Dialog, *22*(1),
Copyright © 2019,
ISSN: 1930-9325

RESEARCH ARTICLE

An Analysis of Services Available to Dual Language Learners and Their Families at Head Start

Christine Meng
Edgewood College

This study addressed gaps in current research on the types of services that Head Start provided for dual language learners (DLLs) and whether the Head Start's DLL services would be related to the Head Start program goals, DLL parents' involvement, and family-school partnership. This study used the Head Start Family and Child Experiences Survey (FACES 2009) to address these gaps. Two types of Head Start's DLL services emerged: family/adult focus and child ESL focus. The services with family/adult focus were related to the program goals of providing the families with language and educational support whereas the services with child ESL focus were related to the program goals of connecting the families with the communities' resources and services. Further, services with family/adult focus were related to greater parent involvement and family-school partnership than services with child ESL focus. Research and practical implications are discussed.

Keywords: dual language learners, Head Start, latent class analysis

Dual language learners (DLLs) refer to a population of children who speak a non-English language at home (California Department of Education, 2008; Office of Head Start, 2008). This population includes children who are speaking their native languages and learning English either simultaneously or sequentially (Office of Head Start, 2008). According to the U.S. Census Bureau (2015), the number of children who speak a non-English language at home has increased from approximately 19.8% in 2007 to approximately 20.9% in 2015. Important issues that past research has examined regarding this population include: DLL children's English proficiency (Kim, Curby, & Winsler, 2014), academic performance (McLeod, Harrison, Whiteford, & Walker, 2016), the differential benefits of Head Start for at-risk children's development (Miller, Farkas, & Duncan, 2016), and social-emotional development (Halle et al., 2014). While these studies document the DLL children's language, cognitive, and social-emotional trajectories, whether the services that Head Start provides for the DLL children and their families are related to Head Start's program goals of serving the DLL population and can promote parent involvement and family-school partnership are gaps in extant research. Thus, the present study explored various types of DLL

services that Head Start provided for this population and whether these services could promote DLL parents' involvement and encourage family-school partnership. This investigation would provide valuable information regarding DLL services at Head Start and shape child care services for this population.

HEAD START AND DUAL LANGUAGE LEARNERS

The demography of early childhood education programs is fast changing with an increased number of DLL children. Although the growth of the DLL population fluctuated over time, the U.S. experienced a steady growth in the DLL population and reached a growth of 63.54% in the past decade (NCELA, 2011). At Head Start, reports indicated that the DLL children attending Head Start increased from 25% in 2001 to 30% in 2009 (Fortuny, Hernandez, & Chaudry, 2010; Hernandez, Denton, & Macartney, 2007). This increased presence of DLL children across the country and in early childhood education programs is accompanied by immigration. While 92% of the DLL children at Head Start are born in the U.S. (U.S. Department of Health and Human Services, 2017), the DLL children are likely to have immigrant parents. According to the U.S. Department of Health and Human Services (2017), approximately 86% to 90% of the DLL children have parents who are born outside the U.S. Among the DLL population, the Spanish-speaking children represent a fast-growing group in the United States. Take Head Start for example, approximately 38% of the children attending Head Start are identified as Hispanic or Latino descendants, with approximately 79% of the parents report Spanish as their primary language at home (U.S. Department of Health and Human Services, 2017).

Overlaid with the enrollment of the DLL population at Head Start is the income eligibility based on the poverty guidelines as determined by the Department of Health and Human Services and Section 645 of the Head Start Act (Office of Head Start, 2009). Recent statistics showed that 61% of the DLL children attending Head Start were at or below the federal poverty threshold and 81% of the DLL children at Head Start were at or below 130 percent of the federal poverty threshold (U.S. Department of Health and Human Services, 2017). The DLL children in poverty often face barriers of accessing and attending high-quality child care services and preschools (Magnuson & Waldfogel, 2005). However, evidence indicates that attending high-quality preschools can reduce the achievement gap for Hispanic/Latino children (Laosa & Ainsworth, 2007). Providing quality child care services and education for low-income DLL children is one of the goals of the Head Start programs.

To meet the needs of the DLL children and their families, the Office of Head Start (2009) has offered a set of guidelines to help systematically set up the services, procedures, and systems for all Head Start programs. For example, it is recommended to understand the cultures of the DLL children and their families and support DLL families' home languages to encourage home literacy activities in the families' home languages (Office of Head Start, 2009). When working with the DLL parents, Head Start often relies on the resources in the surrounding community and connects DLL families with local communities for language and educational support. Head Start programs also actively recruit and support bilingual staff who are familiar with the cultural and linguistic backgrounds of the DLL children and their families. The purpose of setting these guidelines is to ensure quality service delivery for the children who speak non-English languages and their families. As a whole, these services to DLL families recognize that the parents play an important role in nurturing the DLL children's early development. Thus, the goals of providing these services are

to work with DLL families by providing language and education training, connecting resources in the community, providing inclusive curriculum and classroom teaching, and using DLL families' home languages and their cultures in family literacy activities. This service delivery model is consistent with evidence that documents the importance of supporting the DLL children's home languages (Tabors, 1997). Creating family literacy activities in the DLL children's home languages can also promote these children's English acquisition due to the process of cross-linguistic transfer as indicated in past research (Dickinson, McCabe, Clark-Chiarelli, & Wolf, 2004; Reese, Garnier, Gallimore, & Goldenberg, 2000).

HEAD START SERVICES AND PARENT INVOLVEMENT AND FAMILY-SCHOOL PARTNERSHIP

With Head Start's dual focus on the children and their families, Head Start not only serves the DLL children, but also provides direct services to support DLL families (Office of Head Start, 2009). Although the types of services provided can vary from one program to another depending on the available resources and the needs of the particular Head Start program, the overall services provided for the DLL children and their families tend to be related to the children's English acquisition, maintaining their home languages, and providing the parents with educational and language support. Regarding services provided to the DLL children, Head Start makes an effort to assess the DLL children's English proficiency on a regular basis. Given that the young DLL children's language capacities in English and their home language are still developing in early childhood, it is recommended to use assessments that are culturally and linguistically responsive while developmentally appropriate with the formative purpose to modify curricular materials and improve teaching practices (Espinosa, 2005). To ensure that the DLL children are progressing, comprehensive assessments of their English skills along with their home languages and other developmental domains is recommended accompanied by interpreters and other community members who are familiar with the children's cultural and linguistic backgrounds if needed (Espinosa, 2005; Office of Head Start, 2009). Depending on the particular DLL child's language performance, Head Start can also connect the child with ESL services. Additionally, to create an inclusive learning environment, incorporating the DLL children's languages and cultures in the curriculum and teaching strategies can help the DLL children connect the classroom materials with their prior knowledge and experiences.

With respect to the direct services for DLL families, Head Start programs greatly encourage parents' involvement and participation at school. This family-focused service delivery model is in accord with Bronfenbrenner's (1986) framework that conceptualizes the family and school as the microsystems with which the children interact the most during early childhood. The interconnection between the family and school as a part of the mesosystem can have direct influence on the children's development (Bronfenbrenner, 1986). Built on this theoretical framework, the family is an important component of the Head Start's service delivery model. As a result, Head Start focuses on establishing a partnership with the families. Chief among these is to establish an open and effective communication with DLL families. To do so, it is recommended to provide written communication in the families' home language or their preferred language (Office of Head Start, 2009). Interpreting information presented during meetings (e.g., Parent Policy Council meetings) and workshops can help the families understand what is being presented. Head Start also actively invites and encourages the DLL parents' involvement in the program

governance by providing input regarding curriculum and teaching practices and volunteering in the classrooms. As a part of the family-school partnership, Head Start recognizes that DLL families' home languages play a role in promoting family literacy. Thus DLL families' home languages are respected. The parents are also provided with training, educational resources, or English as a Second Language (ESL) classes. Head Start also partners with its surrounding communities to provide cultural and language support for the DLL children and their families.

The family-focused services can create opportunities to increase parents' involvement and engagement at Head Start programs. Research shows that 18% of Spanish-speaking Latino families provide their children with supplemental educational experiences, including enrolling the children in classes outside of Head Start, parent-child reading, and so on (McWayne, Melzi, Limlingan, & Schick, 2016). Parents' home-based involvement and school-based involvement can promote the DLL children's learning and development. Additionally, the parents of DLL children have high expectations and aspirations for their children (Goldenberg, Gallimore, Reese, & Garnier, 2001). Providing interpreters at school meetings and events, offering the DLL parents with educational training and classes, and translating written materials are some of the ways to support the DLL parents' educational expectations for their children (Arias & Morillo-Campbell, 2008; Zehler et al., 2008).

THE USE OF PERSON-CENTERED APPROACH IN HEAD START SERVICES FOR THE DLL POPULATION

Past research has used the variable-centered approach to examine the challenges, strategies, diversity promotion, and parent involvement associated with various child care programs, including Head Start (Buysse, Castro, West, & Skinner, 2005), the nature of parent involvement at Head Start (Castro, Bryant, Peisner-Feinberg, & Skinner, 2004), and Head Start center goals and incentives associated with parent involvement (Hindman, Miller, Froyen, & Skibbe, 2012). However, the types of services that Head Start provides in serving the DLL children and their families can vary systematically from one program to the next. With the available resources and staff, some Head Start programs may have interpreters and resources to provide ESL and educational opportunities for DLL families while other programs may be able to provide language assessments for the children and their families, offer translation services, and connect the children and their families to ESL services in the communities. The person-centered approach can be useful to capture the diversity in Head Start's DLL services. Typically, the level of analysis for the person-centered approach is the individuals by assuming heterogeneity in the individuals' characteristics and identifying typologies or subgroups of individuals that reflect certain typologies or subgroups of characteristics (Magnusson, 2003). In the present study, the level of analysis is the Head Start centers. Rather than examining the association between Head Start's DLL services and parent involvement and family-school partnership as past research has often done, the present study takes advantage of the person-centered approach to capture the heterogeneity of Head Start's DLL services by identifying typologies or subgroups of Head Start's DLL services and examines whether the typologies or subgroups of Head Start's DLL services would be related to Head Start's program goals of serving the DLL population, parent involvement, and family-school partnership.

The Head Start's service delivery model has the dual focus of supporting the development of the children and establishing a partnership with the parents (U.S. Department of Health and Human Services, 2003). Therefore, the person-centered approach is useful to identify typologies

or subgroups of Head Start's DLL services that are child-focused and ones that are family-focused and how the typologies of Head Start's DLL services are related to the Head Start's program goals of serving the DLL population, parent involvement, and family-school partnership. However, surprisingly, research on classifications of Head Start's DLL services and their associations with Head Start's program goals, parent involvement, and family-school partnership has been largely absent. The present study intends to fill this gap in extant Head Start research.

THE PRESENT STUDY

The present study aimed to explore various types of services that Head Start provided for the DLL children and their families. The present study examined seven types of DLL services at Head Start: two types of services provided for the DLL children (English language assessments and connecting the child with ESL services) and five types of services provided for DLL families (English assessments, activities and workshops for the parents, adult ESL or education resources, interpreters, and translation services). The present study used the latent class framework to: (1) empirically classify the seven types of DLL services at Head Start into typologies or subgroups, (2) test whether the typologies or subgroups of Head Start's DLL services would be related to Head Start's program goals of serving the DLL population, and (3) test whether the typologies or subgroups of Head Start's DLL services would be related to parent involvement and family-school partnership.

The first research goal was to explore the nature of various services that Head Start offered for the DLL population by using the person-centered approach to classify the Head Start's DLL services. The present study addressed the following research question: How would Head Start's DLL services be characterized by the seven types of DLL services? Based on the Head Start's service delivery model with the focus on both the child and the family, it was hypothesized that a subgroup of DLL services with the child focus and a subgroup of DLL services with the family focus would emerge from the analysis. With respect to the second and third research goals, the research questions were: Would the typologies of Head Start's DLL services be differentially correlated with Head Start's program goals? And would the typologies of Head Start's DLL services differentially promote parent involvement and family-school partnership? Given a lack of empirical evidence in past research to connect Head Start's DLL services with Head Start's program goals, parent involvement, and family-school partnership, the second and third research goals remained exploratory and no hypotheses were offered.

METHOD

The present study used data from the 2009 cohort of the Head Start Family and Child Experiences Survey (FACES, 2009). The FACES study aimed to understand the children's experiences and development during the Head Start programs. To do so, the FACES study collected data from the children, parents, teachers, and Head Start program and center directors. FACES (2009) paid particular attention to the DLL children and their families. A part of the study goals of FACES (2009) was to understand the DLL children's Head Start experiences, the children's early development and learning, and the services provided by the Head Start programs to the DLL children and their families.

FACES (2009) used a multistage sampling design with stratification at each stage of the sampling. The sampling frame was based on the Head Start Program Information Report (PIR) database for program year 2007–2008 from the 50 states and the District of Columbia. The sampling design of the FACES (2009) has been detailed elsewhere (Malone et al., 2013) that describes the inclusion criteria and the sampling procedure to ensure representativeness of the sample. In the FACES (2009), once an eligible program was selected for the study, two centers were randomly selected from each participating program. This sampling procedure resulted in an unweighted *n* of 60 Head Start programs (weighted *n* = 3464) and an unweighted *n* of 129 Head Start centers (weighted *n* = 14,969).

Data were collected from multiple informants, including the parents, teachers, program directors, and center directors. For the purpose of the present study, the analyses excluded the non-DLL children and included only the DLL children (unweighted *n* = 955; weighted *n* = 127,441; 51.7% male; 2.6% White). Table 1 presents detailed information on the descriptive statistics of the DLL children and their parents. As a whole, 97.4% of the DLL children had non-White racial/ethnic backgrounds. A large percentage (88.9%) of their parents were born outside the U.S., with less than high school education, and with low-income backgrounds.

TABLE 1
Descriptive Statistics of the DLL Children, Parents, Programs, and Centers Characteristics

Child characteristics	*M* (*SD*) or Percentage
Age	46.32 (6.46)
% Male	51.7%
Race/Ethnicity	
% White	2.6%
Parent characteristics	
Race/Ethnicity	
% White	1.7%
Average family income $20,000-$25,000	
%Born in the U.S.	11.1%
Education (% high school and less)	80.3%
Program characteristics	
% bilingual teachers/assistant teachers	96.9%
% recruiting bilingual teachers	76.0%
Center director characteristics	
Age (in years)	46 (9.41)
% Male	10.2%
Race/Ethnicity	
% White	62.3%
Education levels	
(% Bachelor's degree and above)	75.5%
Years at Head Start	12.63 (7.58)

Measures

Head Start DLL Services. Head Start program and center directors responded to seven binary yes/no questions at Head Start entry regarding whether the Head Start programs (1) gave English language proficiency tests to DLL families (e.g., parents, children), (2) provided assessment of English skills for DLL families (e.g., parents, children), (3) provided activities and/or workshops for the parents of DLLs, (4) provided information about adult ESL or other education resources, (5) provided interpreters, (6) translated written materials, and (7) connected the DLL children with ESL services. The Head Start program directors responded to the first four questions while the center directors responded to the last three questions. The seven binary yes/no questions showed acceptable reliability (α = .78 at Head Start entry).

Head Start Program Goals for DLL Families. Head Start center directors responded to eight binary yes/no questions at Head Start entry regarding what they hoped to achieve with DLL families: (1) helping them learn English, (2) connecting them to DLL resources, (3) serving as a bridge for acculturation, (4) finding services within the community, (5) supporting and honoring the family's first language, (6) making sure the parents were involved in the program, (7) providing DLL curriculum materials and teaching strategies, and (8) working with the DLL parents. The eight binary yes/no questions showed acceptable reliability (α = .82 at Head Start entry).

Parent Involvement. Parents responded to 25 binary yes/no questions regarding the extent to which they were involved with their children at both Head Start entry and Head Start exit. Sample items included, "Told the child a story," "Played counting games," and "Visited zoo or aquarium with the child." The 25 items were summed to form a composite score of parent involvement. The scores ranged from 0 to 25 (α's = .61 and .71 at Head Start entry and Head Start exit, respectively).

Family-School Partnership. Teachers responded to four items regarding the extent to which Head Start programs invited and encouraged the DLL parents' involvement and partnership with the programs on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*): promote cooperation between the staff and parents, ensure the parents do not feel isolated, encourage the parents' learning, and support the staff in engaging the parents. The four items were averaged to form a composite score of family-school partnership (α = .84 at Head Start exit).

Covariates. A range of child, parent, program, and center director characteristics were included in the analysis as covariates. The child characteristics included child age, child gender, and child race/ethnicity. The parent characteristics included mother race, mother educational levels, whether the mother was born in the U.S., and family income. The program characteristics included the percentage of Head Start programs with bilingual teachers or assistant teachers and the percentage of Head Start programs were recruiting bilingual teachers. The center director characteristics included the directors' age, gender, race/ethnicity, educational levels, and years at Head Start.

Analytic Strategy

To test the hypothesis for the first research goal, how the Head Start DLL services would be characterized, latent class analysis (LCA) was performed using the Mplus program (version 7.4; Muthén & Muthén, 1998-2015) with full information maximum likelihood estimation. LCA is superior to traditional cluster analyses because LCA uses the probabilistic approach with formal criteria (e.g., AIC, the Lo-MendDLL-Rubin Test) in model selections to assign individual cases to different latent classes (Wang & Hanges, 2011). In the present study, LCA was used to capture the diverse DLL services that Head Start provided to the DLL children and their families by identifying the typologies or subgroups of Head Start DLL services.

For the first research goal, the LCA models were estimated at the center level. A series of models that fit between one to three latent classes were performed. The Akaike Information Criterion (AIC; Akaike, 1974), the Bayesian Information Criterion (BIC), the Adjusted Bayesian Information Criterion (ABIC), entropy, and the Lo-MendDLL-Rubin Adjusted LRT Test (Nylund, Asparouhov, & Muthén, 2007) that compared between models with k classes and models with k-1 classes were used to evaluate model fit. The best fitting model would have a smaller value in AIC, BIC, ABIC, and entropy greater than .70 (Jung & Wickrama, 2008; Nylund et al., 2007). Once the model that best fit the data with the appropriate latent classes was identified, LCA produced the latent class membership that assigned Head Start centers into different latent classes. The latent class membership was used in subsequent analyses for the second and third research goals.

To address the second research goal, regarding Head Start programs goals for the DLL population, logistic regression was performed using IBM SPSS Statistics for Windows (version 22; IBM Corp., Armonk, N.Y.) with the class membership as the predictor of the eight Head Start program goals for DLL families while controlling for program and center director characteristics. Logistic regression was performed at the center level with the center weight to ensure the representativeness of the Head Start centers.

For the third research goal, the effectiveness of Head Start DLL services on the DLL parents' involvement and family-school partnership, mixed effects modeling with maximum likelihood was performed using IBM SPSS Statistics for Windows (version 22; IBM Corp., Armonk, N.Y.). In the mixed effects models, to account for the nesting structure in which the parents were nested within the centers, a random effect in which the parents were nested within the centers was specified. The class membership and covariates were treated as fixed effects with the continuous covariates (e.g., child age, family income) grand-mean centered. Parent involvement at Head Start entry (grand-mean centered) was also controlled. Finally, the individual weight was used to ensure that the sample was representative of the Head Start DLL children and their parents.

RESULTS

The first research goal of the present study was to explore how the Head Start DLL services would be characterized. Table 2 showed that the two-class model was the best fitting model. Although the AIC, BIC, and ABIC continued to decline from the one-class model to the three-class model, the largest decline was between the one-class model and the two-class model. Entropy for all the models exceeded the recommended value. Further, the LMRT test showed that while the two-class

model was better than the one-class model, the three-class model was not a better fitting model than the two-class model. These statistics appear to converge on the two-class model. In addition to these indices, the two-class model as the best-fitting model was selected based on the principle of parsimony and interpretability informed by the Head Start's dual focus service delivery model.

TABLE 2
Model Fit Statistics of Latent Class Analyses and Weighted and Unweighted Class Size

	Latent Class		
	Class 1	Class 2	Class 3
AIC	840.363	720.399	692.381
BIC	860.382	763.297	758.157
Adjusted BIC	838.243	715.856	685.416
Entropy	-	0.90	0.96
LMRT *p* value	-	0.02	0.65
	Two-Class Solution		
Unweighted class size	102	27	-
Weighted class size	2482	982	-

Note. AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; LMRT = Lo-MendDLL-Rubin Adjusted LRT Test.

Figure 1 illustrates the two-class model. Class 1 was the largest class that comprised 69.4% of the sample (unweighted n = 102 centers; weighted n = 2482 centers). Class 1 was characterized by providing activities and workshops for the DLL parents, adult ESL services, interpreters, and translating written materials. Since Class 1 appears to capture services provided to the DLL parents and families, Class 1 was labeled "family/adult focus." In contrast, Class 2 comprised 30.6% of the sample (unweighted n = 27 centers; weighted n = 982 centers). Class 2 was characterized by providing ESL services to the children and was labeled "child ESL focus."

Program Goals that Correlated with Head Start Services for DLL Children and Their Families

Once the number of typologies or subgroups of Head Start DLL services was identified, the second research goal was to examine whether the typologies of the Head Start DLL services would be differentially related to various program goals of serving the DLL children and their families. Results of logistic regression (Table 3) showed that "child ESL focus" was significantly related to the program goals of helping DLL families connect to DLL resources (odds ratio = 6.82, $p < .001$) and finding services within the community (odds ratio = 2.15, $p < .01$) than "family/adult focus." In contrast, "family/adult focus" was significantly related to the program goals of helping DLL families learn English (odds ratio = 0.26, $p < .001$), serving as a bridge for acculturation (odds ratio = 0.29, $p < .001$), supporting and honoring DLL families' first language (odds ratio = 0.31, $p < .001$), involving DLL families in the programs (odds ratio = 0.65, $p < .01$), providing DLL curriculum materials and teaching strategies (odds ratio = 0.67, $p < .001$), and working with the DLL parents (odds ratio = 0.72, $p < .001$).

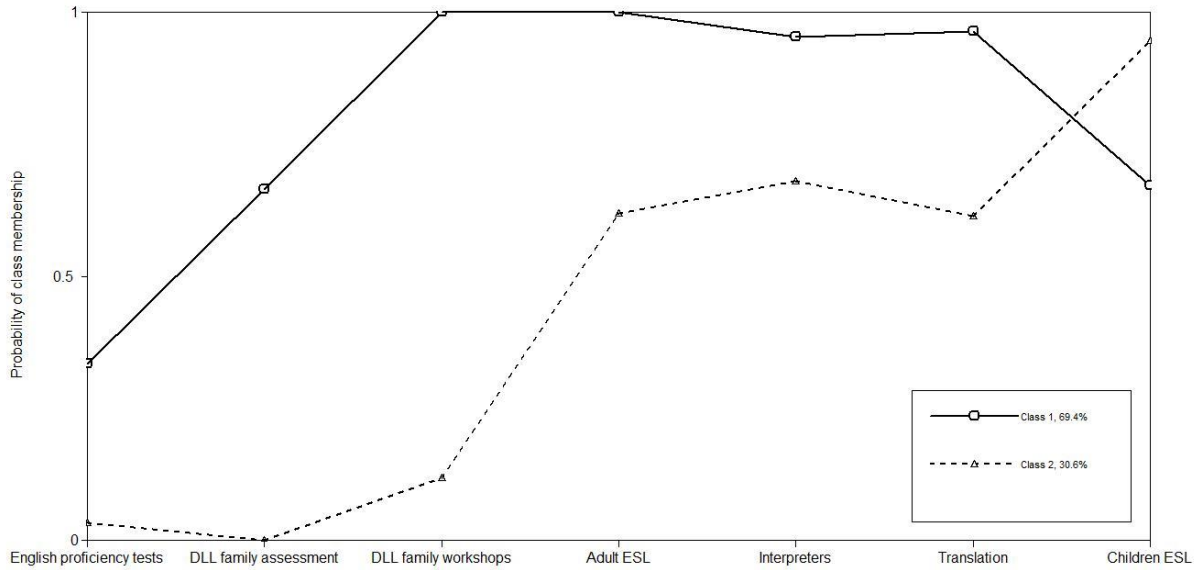

Figure 1. Two-class model of Head Start services to the DLL children and their families.
Note. Class 1 = Family/Adult focus; Class 2 = Child ESL focus; English proficiency tests = Give English language proficiency tests; DLL family assessment = Assessment of English skills for DLL families; DLL parent workshops = Activities/Workshops for the parents of DLLs; Adult ESL = Information about adult ESL or education resources; Interpreters = Provide interpreters; Translation = Translate written materials; Children ESL = Connect DLL children with ESL
services.

TABLE 3
Results of Logistic Regression Predicting Program Goals for DLL Families

	Learning English		Resources Connection		Acculturation		Community Services		Home Language	
Class	B	OR	B	OR	B	OR	B	OR	B	OR
2[a]	-1.35***	0.26	1.92***	6.82	-1.25***	0.25	0.77**	2.15	-1.17***	0.31

	Program Involvement		DLL Curric.		Work with DLL parents	
Class	B	OR	B	OR	B	OR
2	-0.44**	0.65	-0.40***	0.67	-0.33***	0.72

Note. B = unstandardized beta coefficient; OR = odds ratio. Logistic regression controlled for program and center director covariates in Table 1. Learning English = Helping DLL families learn English; Resources connection = Helping families connect to DLL resources; Acculturation = Serving as a bridge for acculturation; Community services = Helping DLL families find services within community; Home language = Supporting/Honoring DLL families' first language; Program involvement = Making sure DLL families are involved in programs; DLL Curric = DLL curriculum materials and teaching strategies; Work with DLL parents = Working with DLL parents.
[a] Reference group is Class 1.

Effect of Head Start Services on DLL Parents' Involvement and Family-School Partnership

The third research goal was to examine the effectiveness of Head Start DLL services on DLL parents' involvement and family-school partnership. Results of mixed effects modeling (Table 4) demonstrated that "family/adult focus" was associated with greater parent involvement (B = -0.21, $p < .001$) and family-school partnership (B = -1.34, $p < .001$) than "child ESL focus." These findings indicate that, from the point of view of the program directors and teachers, Head Start's DLL services with the focus on the parents and families can better engage the parents than services with the focus on the children.

TABLE 4

Results of Mixed Effects Modeling Predicting Parent Involvement and Family-School Partnership at Head Start Exit

	Parent Involvement		Family-School Partnership	
	B	(SE)	B	(SE)
Class 2[a]	-0.21***	(0.39)	-1.34***	(0.99)

Note. B = unstandardized beta coefficient; SE = standard error. Mixed effects modeling controlled for the covariates in Table 1.

[a] Reference group is Class 1.

DISCUSSION

Because of the increased number of dual language learners, the demography of early childhood classrooms, such as Head Start, is changing. In light of a large proportion of the DLL children living in poverty, it is suggested that dual language learners need extra support in addition to providing high-quality early childhood education to this population (McNamara, 2016). However, no research thus far has examined the effectiveness of the DLL services in connection to the Head Start's program goals of serving this population and whether the Head Start's DLL services can increase the DLL parents' involvement and family-school partnership. This present study intended to fill these gaps by identifying the typologies of diverse DLL services that Head Start provided to this population and examining whether the typologies of Head Start's DLL services would be differentially related to Head Start's program goals of serving this population and whether the typologies of Head Start's DLL services would be differentially related to DLL parents' involvement and family-school partnership.

With respect to the first research goal, identifying the typologies of Head Start's DLL services, findings of the present study support the dual focus of the Head Start's service delivery model. Specifically, latent class analysis identified two typologies of Head Start's DLL services: family/adult focus and child ESL focus. The majority (69.4%) of the Head Start's DLL services have the family/adult focus. These services aim to connect DLL families with language and educational resources, provide interpretation and translation services, and respect that the DLL children's home languages have an important place in home literacy activities and the DLL children's language development. In contrast, the child ESL focus represents a small portion (30.6%) of the Head Start's DLL services that connect the DLL children with ESL services in the

community. As hypothesized, the typologies emerged from latent class analysis are consistent with the Head Start's service delivery model of helping the DLL children acquire English skills while assisting DLL families to acculturate, learn English, and provide language and educational support.

Regarding the second research goal, findings showed that the typologies of Head Start's DLL services were differentially related to Head Start's program goals of serving the DLL population. Specifically, Head Start's DLL services with the family/adult focus are correlated with Head Start's program goals of helping DLL families learn English, acculturate, support their home languages, involve the DLL parents at Head Start, use DLL curriculum materials and teaching strategies, and work with the DLL parents. In contrast, Head Start's DLL services with the child ESL focus are correlated with the program goals of connecting the families with DLL resources and services in the community. This may be attributed to the fact that the DLL children are enrolled in the Head Start classrooms, so connecting DLL families to additional resources in the community may complement the instruction that the DLL children receive in the classrooms. Future research needs to examine whether and how these services are used by the families to understand whether the programs goals are actually achieved from the parents' point of view. The questions of whether and how the services encourage DLL families' home languages and support the DLL children's English acquisition and the development of their native languages are warranted in future studies. While the present study shows that services with the family/adult focus are correlated with the program goals of getting the DLL parents involved at Head Start and working with these parents, future studies need to further examine whether services with the family/adult focus are aligned with the program goal of providing curriculum materials and teaching strategies that are sensitive to the DLL children's needs. Examining the alignment between Head Start services and program goals can help inform and shape current Head Start services and practices in support of the DLL population.

Finally, with respect to the final research goal, results revealed that Head Start's DLL services with the family/adult focus can increase the DLL parents' involvement at home and improve the partnership between these parents and Head Start. This is aligned with Bronfenbrenner's (1986) ecological model that conceptualizes the family and school as important developmental contexts for the children's development. The interconnection between the family and school is a part of the mesosystem that has influence on the parents' involvement in their children's early education. However, past research indicates that when being invited to participate in an early intervention program, many ethnic minority parents with Head Start children cited work schedule conflict as the biggest barrier in participating in the program (Mendez, 2010). It is possible that the method of delivering some of the DLL services explains the increase in DLL parents' involvement at home and their family-school partnership. It is also possible that the provision of the DLL services increases the DLL parents' contact with Head Start. Increased contact with Head Start may make it likely to send the message to the DLL parents about the importance of parent involvement in their child's education and be invited to participate in Head Start program governance.

Although the present study examined seven types of DLL services, it should be noted that not all Head Start programs across the country provide the same services to DLL families and their children. The services that Head Start provides depend on the needs of the Head Start program and the available resources in the community. Considering that there is no single service that can meet the needs of the DLL children and their families, Head Start programs use various services and collaborate with agencies in the local community to serve the DLL children and their families.

Limitations and Future Research

Several limitations of the present study need to be noted. First, although the FACES 2009 provided national data to analyze Head Start's DLL services, the information available was limited. For example, although the Head Start program and center directors provided information on the types of services provided to the DLL population, there was no information with respect to the implementation and delivery methods of the DLL services and the effectiveness of such implementation and delivery methods. Future research needs to examine how the DLL services are implemented and whether the delivery methods of the DLL services are effective at reaching out to the DLL children and their families. Relatedly, the services provided to the DLL children and their families largely depend on the available funding and resources of a given Head Start program. Thus examining whether the allocation of funding and resources plays a role in the provision of the Head Start's DLL services can shape Head Start program support and related policies for the DLL population. Another limitation of the present study involves the measure of the Head Start's DLL services. While the present study identified seven types of DLL services at Head Start, there are other types of services for the DLL population that are not available in the FACES 2009 data set, for example, speech-language services. Additionally, using reliable, valid, and culturally sensitive measures to assess the DLL children's language development in both English and their home languages has been a limitation in extant research (Epstein, Schweinhart, DeBruin-Parecki, & Robin, 2004). Consequently, providing services to assess the DLL children's progress in their homes languages remains to be an obstacle. Despite these limitations, the present study is among the first to use a national data set to examine Head Start's DLL services and its associations with Head Start program goals, DLL parents' involvement at home, and family-school partnership. Findings of the present study can contribute to research on Head Start services for the DLL population.

Implications and Conclusion

Evidence generated from this study has implications for research on the DLL children and their families and policies and regulations related to Head Start's services for this population. The provision of Head Start's DLL services has research implications for DLL families. This is noteworthy because low-income DLL families often live in communities with insufficient language and educational resources. Head Start's DLL services provide access to language and educational support for DLL families in poor communities. The language and educational support that Head Start offers can also promote family literacy and is likely to benefit the DLL children via family literacy and parent engagement. Equally important, findings of the present study have policy implications for Head Start or early childhood education programs in general. Presently, although Head Start is committed to providing the DLL services to the DLL population, the provision of the DLL services at Head Start largely depends on the funding, available resources in the surrounding community, and the particular needs of the Head Start program. Further, there is no empirical evidence to date on the effect of Head Start's DLL services on DLL parents' involvement and family-school partnership to inform Head Start policies. The evidence generated from the present study suggests that Head Start's DLL services are needed for the DLL population. To better serve this population, policies and regulations need to be put in place to help effective implementation and delivery of the DLL services to DLL families.

With the increased number of DLL children in early childhood classrooms, no research thus far has examined what services can help support DLL families. Given Head Start's goal of serving the children and their families, it is imperative to understand what Head Start services can better serve the DLL population. The present study addresses this gap in extant Head Start research. With Head Start's DLL services, DLL families can access the resources that they need to better support their children.

REFERENCES

Akaike, H. (1974). A new look at the statistical model identification. *IEE Transactions on Automatic Control, 19*, 716-23.

Arias, M., & Morillo-Campbell, M. (2008). *Promoting ELL parental involvement: Challenges in contested times*. Retrieved from http://greatlakescenter.org/docs/Policy_Briefs/Arias_ELL.pdf

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology, 22*, 723-742. doi:10.1037/0012-1649.22.6.723

Buysse, V., Castro, D. C., West, T., & Skinner, M. (2005). Addressing the needs of Latino children: A national survey of state administrators of early childhood programs. *Early Childhood Research Quarterly, 20*(2), 146-163. doi:10.1016/j.ecresq.2005.04.005

California Department of Education. (2008). *California preschool learning foundations (Vol. 1)*. Sacramento, CA: Author. Retrieved from https://www.cde.ca.gov/sp/cd/re/documents/preschoollf.pdf

Castro, D. C., Bryant, D. M., Peisner-Feinberg, E. S., & Skinner, M. L. (2004). Parent involvement in Head Start programs: The role of parent, teacher and classroom characteristics. *Early Childhood Research Quarterly, 19*(3), 413-430. doi:10.1016/j.ecresq.2004.07.005

Dickinson, D. K., McCabe, A., Clark-Chiarelli, N., & Wolf, A. (2004). Cross-language transfer of phonological awareness in low-income Spanish and English bilingual preschool children. *Applied Psycholinguistics, 25*(3), 323-347. doi:10.1017/S0142716404001158

Epstein, A. S., Schweinhart, L. J., DeBruin-Parecki, A., & Robin, K. B. (2004). *Preschool assessment: A guide to developing a balanced approach*. New Brunswick, NJ: National Institute for Early Education Research.

Espinosa, L. M. (2005). Curriculum and assessment considerations for young children from culturally, linguistically, and economically diverse backgrounds. *Psychology in the Schools, 42*(8), 837-853. https://doi.org/10.1002/pits.20115

Fortuny, K., Hernandez, D. J., & Chaudry, A. (2010). *Young children of immigrants: The leading edge of America's future*. Brief No. 3. Washington, DC: The Urban Institute. Retrieved from http://www.urban.org/UploadedPDF/412203-young-children.pdf

Goldenberg, C., Gallimore, R., Reese, L., & Garnier, H. (2001). Cause or effect? A longitudinal study of immigrant Latino parents' aspirations and expectations, and their children's school performance. *American Educational Research Journal, 38*(3), 547–582. https://doi.org/10.3102/00028312038003547

Halle, T. G., Whittaker, J. V., Zepeda, M., Rothenberg, L., Anderson, R., Daneri, P., . . . Buysse, V. (2014). The social–emotional development of dual language learners: Looking back at existing research and moving forward with purpose. *Early Childhood Research Quarterly, 29*(4), 734-749. doi:10.1016/j.ecresq.2013.12.002

Hernandez, D. J., Denton, N. A., & Macartney, S. E. (2007). *Children in immigrant families: The U.S. and 50 states: National origins, language, and early education* (Publication No. 2007-11). Washington, DC: Child Trends.

Hindman, A. H., Miller, A. L., Froyen, L. C., & Skibbe, L. E. (2012). A portrait of family involvement during Head Start: Nature, extent, and predictors. *Early Childhood Research Quarterly, 27*, 654-667. doi:10.1016/j.ecresq.2011.11.002

IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

Jung, T., & Wickrama, K. A. S. (2008). An introduction to latent class growth analysis and growth mixture modeling. *Social and Personality Psychology Compass, 2*, 302–317. http://dx.doi.org/10.1111/j.1751-9004.2007.00054.x

Kim, Y. K., Curby, T. W., & Winsler, A. (2014). Child, family, and school characteristics related to English proficiency development among low-income, dual language learners. *Developmental Psychology, 50*, 2600-2613. doi:10.1037/a0038050

Laosa, L. M., & Ainsworth, P. (2007). Is public pre-K preparing Hispanic children to succeed in school? *National Institute for Early Education Research Policy Brief*. New Jersey: National Institute for Early Education Research.

Magnusson, D. (2003). The person approach: Concepts, measurement models, and research strategy. *New Directions for Child and Adolescent Development, 101*, 3-23.

Magnuson, K. A., & Waldfogel, J. (2005). Early childhood care and education: Effects on ethnic and racial gaps in school readiness. *Future of Children, 15*, 169-96.

Malone, L., Carlson, B. L., Aikens, N., Moiduddin, E., Klein, A. K., West, J., … Rall, K. (2013). *Head Start family and children experiences survey: 2009*. Washington, DC: U.S. Administration for Children and Families, Office of Planning, Research and Evaluation.

McLeod, S., Harrison, L. J., Whiteford, C., & Walker, S. (2016). Multilingualism and speech-language competence in early childhood: Impact on academic and social-emotional outcomes at school. *Early Childhood Research Quarterly, 34*, 53-66. doi:http://dx.doi.org/10.1016/j.ecresq.2015.08.005

McNamara, K. (2016, September 8). *Dual language learners in Head Start: The promises and pitfalls of new reforms*. Retrieved from https://www.migrationpolicy.org/article/dual-language-learners-head-start-promises-and-pitfalls-new-reforms.

McWayne, C. M., Melzi, G., Limlingan, M. C., & Schick, A. (2016). Ecocultural patterns of family engagement among low-income Latino families of preschool children. *Developmental Psychology, 52*, 1088.

Mendez, J. L. (2010). How can parents get involved in preschool? Barriers and engagement in education by ethnic minority parents of children attending Head Start. *Cultural Diversity and Ethnic Minority Psychology, 16*, 26-36. doi:10.1037/a0016258

Miller, E. B., Farkas, G., & Duncan, G. J. (2016). Does Head Start differentially benefit children with risks targeted by the program's service model? *Early Childhood Research Quarterly, 34*, 1-12.

Muthén, L. K., & Muthén, B. O. (1998-2015). *Mplus user's guide*. Seventh Edition. Los Angeles, CA: Muthén & Muthén

National Clearinghouse for English Language Acquisition and Language (NCELA). (2011). *The growing numbers of English learner students, 2009/10*. Washington, D.C.: Author.

Nylund, K. L., Asparouhov, T., & Muthén, B. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling, 14*, 535–569. http://dx.doi.org/10.1080/10705510701575396

Office of Head Start. (2008). *Dual language learning: What does it take?* Washington, D.C.: U.S. Department of Health and Human Services: Administration for Children and Families.

Office of Head Start. (2009) *Program preparedness checklist: Serving dual language learners and their families*. Retrieved from http://www.buildinitiative.org/WhatsNew/ViewArticle/tabid/96/ArticleId/100/Program-Preparedness-Checklist-Serving-Dual-Language-Learners-and-Their-Families.aspx

Reese, L., Garnier, H., Gallimore, R. & Goldenberg, C. (2000). Longitudinal analysis of the antecedents of emergent Spanish literacy and middle-school English reading achievement of Spanish-speaking students. *American Educational Research Journal, 37*, 633-62.

Tabors, P. (1997). *One child, two languages: A guide for preschool educators of children learning English as a second language*. Baltimore, MD: Paul H. Brookes.

U.S. Census Bureau. (2015). *2015 American Community Survey 1-year estimates*. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#acsST

U.S. Department of Health and Human Services. (2003). *Program performance standards for the operation of Head Start programs by grantees and delegate agencies, Education and early childhood development, 45 CFR § 1304.21*. Retrieved from https://www.gpo.gov/fdsys/granule/CFR-2003-title45-vol4/CFR-2003-title45-vol4-sec1304-21/content-detail.html.

U.S. Department of Health and Human Services. (2017). *Services Snapshot – National All Programs (2016-2017)*.Washington, DC: Administration of Children and Families.

Wang, M., & Hanges, P. J. (2011). Latent class procedures: Applications to organizational research. *Organizational Research Methods, 14*, 24-31.

Zehler, A., Adger, C., Coburn, C., Arteagoitia, I., Williams, K., & Jacobson, L. (2008). *Preparing to serve English Language Learner students: School districts with emerging DLL communities* (REL 2008–No. 049). Washington, DC: U.S. Department of Education.

United States Department of Health and Human Services. Administration for Children and Families. Office of Planning, R. and E. (2018). *Head Start Family and Child Experiences Survey (FACES): 2009 Cohort [United States]*. https://doi.org/10.3886/ICPSR34558.v3