Perspectives on Assessment of DLLs Development & Learning, Prek-Third Grade[1]

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The accurate and valid assessment of young DLLs' development and achievement is essential to individualizing instruction and improving the quality of education they receive (Espinosa 2008; Espinosa and Garcia 2012). Individualized instruction enhances the learning opportunities of young children and promotes the important developmental and achievement outcomes necessary for school success. Individualized instruction, however, can be accomplished only through comprehensive, ongoing assessments that are fair, technically adequate, and developmentally valid so that we can determine if children are making progress toward the intended outcomes (Snow and Van Hemmel 2008). That is, individual child assessments must be linguistically, culturally, and developmentally appropriate in order to know how children are progressing and what educational decisions need to be made.

The chronic academic underachievement of the DLL population across the nation, (Galindo 2010) and their lower school readiness scores in mathematics and literacy at kindergarten entry (Cannon and Karoly 2007; Lee and Burkham 2002) clearly reveal the need for more effective assessment approaches that are linked to improved instruction for young DLLs. This paper is organized around the following questions:

1. What are the important linguistic, cultural, and background factors to consider in the assessment of young DLLs?

2. What are the most appropriate methods for assessing young DLLs for certain purposes (e.g., instructional improvement and developmental screening)?

3. What technical considerations are required for testing DLLs?

4. What do teachers need to know about the valid assessment of young DLLs?

Need for Linguistically and Culturally Appropriate Individualized Assessments

To accurately assess young DLLs, one must consider the unique aspects of linguistic and cognitive development associated with acquiring two languages during early childhood, as well as the social and cultural contexts that influence overall development. Decades of research have clearly shown that all children are capable of successfully learning and benefiting from two languages during the early childhood years (Bialystok 2009; Bialystock and Feng 2010; Garcia 2005; Paradis, Genesee, and Crago 2011). Nevertheless, important individual and contextual differences may affect the development of essential skills that are necessary for school performance. For example,

[1] Portions of this paper are adaptations of Espinosa & Gutiérrez-Clellen, 2013.

within the context of the United States, young DLLs are much more likely to have parents without a high school education, to live in low-income families, and to be raised in cultural contexts that may not reflect majority culture norms, compared with monolingual children (Capps et al. 2005; Castro, et al., 2014; Espinosa 2007; Hernandez 2006).

Poverty is one of the characteristics most strongly associated with DLLs' lower performance on many common assessment measures (Duncan and Magnuson, 2005). Analysis of the nationally representative Early Childhood Longitudinal Study–Kindergarten Cohort (ECLS-K) data set reveals that young Latino DLLs at school entry are more likely to live in low-income homes (Espinosa, Laffey, and Whittaker 2006), with both parents, and have a mother who is less likely to work outside the home than their European American or African American peers (Crosnoe, 2005). In addition, young DLLs from homes where an Asian or European language is spoken are less likely to experience poverty and low levels of academic achievement than young Latino, Spanish-speaking DLLs (Espinosa, et al., 2006). Low-income Latino children in the ECLS-K sample scored more than half a standard deviation below the national average in math and reading achievement at kindergarten entry (Lee and Burkham 2002). In addition, this analysis of the ECLS-K data set by language type revealed that when compared as a group, the DLLs scored below their native English-speaking peers on school-age math and reading assessments. However, when DLLs are compared by language background, the findings are more nuanced:

In general . . . children from European and Asian speaking homes do as well or better than their English-speaking counterparts. Children from Spanish-speaking homes are behind all other language groups. (Espinosa, Laffey, and Whittaker 2006, 52).

The Spanish-speaking children who had basic English proficiency (i.e., passed the Oral Language Development Screener) and were not in the lowest socioeconomic status (SES) quintiles demonstrated achievement at rates that were comparable with their monolingual English-speaking peers. It is important for ECE administrators, staff, and teachers to understand the impact of these factors on the academic readiness of young DLLs and, ultimately, their achievement during the school years. By doing so, educators can determine how to design the most appropriate and effective interactions, instruction, and assessment of DLLs.

One of the reasons Latino DLLs are the most likely to experience academic delays compared with other minority children of similar socioeconomic characteristics (National Center for Education Statistics, 2007) is that their language needs are not sufficiently addressed during the early school years. Latino DLLs frequently do not exhibit age-appropriate vocabulary or academic readiness in either their home language (Spanish) or English when they enter kindergarten (St. Pierre et al. 2001; U.S. Department of Health and Human Services et al. 2001, U.S. Department of Health and Human Services et al. 2003), and their unmet language needs are one of the primary causes of reading and academic delays during the school years (Carlo et al. 2004; Storch and Whitehurst 2002). As with native speakers of English, certain early literacy skills, such as decoding in addition to oral language skills, have been shown to be important for reading comprehension with DLL populations (Espinosa and Zepeda 2009; Kieffer 2008;

Mancilla and Lesaux 2010). Although decoding skills appear to develop at appropriate rates when DLLs receive high-quality instruction, their reading comprehension abilities are far below age and grade expectations beginning in first and second grade and persisting through high school. In fact, in some studies, low-income DLLs' knowledge of vocabulary has been shown to be two standard deviations below the national norm in preschool and at kindergarten entry (Hammer et al. 2009; Páez, Tabors, and López 2007). With targeted instructional support, DLLs appear to develop the prerequisite decoding skills during the early childhood years, but not the linguistic capacity to understand the text they are decoding. Thus, both SES and the child's level of language development need to be considered in any evaluation of his or her academic readiness and performance.

In addition to factors such as poverty, parents' educational level, and related SES variables, a child's performance may vary due to differences in home language experiences (Hammer, Scarpino, and Davison, 2011), the timing and reasons for family immigration (Portes and Rumbaut, 2005), the age of first exposure to English (Hammer, Scarpino, and Davison, 2011), as well as differences in cultural beliefs and child socialization practices across families (Castro et al., 2014; Laosa 2006). To individualize instruction, school administrators and teachers must consider the impact of these factors and then carefully determine how to best promote language and academic competencies within the ECE curriculum. Thus, child assessments should provide sufficient information about the family and the child's language environment at home so that the specific contextual factors influencing each child's development may be carefully considered and instruction can be individualized. Child assessments should also help to identify early on which children should be referred for further evaluation, which in turn may indicate a need for intervention.

Assessing Young Dual Language Learners for Specific Purposes

A cardinal rule in the selection of assessment measures is that the purpose of the assessment must guide assessment decisions. As stated by Snow and Van Hemel in the National Research Council Report on Early Childhood Assessment, "Different purposes require different types of assessments, and the evidentiary base that supports the use of an assessment for one purpose may not be suitable for another" (Snow and Van Hemel 2008, 2). For example, assessment strategies utilized by teachers for daily instructional purposes are typically less formal than assessment strategies employed by administrators for program accountability or evaluation purposes. This approach is consistent with the *Principles and Recommendations for Early Childhood Assessments* developed by the National Education Goals Panel (Shepard, Kagan, and Wurtz 1998). Four broad purposes for early childhood assessments were established:

1. To promote learning and development of individual children;

2. To identify children with special needs and health conditions for intervention purposes;

3. To monitor trends in programs and evaluate program effectiveness;

4. To obtain benchmark data for accountability purposes at local, state, and national levels.

To date, each of the above noted purpose for assessment requires its own instruments, procedures, and technical standards and has carried its own potential for cultural and linguistic bias. Although there may be some similarities across the different types of assessment, it is nevertheless critical to understand the unique considerations and recommendations for assessing DLLs according to each of the stated purposes. Ideally, a truly comprehensive and integrated assessment system that addresses all four purposes for DLLs would employ a congruent set of measures and procedures; reflect the state's ELDS; provide a coherent profile of the functioning and progress of children, classrooms, and programs; and be adequately sensitive to capture DLLs' important developmental changes over time as well as school program effects. Currently, most assessments across the four purposes are not congruent, do not assess the same developmental constructs, and are difficult to integrate across time. For purposes 1 and 2, standardized assessment instruments that have not been validated for populations of young DLLs are frequently utilized (see Espinosa and Lopez, 2007 for a complete discussion of this issue). This paper will focus on purposes 1 and 2 noted above.

Both Languages Need to Be Assessed

Becoming proficient in a language is a complex and challenging process that takes many years for children of all ages (Hakuta, Bialystok, and Wiley, 2003). As with any type of learning, children will vary enormously in the rate at which they learn languages. The speed of language acquisition depends on factors within the child and in the child's learning environment. The child's personality, aptitude for languages, interest, and motivation interact with the quantity and quality of language inputs and opportunities for use to influence the rate and eventual fluency levels. As children acquire a second language, one language may be more dominant because they use that language more often than the other at a particular point in time. If children are assessed only in their least-proficient language, their abilities will be underestimated. Frequently, children demonstrate a *language imbalance* as they progress toward bilingualism. Depending on experiences and learning opportunities, children may not perform as well as monolingual speakers of each language in all domains. This is a normal and, most often, a temporary phase of emergent bilingualism (Paradis, Genesee, and Crago 2011).

Barry McLaughlin (1984, 1995) made a distinction between children who learn a second language *simultaneously* with the first language and those who learn one *sequentially* after learning the first language. When a child learns two languages *simultaneously* (e.g., during the first years of life), the developmental pathway is similar to how monolingual children acquire language. In contrast, the language development of children who learn a second language sequentially—that is, after the first language is established or from about two to three years of age onward—follows a different progression and is highly sensitive to the characteristics of the child as well as the language learning environment. At this point, the basics of the child's first language have been learned. Children know the structure of one language, but now must learn the specific features—grammar, vocabulary, and syntax—of a new language. According to

Tabors and Snow (1994), *sequential* second-language acquisition follows a four-stage developmental sequence for children acquiring English.

1. *Home Language Use*. When a child has become competent in one language and is introduced into a setting where everyone is speaking a different language (e.g., a young dual language learner entering an English-dominant preschool classroom), the child will frequently continue to speak his home language even when others do not understand. Parent interviews and observations should be conducted to determine the child's ability to communicate in the home language with peers and family, as well as the early language learning opportunities available to each DLL. A child who does not show age- appropriate home language skills might be at risk of a language delay and may need a referral for further evaluation.
2. *Nonverbal or Observational Period*. After young children realize that speaking their home language will not work, they frequently enter a period where they may use nonverbal means to communicate. This is a period of active language learning for the child; he is busy learning the features, sounds, and words of the new language (receptive language) but not verbally using the new language to communicate in English (productive language). Any English-only language assessments conducted during this stage of development may result in misleading information that underestimates the child's true language skills. In fact, in order to determine if the child has a language delay, the child's development in the home language must be thoroughly documented. If the child is not using verbal means in the home language, a referral for further evaluation will be needed. If the child shows age-appropriate language skills in the home language, no referral will be needed.
3. *Telegraphic and Formulaic Speech*. The child is now ready to start using the new language and does so through telegraphic speech that may involve the use of formulas. This is similar to a monolingual child who is learning simple words or phrases (content words) to express whole thoughts. For instance, using telegraphic speech a child might say, "me down," indicating he wants to go downstairs. *Formulaic speech* refers to unanalyzed chunks of words or sometimes even syllables strung together that are repetitions of what the child has heard. For example, Tabors (1997) reported that young DLLs in the preschool frequently used the phrase "Lookit" to engage others in their play. These are phrases the children had heard from others that helped to achieve their social goals, even though the children probably did not know the meaning of the two words and were only repeating familiar sounds that were functionally effective. Children performing at this stage in their acquisition of the second language *should not be assessed only in English* because their performance in that language is likely to show limited academic skills. An assessment in the home language will help determine what the child is capable of doing academically. This assessment is critical also to determine if the preschool child is able to use complete sentences to express her thoughts in that language. A preschool child who does not demonstrate these skills in either language will need a referral for further evaluation.
4. *Productive Language*. Now the child is starting to go beyond telegraphic or formulaic utterances to create her own phrases and thoughts. Initially the child may use very simple grammatical patterns such as "I wanna play," but over time, she will gain control over the structure and vocabulary of the new language. Errors in language usage are common during this period as children experiment with their new language and learn

its rules and structure. In contrast, the assessment in the home language should show that the child usually does not make errors when she produces sentences in that language. Depending on the literacy experiences at home, young DLLs may know certain words in the home language, but not in English, and as a result, they may have a smaller English vocabulary than monolingual speakers of English (Hammer, Scarpino, and Davison, 2011; Páez, Tabors, and López, 2007). For example, young DLLs may know the names of objects in the kitchen and home in Spanish but not in English. They may also know words such as *recess, chalk, line,* and *scissors* in English because these are the words they are exposed to at school. However, they never learn the same words in Spanish because there was no need or opportunity to do so in the home. In those cases, the child may appear as if he has limited vocabulary in each language. However, when the total number of words the child knows in both languages is considered together, it is often comparable to the number and range of vocabulary words that monolingual children know.

In short, a child's limited second-language skills are likely to affect performance in any ECE assessment. All young DLLs will need specific, individualized instruction that is based on their stage of English language development (ELD) and focused on vocabulary and oral language skills in order for them to make substantial academic progress. Children should be assessed in both languages because assessing a child only in English will underestimate his or her conceptual knowledge and true language abilities. A child who demonstrates difficulties in both languages should be referred for an evaluation to determine the need for services.

Code Switching/Language Mixing

Code switching (switching languages for portions of a sentence) and *language mixing* (inserting single items from one language into another) are normal aspects of second-language acquisition (Paradis, Genesee, and Crago, 2011). This phenomenon occurs in both simultaneous and sequential bilingualism. It does not mean that the child is confused or cannot separate the languages. In some cases, children mix the two languages in one communication because they lack sufficient vocabulary in the target language to fully express themselves. In other cases, in particular when children are raised in bilingual communities in which adults code-switch, children may do so because of their exposure to code switching. Research has shown that even proficient adult bilinguals mix their languages in order to convey special emphasis or establish cultural identity (Garcia, 2009). In any case, code switching, or language mixing, is a normal and natural process that teachers need not be concerned about. In fact, language mixing has been shown to be a linguistic resource that indicates growing proficiency in both languages (Paradis, Genesee, and Crago, 2011). The goal must always be on *enhancing communication,* rather than enforcing rigid rules about which language or how each language should be used by the child at a given time or under certain circumstances.

Young children who have regular and rich exposure to two languages during the early childhood years can successfully become bilingual. Most research concludes that, with sufficient language exposure and usage, there are negligible negative effects of bilingualism on the linguistic, cognitive, or social development of children. Most research

shows significant advantages in certain areas of development, particularly in executive function or cognitive control skills, and that the ECE years may be an ideal time to learn two languages (Bialystok 2001; Genesee 2003; Paradis, Genesee, and Crago 2011; Kuhl 2009).

In summary, simultaneous bilingualism follows a path similar to monolingual development, and sequential second-language acquisition occurs in a predictable series of stages or waves. In both cases, it is typical for one language to dominate or be more developed than the other at any given time, depending on the amount of exposure to and time spent communicating in each language.

Language Proficiency and Dominance The first issue facing educators who work with DLLs is to determine the proficiency in each language as well as the distribution of knowledge across the two languages. Young DLLs, whether simultaneous or sequential second-language learners, most likely will have a dominant language (Paradis, Genesee, and Crago, 2011), even though the differences may be subtle. Before educators can decide on a child's developmental status, educational progress, or the need for educational intervention, it is necessary to know the language in which the child is more proficient. Typically, the young DLL will have a larger vocabulary, or a specialized vocabulary, along with greater grammatical proficiency and mastery of the linguistic structure of one of his languages. This is the language the child has had the most exposure to, uses more fluidly, and often prefers to use (Paradis, Genesee, and Crago, 2011; Pearson, 2002).

There are no individual child assessments specifically designed to determine language dominance. Paradis, Genesee, and Crago (2011) have recommended that educators ask the parents/family members about the child's earliest language exposure to determine early language learning opportunities. Research indicates that the amount of input, frequency of use, and the parents' estimates of language ability highly relate to the level of proficiency in the language (Gutiérrez-Clellen and Kreiter, 2003).

As stated earlier, young DLLs' skills must be assessed in both their home language and English. One reason is that while a child is learning English, she may show greater initial progress in the home language and limited progress in the second language. Another reason is that research shows that when the child's achievements are examined in the home language, teachers can also make fairly accurate predictions about the child's potential for learning in the second language (Gutiérrez-Clellen, 1999; Gutiérrez-Clellen, Simon-Cereijido and Sweet, 2012). If the young DLL is able to learn age-appropriate concepts in the home language, it is probable she will be able to transfer this knowledge to English language learning. As there is much variability in the amount and quality of English exposure as well as home language development, young DLLs will show uneven progress between the two languages, depending on the language tasks. For example, a child may be proficient in one language for one task (e.g., letter naming, simple vocabulary) but not for another (e.g., listening comprehension) (Valdés and Figueroa, 1994). Another child may be able to hold a simple conversation in English but be unable to answer questions about a story or a sequence of pictures in that language (Gutiérrez-Clellen 2002). Because of this variability and the fact that knowledge is mediated by

language, it is impossible to obtain an accurate measure of progress without examining development in the two languages.

Observational Assessment for Instructional Decision Making and Improvement

Informal, indirect methods of observing young DLLs' interactions and language use can provide important information on the child's level of language development or proficiency. Research has shown that teachers can be reliable in estimating a child's level of proficiency and English use based on their observations of the child (Gutiérrez-Clellen and Kreiter, 2003). This type of assessment is often referred to as *authentic,* meaning that ongoing observations of children's behavior and use of language over time in the natural classroom environment are less contrived than standardized testing and, if aligned with curriculum goals, can be critical to instructional planning. Observations, language samples, and interviews are considered authentic methods because no specific patterns of correct responses are assumed; instead, they aim to describe a child's skills and knowledge in the context of the natural classroom environment. Observations and insights from other staff members who speak the child's home language and have contact with the child—for example, bus drivers and family or health specialists—can be collected through standardized questionnaires or family interviews (Espinosa 2006; Gutiérrez-Clellen 2006).

In addition to information from parents, staff, and teachers, language development may be assessed directly by asking children to talk about a past event or personal experience or by talking about a storybook using story retellings. These are also considered authentic assessment methods because they seek to evaluate what the child can do with language using spontaneous language samples. Through these language tasks, children can show their ability to produce and comprehend a language. Adults can model a statement about each picture (e.g., "This is John and his frog"; "One day they went to the park") and then ask the child to retell the story while looking at the pictures. Through this approach, it is possible to determine if a child has sufficient mastery of the target language to comprehend the main actions in the story and to use complete sentences to talk about it.

Observational approaches that are aligned with curriculum goals, focus on educationally significant outcomes, rely on data from multiple sources gathered over time, and include families are recommended by the leading early childhood education (ECE) professional associations to improve and individualize instruction (National Association for the Education of Young Children (NAEYC) and National Association of Early Childhood Specialists in State Departments of Education [NAECS/SDE] 2003). Frequent and ongoing assessment for instructional improvement and adjustment include observations of each child's performance, checklists, rating scales, work samples, and portfolios during everyday activities (Espinosa, 2008). In order to accurately collect data on the emerging competencies of young DLLs, assessors need to understand typical development of young children who are growing up with more than one language, their home languages, and their cultures.

In California, all state-funded child development programs are required to

administer the *Desired Results Developmental Profile–Preschool, DRDP-PS© (2010)* (California Department of Education 2010c). Teachers complete this observational child assessment twice a year to measure children's progress toward the Desired Results or learning expectations. The assessment results are then used to inform instructional planning for individual children as well as to adjust instruction for groups of children. This child assessment is part of a larger Desired Results (DR) system that includes information from parents, a measurement of the quality of the program environment (ERS), and an annual Program Self-Evaluation.

In this assessment system, the California Department of Education, Child Development Division (CDE/CDD) has provided guidance on how to assess the skills of DLLs:

The teacher who completes the assessment for a child who is a dual language learner should speak the child's home language. If not, the teacher must receive assistance from another adult, such as an assistant teacher, director, or parent, who does speak the child's home language. It is important that the program plans for time during the day when the child and adult have time to interact if the adult is not the child's parent or the assistant teacher in the child's classroom. (California Department of Education 2010c, 13)

These same measures are included in the DRDP–School Readiness (DRDP-SR©) instrument for use in transitional kindergarten and kindergarten. Further, in the guidance for the DRDP-SR© the CDE/CDD states:

For children who are dual language learners, complete both the LLD [Language and Literacy Development] and ELD [English-Language Development] measures. The ELD measures are used to document and assess progress in learning to communicate in English. The LLD measures are used to assess progress in developing foundational language and literacy skills. Children who are dual language learners may demonstrate mastery of developmental levels in their home language, in English, or in both . . . Children who are dual language learners will vary substantially in their acquisition of English language competencies, depending on factors such as the degree of exposure to English, level of support provided in their home language, and their motivation to acquire English . . . Overall, the development of language and literacy skills in a child's first language is important for the development of skills in a second language, and therefore should be considered as the foundational step toward learning English. (California Department of Education 2012b, vii)

This guidance to teachers is intended to ensure that the assessors of DLLs have the capacity to judge the child's abilities in any language, not just in English. Especially for children who are in the early stages of English acquisition, it is crucial that someone who is proficient in the children's home language determine their understanding of mathematical concepts, their social skills, and their progress in the other developmental domains. Without an assessor who is fluent in the child's home language and properly

trained to conduct the assessment, it is not possible to obtain accurate results. For example, an assessor who does not understand the language a child is using when communicating to a peer would find it difficult to determine if that child is displaying empathy for others.

Assessment for Screening and Referral of Children Who May Have Special Needs

Developmental screening is the process of early identification of children who may be at risk of cognitive, motor, language, or social–emotional delay and who require further assessment, diagnosis, and/or intervention. Currently, a large number of young Latino and other DLLs with special needs are not identified. Nationwide, the percentage of Latino preschoolers with disabilities (15 percent in 2004) is smaller than the percentage of preschoolers in the general population identified with special needs (National Center for Education Statistics 2007). This trend changes in later grades. Rueda and Windmueller (2006) reported that in California school districts with high proportions of English learners (ELs) (this term is commonly used in the K–12 grades for children who speak a language other than English at home and are not fully proficient in English) and high poverty levels, there was an overrepresentation of EL children in special education emerging by fifth grade that continued throughout the school years until grade twelve.

Service providers are also challenged to provide services to a growing number of Latino children ages birth to five years of age. About a quarter of the children in the United States from birth to age five are Latino (U.S. Census Bureau, 2009). With regard to linguistic diversity, the California Department of Education (CDE) reports that 23.2 percent of children in K–12 public schools are dual language learners (California Department of Education, 2012c). While there are no precise estimates for the size of the DLL population in preschool, the Office of Head Start reports that approximately 40 percent of the participating families are of Latino descent; 30 percent of participants were from families that primarily spoke a language other than English at home; and 25 percent were from families that primarily spoke Spanish at home (U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Office of Head Start, 2012), yet Latino children are less likely to receive services compared with those from other ethnic backgrounds (Morrier and Gallagher, 2012). Both nationally and in California, 2 percent of all Latino children ages birth to three years receive services, a smaller percentage than the percentage of infants and toddlers of all races and ethnicities nationwide (9 percent) and in California (5 percent) (U.S. Department of Education 2008). Clearly, there is a need to improve the methods used for screening young Latino DLLs who may need special services.

Typically, brief standardized developmental screenings are administered to large numbers of children to determine if there is a potential problem and if referral for more in-depth assessment is warranted. Standardized instruments are most often used for this purpose since comparisons of one child's development against other similar children is required to determine if the child is developing within normative range or may have developmental delays. As was discussed earlier, screenings should also be conducted in the two languages (Barrueco et al. 2012; NAEYC and NAECS/SDE 2009).

The use of culturally and linguistically appropriate screening tools and procedures is a challenge when screenings are conducted with young DLLs. Most standardized screening tools have not been designed or normed for young bilingual children and have serious limitations when used with young DLLs. Most teachers and assessment professionals have not been trained to conduct unbiased assessments with children from culturally and linguistically diverse backgrounds; many of them do not speak the child's native language and are not familiar with the home culture; and many teachers lack knowledge of the psychometric characteristics of tests and therefore cannot make informed judgments about the appropriateness of specific tests when their students are from linguistically diverse backgrounds (Sanchez and Brisk 2004).

Finally, assessors need to be able to distinguish between *language differences* attributable to growing up with two languages and *language delays*, which may require specialized language interventions (Espinosa and Lopez 2007). For all of these reasons, it is important for assessors to employ multiple measures and sources of information, consult with a multidisciplinary team that includes bilingual experts (e.g., speech therapists and psychologists who speak the home language), collect information over time, and include family members as informants when making any screening recommendations (Barrueco et al. 2012; Espinosa and Lopez 2007).

Response to intervention models may help differentiate children with special needs from typical learners who may underachieve due to differences in English proficiency, literacy experiences, or educational opportunity (e.g., Linan-Thompson et al., 2006). However, the efficacy of these models for distinguishing the language development of young DLLs with language disorders from young DLLs with typical language development has not been evaluated. In many cases, these children do not receive speech and language services until their performance significantly lags behind their peers. Appropriate screenings and early assessments in the two languages are critically needed to better understand how to provide differentiated instruction for these children.

Technical Requirements for Assessment Instruments Administered to Young Dual Language Learners[2]

All assessments administered to young DLLs must meet industry standards for reliability and validity as well as be linguistically and culturally appropriate for the populations of children to whom they are administered. Assessments are valid and reliable when they account for the linguistic and cultural factors related to DLLs throughout the design, administration, and interpretation processes.

Reliability includes the extent to which an assessment yields consistent information across time (test-retest reliability) and with different assessors (interrater reliability), and the degree to which scores within a given test are correlated (internal consistency). Reliability estimates help to establish confidence that an assessment is consistently and objectively measuring the same dimension of development regardless of

[2] Adapted from Espinosa & Garcia, 2013

who is conducting the assessment and when it is administered. *Validity* refers to the degree to which the assessment is actually measuring the knowledge and skills it is intended to measure. Although there are multiple forms of validity, an important dimension of validity for young DLLs is construct validity: the extent to which a given assessment captures the domain of interest. The performance of school-age young DLLs on achievement assessments administered in English is greatly influenced by their level of English proficiency (Abedi 2010). Therefore, scores of mathematical and literacy skill development may reflect the level of a child's English proficiency rather than their knowledge of numeracy, phonological awareness, basic concepts, and so on.

In addition to meeting the standards for reliability and validity, assessments must address the unique cultural and linguistic features of dual language development. Currently, there are multiple limitations to existing assessment approaches employed with DLLs; the scope of this paper does not allow a complete discussion of the major issues (see Espinosa and Lopez 2007 or Espinosa 2008 for a more complete discussion of the technical and administrative considerations). For assessments to be linguistically and culturally appropriate, the assessment or test should describe the characteristics of the children used to norm the measure (i.e., standardization sample). It should also assess the same content in each language, and the items should be equivalent across language versions (i.e., semantic equivalency). These important considerations are described below.

Standardization Sample. Was the measure standardized with samples of children who are similar to the targeted children? This question is key. As DLLs growing up in the United States have two or more languages, it is important that all versions of the assessment have been normed with samples of children who are bilingual and not monolingual. In addition, the socioeconomic conditions and educational levels of the parents of the children in the standardization sample should closely resemble those of the children included in the assessment. Misleading conclusions about language development can be drawn when assessment norms are based entirely on monolingual, middle-class children's development and the children being assessed are growing up in bilingual families and under more deprived circumstances (Snow and Van Hemmel 2008). Underrepresentation in the norming sample can lead to systematic bias when assessment results for young DLLs are interpreted.

Content Equivalence. Are the developmental domains and constructs that are being assessed the same for different cultural groups? Are the topics and items relevant to the language and cultural group being assessed? For example, a vocabulary test given to four-year- old DLLs in Hawaii should probably not ask them to identify words about ice-climbing equipment (e.g., *crampons* or *glaciers*).

Semantic Equivalence. According to Barrueco and others (2012), measures and items within measures must possess the same meaning across languages and dialects. Do the words used in the assessments have the same meanings when translated from one language to another? How were the translations completed, by whom, and do the translations maintain the original meanings? This feature is particularly important when vocabulary development in DLLs of all ages is assessed.

Finally, when assessment measures are developed in more than one language, it is important to carefully review the specific psychometric characteristics in each language. The administration manuals will often include information on the standardization sample, reliability, and validity only in the English version and then conclude that the translated version is appropriate for DLL populations.

The impetus for appropriate and responsive assessment of DLLs is supported by a number of legal requirements and ethical guidelines, which have developed over time. A widely cited set of testing standards can be found in *Standards for Educational and Psychological Testing,* a 1999 publication from the American Psychological Association (APA), the American Educational Research Association (AERA), and the National Council on Measurement in Education (NCME). In summary, it is inappropriate to use psycho-educational tests developed for and normed with monolingual, English-speaking children to understand the development of children who are learning two languages. As Snow and Van Hemel (2008) noted in the NRC Report, "Assessment tools and procedures should be aligned with the cultural and linguistic characteristics of the child. Moreover, in the case of norm based tests, the characteristics of children included in the normative sample should reflect the linguistic, ethnic, and socioeconomic characteristics of the child" (Snow and Van Hemel 2008, 252).

Steps to Follow in Assessing Young Dual Language Learners

Teachers and practitioners may be guided by specific questions that can help them make decisions during the assessment process. The first question seeks to determine if the child speaks a language (or languages) other than English at home so that the teacher can decide which language(s) to assess. This can be determined through a parent/family interview or questionnaire. If the child uses or is exposed only to English at home, assessments can be conducted in English. If the child speaks another language, assessment must be conducted in both languages. A child with typical language development should show age-appropriate knowledge and language skills in the home language. A child with language learning difficulties will show delays in both languages and should receive further evaluation to address specific developmental needs.

The second question is to determine the child's level of second-language development. Most likely, the DLL will be at one of the stages in English-language development described above, and the preschool curriculum will need to provide a focus on oral language development, early literacy skills, and writing. The child's language skills are likely to affect academic readiness if not sufficiently addressed.

The third question focuses on obtaining information about the child's development and skills in the home language. If the child exhibits limited home language development, this will indicate a risk of developmental language delays, and a referral for an evaluation will be needed to develop an intervention plan. If the child shows age-appropriate competencies in the home language, continued language development will be needed to maintain skills and prevent loss of the home language.

The fourth question focuses on the teacher's opinion about the child's ability to

learn. Teachers observe the child during learning activities and can evaluate the child's responsiveness during these interactions. Comparing the child to other DLLs can provide critical information about a child's learning potential. Children who are highly responsive in spite of their limited English skills are likely to be successful learners as long as opportunities for teacher-guided interaction and instruction are provided. Children who have limited responsivity to high-quality learning interactions are likely to be at risk of academic delays. In these cases, a full evaluation is needed to determine the course of individualized intervention.

The fifth question determines whether there are any developmental concerns that can affect the child's academic progress and that may need to be addressed directly. To answer this question, it is critical that the measures selected are culturally and linguistically appropriate. Only screening instruments that are administered in the two languages (if both are spoken) will reveal whether a true disability exists. If appropriate instruments are used and the child shows delays in both languages, a full evaluation will be necessary to develop an individualized intervention. If no appropriate instruments are used, the results of such screenings should be interpreted with caution, and additional evidence of concern (e.g., parent report, evaluation of child responsivity) will be needed to provide converging support for a referral.

Finally, as has been discussed above, children may have different skills in each language. Thus, the last question focuses on determining the child's knowledge and skills in each language. By conducting assessments in both languages, critical information about what the child knows and is able to do in each language will be needed to plan instructional activities that address the child's needs in each language.

What Teachers and Program Staff Need to Know to Conduct Valid Assessments

Teachers and support staff will be asked to accurately assess young DLLs' development and achievement in order to individualize instruction, improve the quality of education, and improve academic school readiness. As discussed above, this multistep process requires all program staff members to be knowledgeable about certain aspects of the linguistic and cultural development of young DLLs as well as the specific characteristics of the assessment instruments they administer. They will need to understand the stages of English-language acquisition and the importance of home language development for overall language development and future academic achievement. They will also need to be skilled in observational authentic assessment methods related to curriculum goals and linking ongoing assessment results to individualized instruction (see above section on "Observational Assessment for Instructional Decision Making and Improvement" for further discussion on the types of observation and documentation).

Administrators and program staff must be able to make judgments about the developmental, cultural, and linguistic appropriateness of available instruments to make the best decisions about the use of specific assessments for their DLL children (see Barrueco et al. 2012 for a discussion of strengths of ECE assessments available in Spanish and English).

When reviewing assessment results, teachers and staff need to understand the limitations of standardized instruments used with young DLLs and use their professional judgment when interpreting and applying the assessment results. Assessment in early childhood education is a process that requires teams of individuals who all contribute specialized information about the child; therefore staff must be skilled in team collaboration. Finally, all staff members must be competent in working across cultures to establish effective working relationships with diverse families, many of who may hold distinct parenting values and beliefs.

Final Conclusions and Recommendations for DLL Assessment

1. Program administrators and staff need to consider the unique linguistic, social, and cultural characteristics of young DLLs when selecting culturally and linguistically appropriate assessment instruments and approaches—and when interpreting results. The characteristics of the children and families served must be considered in decisions about specific assessment instruments.

2. Program staff need to administer carefully selected assessments for specific purposes: in order to determine if a child may be at risk of cognitive, motor, language, or social–emotional delay, which will require further assessment, diagnosis, and/or intervention (developmental screening). Standardized instruments need to be culturally and linguistically appropriate and unbiased as possible. Program staff members need to assess the proficiency level of young DLLs in both the home language and English by using a variety of informants, multiple sources of data collected over time, and a team that includes at least one member who is fluent in the child's home language.

3. Program administrators and staff need to interpret assessment results cautiously, particularly when evaluating the results of standardized vocabulary assessments. Conclusions should be considered as tentative and continually updated; consider limitations of results of standardized assessment instruments; and complement results with information from other sources, particularly families.

4. All ECE program staff members need to receive professional development on appropriate assessment methods and instruments in order to conduct valid assessments of young DLLs.

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