 1986).

At the school site level, a supportive principal assures that the language education program is integrated within the total school, that all teachers and staff understand the language education program, and that appropriate and an equitable amount of financial and instructional resources are allocated to the program to meet the content standards, vision, and goals (Levine & Lezotte, 1995; Troike, 1986). In addition, the principal understands the language education model, truly supports the vision and goals and the program's implementation at the school site, and understands the program well enough to explain it to others. The principal also devotes attention and resources to promoting acceptance of the program within the central administration, the community, among other school staff, and the parents. As a part of this support, the principal can explain that successful results require patience and can show how school results compare with findings obtained in other studies (and if they are not as good, what the school is doing to improve their results). In effective schools, the principal shows support, respect, and concern for the teachers (Darling-Hammond, 2000; Levine & Lezotte, 1995; Reyes et al, 1999). That is, the principal promotes acceptance of the bilingual program staff as part of the regular staff by insisting

on comparable standards of certification and competence and by facilitating interaction among the staff. Finally, there is a serious effort to obtain high quality materials in the non-English language for the students. Resources are allocated for the purchase and development of appropriate instructional, resource, and library materials that support the vision and goals of the program.

Supportive families and communities also provide additional buoyancy to the program in good times and critical advocacy that may keep the program functioning in bad times when the state or district may want to shut it down (Lindholm-Leary, 2001). They may also help in fundraising to provide additional support for the program. In order to provide advocacy, as mentioned in the Family and Community Involvement section, there must be training so that parents and the community are knowledgeable about the program and can assume leadership on its behalf.

Conclusions

In summary, a variety of features related to assessment and accountability, curriculum, instructional practices, staff quality and professional development, program structure, family and community involvement, and resources/support are associated with effective language education programs. These factors serve as a framework for effective language education programs, regardless of the type of language education program or its location. Not all features will necessarily be appropriate in the same way for all programs, particularly for language education programs serving more homogeneous student populations. However, the results clearly show that a successful program requires careful consideration of many effective features to attain success. Understanding these features can help young programs mature and more experienced programs develop into a program that promotes more successful outcomes in students.

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