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Identifying and Serving English Learners in Gifted Education: Looking Back and Moving Forward

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Abstract

Although the number of English learners (ELs) in the United States continues to increase, this population remains underserved by gifted and talented (GT) education programs across the nation. This underrepresentation represents a societal and research dilemma for reasons we address in this systematic review of the most effective practices documented to identify and serve ELs for GT programs. We examine 50 theoretical and empirical articles according to four major themes: nomination, screening/assessment, services, and identification models. We discuss identification recommendations, including outreach and professional learning to foster stakeholder recognition of GT potential in all ELs, an equitable referral process based on a multiple-lens approach, and observation of students completing problem-solving tasks. Finally, we address perceived best practices in serving GT ELs, including making accommodations for ELs in GT programs.

Keywords

bilingual, cultural differences, identification of gifted children, underrepresentation

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English learners (ELs) are the fastest growing population of K–12 students in the United States (National Center for Education Statistics, 2013).[1] In spite of this increase, EL representation in gifted and talented (GT) programs continues to lag behind not only traditional populations of learners (Adler, 1967; Callahan, 2005; Coronado & Lewis, 2017; Hodges et al., 2018) but all underserved populations, including twice-exceptional, rural, Hispanic, Native American, and Black students (M. S. Matthews, 2014; Siegle et al., 2016).[2]

Despite a federal definition of EL, how ELs are identified and served in schools for GT programs depends on state, district, and school policies. Similarly, policies related to GT education (including definitions, identification, and services provided) reside at local, not federal, levels (Castellano & Matthews, 2014; Council of State Directors of Programs for the Gifted [CSDPG] & National Association for Gifted Children [NAGC], 2015; Stephens, 2008). This means that students considered to be EL or GT in one school system may not be identified as such in another (Borland, 2005; L. J. Coleman & Cross, 2005; Cross & Cross, 2005), making GT identification arbitrary, subjective, and inexact, especially for ELs.

EL Label

Although the EL label has been used interchangeably at the federal level with *Limited English Proficient* (LEP; U.S. Department of Education Office for Civil Rights, 2015), the latter is falling out of favor due to its negative connotation as a deficit rather than a difference that is outside a student's control (Castellano & Díaz, 2002; M. S. Matthews, 2014). Educators have instead focused on strengths (Ford & Grantham, 2003) and the various forms of capital (i.e., cultural or social; J. S. Coleman, 1988; Noguera, 2004) or funds of knowledge (Moll et al., 1992) that students possess. Using this same mindset, ELs can be viewed as possessing a wealth of previous experiences, knowledge, abilities, skills, and fluencies in multiple languages as demonstrated, for instance, in some students' abilities to *code switch* or alternate the use of two languages (Hughes et al., 2006). ELs are typically (but not exclusively) U.S.-born children of parents who reside in monolingual, non-English-speaking neighborhoods in the United States; immigrants (born in another country); and U.S.-born children with immigrant parents (Kogan, 2001).

U.S.-Born ELs

The majority of ELs are American citizens born to non-English-speaking parents, with 85% of such students in elementary and 62% of such students in secondary grades (Zong & Batalova, 2015). These students may possess unique educational needs that might be accounted for by several factors. One factor may be their spending most of their time between school and home, where the language, norms, values, roles, and/or expectations of one is not the same as the other. Another factor may be

the role they sometimes serve as interpreters for their family, and the tensions that can arise if parents feel pressure to speak English to and for their children (Nelson & Davis-Wiley, 2017; Roberge, 2002).

Immigrants and Children of Immigrants

With the Immigration Act of 1990, the population of those born outside of the United States doubled to 35.2 million between 1990 and 2005 (Rong & Preissle, 2009). Many new immigrants are of Asian and Latin American origin (Grieco et al., 2012); however, immigrants and their children speak more than 350 different languages (American Community Survey, 2015). New immigrants are more likely to experience poverty than U.S.-born individuals (Camarota, 2012) and face financial, educational, cultural, legal, linguistic, and/or political challenges in a climate fraught with uncertainty, discomfort, stress, and even threat to life (McBrien & Ford, 2012). Despite these hardships, there are stories of children of refugees with remarkable resilience who have achieved academically and pursued higher education (see Suárez-Orozco & Suárez-Orozco, 2001).

Factors Affecting GT EL Underrepresentation

Identifying a student as GT is controversial as it results in some students being labeled as GT while others are "left behind" (Borland, 2014, p. 323). Unfortunately, those from low-income and culturally, linguistically, and economically diverse (CLED) populations—which typically include ELs—are more often left behind (Borland, 2003; Ford, 2014; Mun, 2016; Peters & Engerrand, 2016; Siegle et al., 2016; Worrell, 2014). Even if referred for GT programming, such students may face barriers in testing, as differences in average scores for identification have been observed among various populations (Gottfredson, 2003). These score differences are highly correlated with socioeconomic status (SES) and other factors such as levels of parental education, reduced opportunities to learn, self-fulfilling prophecy, and stigma consciousness. Nonetheless, there is the possibility that these factors play a role in the differences in test scores due to a multiplicative effect of various disadvantages (Nisbett et al., 2012; Robinson, 2003).

Research on GT EL Underrepresentation

Because this increase in the number of ELs has not been matched by an increase of this population in GT programs, the field of GT education has been characterized as elitist (Borland, 2003; Sapon-Shevin, 2003). Students with academic advantage are perceived as gaining even greater advantages by enjoying the benefits of GT pedagogy, smaller classrooms, and more skilled teachers, all of which run counter to the American ideals of egalitarianism (Sapon-Shevin, 2003; Subotnik et al., 2011). Plucker and Callahan (2014) asserted that for GT education to advance and thrive as a field, it "needs to shrink excellence gaps . . . by raising the achievement levels of underachieving groups, not by allowing already high-performing groups to slip" (p. 400).

Research Questions

The purpose of this article is to provide a comprehensive review of extant literature related to practices used to identify and serve ELs for GT education services by addressing the following research questions:

Research Question 1: What empirical and theoretical/descriptive research exists on how to identify ELs for school GT programs?
Research Question 2: What are the current identification and participation rates of ELs in school GT programs?
Research Question 3: What are suggested services and strategies for serving ELs in school GT programs?

Method

Based on these research questions, we conducted a systematic literature review, or "a review with a clear stated purpose, a question, a defined search approach, stating inclusion and exclusion criteria, producing a qualitative appraisal of articles" (Jesson et al., 2011, p. 12). Given the dearth of literature on GT ELs, we included articles of related interest as well (e.g., those that addressed CLED GT populations that counted ELs as members).

Search Terms

To capture the initial batch of references, we applied a broad set of terms using *gifted* or *talented* and synonymous terms like *advanced learn*, high achiev**, or *high abilit** together with a pre-identified set of terms for *English learner* (see Table 1). We selected search terms for ELs in consultation with experts in dual language and multicultural education, and included terms that are currently out of favor due to deficit beliefs such as *limited English proficient* to incorporate as many related articles as possible.

Inclusion and Exclusion Criteria

We limited the search to peer-reviewed journal articles to ensure scholarly quality and reliability of sources (Jesson et al., 2011). This meant that book reviews, book chapters, and other similar published works were excluded from our search. Only articles written in English and focused on K–12 education in the United States were included for review because this report was concerned with GT ELs in the context of American schools. The dates of the search were purposefully undefined to capture the earliest references to ELs in GT education as well as the emergence of GT programs. This resulted in the inclusion of articles published between 1974 and 2018. See Table 2 for a full outline of search criteria.

Table 1. Literature Search Databases, Search Terms, and Identified Articles.

Search terms/databases	No. of references
1. "gifted" or "talented" **and** "English language learner" or "ELL"	
PsycINFO	12
EBSCO	21
2. "gifted" or "talented" **and** "English learner" or "EL"	
PsycINFO	6
EBSCO	45
3. "gifted" or "talented" **and** "English as a second language" or "ESL" or "ESOL"	
PsycINFO	13
EBSCO	29
4. "gifted" or "talented" **and** "limited English proficien*" or "LEP"	
PsycINFO	9
EBSCO	41
5. "gifted" or "talented" **and** "bilingual" or "minority language learner" or "language minority"	
PsycINFO	33
EBSCO	93
6. "gifted" or "talented" **and** "ling*"	
PsycINFO	94
EBSCO	226
7. "advanced learn*" or "high achiev*" or "high abilit*" **and** "English learner"	
PsycINFO	0
EBSCO	3
Total	625

Table 2. Inclusion/Exclusion Criteria.

Inclusion criteria	Exclusion criteria
Peer-reviewed articles	Non-peer-reviewed articles
Unique articles	Duplicates
Written in English	Not written in English
U.S. context	Non-U.S. context
Related to identification or servicing of potentially gifted ELs	Unrelated to identification or servicing of potentially gifted ELs
K–12 grades or corresponding age levels	Non-K–12
All dates of publication	

Note. ELs = English learners.

Electronic Databases Searched

We conducted the search in relevant databases in the fields of education and psychology, including Educational Resources Information Center (ERIC), Academic Search Premier, PsycINFO, and Professional Development Collection (see Table 1).

Search Procedures, Selection, and Coding Process

We engaged in a multiphase search procedure in select databases aimed at finding and including all relevant articles on GT EL identification and services. This involved a critical appraisal process (Petticrew & Roberts, 2006), where we began with a large body of research that was funneled and vetted using a careful sifting process that led to our final selection of articles. This process included (a) an initial review of articles using a combination of search terms and filters to reflect our broad inclusion/exclusion criteria; (b) a screening of abstracts for relevance to our topic, research questions, study design, and findings; (c) a second, more careful screening of articles in full; and (d) a final, in-depth review and analysis of selected articles. Our research team was comprised of five faculty members, three postdoctoral researchers, and one doctoral student in colleges of education across two different universities at the time of review. An EL advisory board comprised of experts across multiple universities and organizations provided extensive feedback at various time points of this review.

Coding process. The initial search resulted in 625 citations, of which 376 were unique records and not duplicates (see Figure 1). The abstracts of the unique records were reviewed against our inclusion/exclusion criteria (see Table 2). When the abstracts did not provide enough information to make a determination of inclusion or exclusion, we examined the full content of the article. All off-topic citations (e.g., not gifted related, not EL) were removed, resulting in 123 potentially relevant articles. The remaining abstracts and articles were reviewed more critically for how they related to gifted EL identification and services. The samples often included a mix of traditionally underrepresented participants, including culturally, ethnically, and linguistically diverse students.

Two research team members independently reviewed and categorized the articles. We created a code sheet to note important elements of the different articles identified: (a) participant sample, (b) data sources, (c) methods, (d) major findings, and (e) recommendations. The first researcher recorded information for each of the studies, and the second researcher reviewed the first researcher's process, recorded information separately, and expanded some of the initial categories. The second researcher also compared information on both coding sheets for congruity, patterns, and larger themes. Additional categories in our final coding sheet included gifted definitions if noted by authors to identify how giftedness was conceptualized in ELs, and both research and practical recommendations. For sake of simplicity, we only included sample items in Table 4. The two researchers resolved differences in categorization by discussion and review by the research team until we reached consensus.

Based on the information on the coding sheet, we assessed the articles on the presence of "clear methodology, generalizations of results, and strength of claims" (p. 440), a process inspired by Thurlings et al.'s (2014) literature review. For example, we considered whether the methods for any empirical studies were clearly described and whether the research questions aligned with the findings and claims. Excluded articles were mostly descriptive pieces without clearly articulated research methods and evidence to support our research questions (e.g., Hartley & Wasson, 1989; Lara, 1994) or

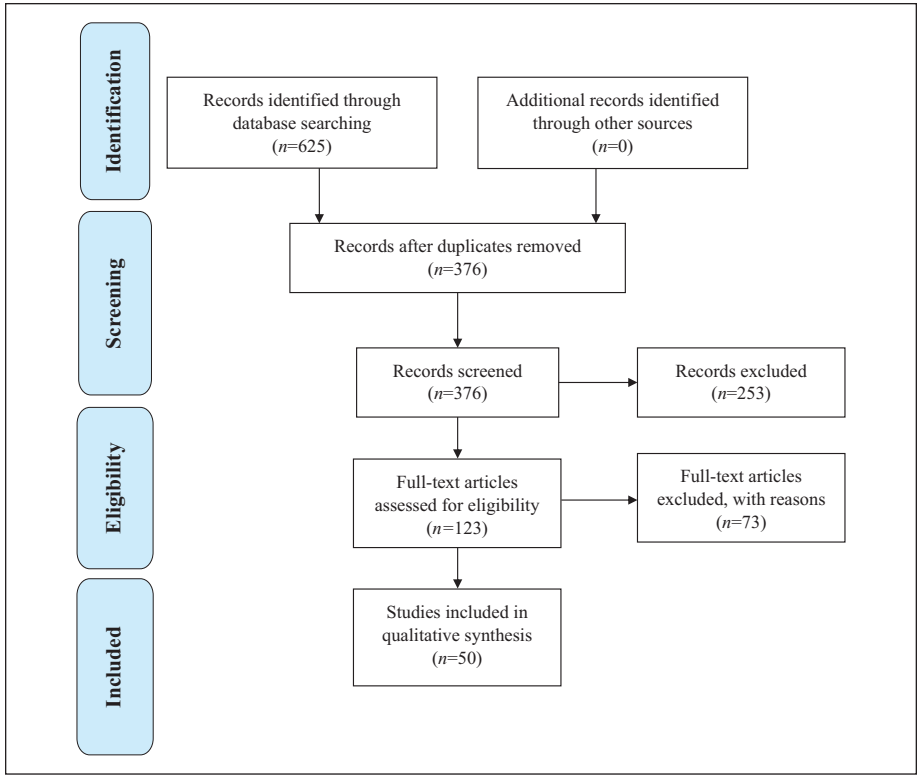

Figure 1. PRISMA diagram of selected studies.
Note. PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

only loosely connected to GT EL identification and/or services (e.g., Antrop-Gonzalez et al., 2004; Jackson & Lu, 1992). For theoretical papers, we considered the relevance of the paper to our research questions and the empirical evidence provided to support author claims. In particular, we were interested in identifying common themes across content and recommendations and the rationale for these recommendations. Only 50 of the 123 articles met our criteria and addressed identification or services specifically for potentially gifted EL students (stand-alone or mixed sample). These articles from our literature search are starred in the list of references. The EL advisory board reviewed the literature review, search terms, methods, and findings, and provided detailed feedback that we incorporated into this article.

Results

The articles in our systematic literature review were published between 1974 and 2018, and the number published each year are presented in Table 3. A sample

Table 3. Number of Articles by Year and Category.

Year published	No. of articles	Category
1974	1	Theoretical/descriptive
1985	3	Theoretical/descriptive
1991	1	Theoretical/descriptive
1995	1	Empirical
1996	1	Empirical
1997	1	Empirical
1998	2	Theoretical/descriptive (1), empirical (1)
1999	2	Theoretical/descriptive (1), empirical (1)
2000	1	Empirical
2001	2	Theoretical/descriptive (1), empirical (1)
2002	1	Empirical
2004	2	Theoretical/descriptive (1), empirical (1)
2006	2	Theoretical/descriptive (1), empirical (1)
2007	5	Theoretical/descriptive (2), empirical (3)
2008	4	Theoretical/descriptive (1), empirical (3)
2009	1	Empirical
2010	2	Empirical
2011	3	Empirical
2012	4	Theoretical/descriptive (2), empirical (2)
2013	3	Empirical
2014	3	Theoretical/descriptive
2015	2	Theoretical/descriptive (1), empirical (1)
2016	1	Empirical
2017	2	Empirical
Total articles	50	

summary of articles by type (i.e., empirical or theoretical/descriptive), sample (if available), sources of data collection and methods of analysis, EL population of focus, and evidence/quality of paper is included to illustrate how the articles were organized during the analysis process (see Table 4). Although additional recommendations emerged through the review as mentioned by authors (e.g., checklists, rating scales, portfolios, and parental input), we narrowed our description as it is presented below to the main subjects of the articles identified in our review. The majority of articles ($n = 38$) were published between 2000 and 2018, and just more than half of those ($n = 20$) were published between 2010 and 2018, reflecting perhaps the increasing salience of the topic of EL identification in GT education research. It is significant that the earliest article in this review was published in 1974, 2 years after the federally published Marland (1972) report, which defined GT children as those who are capable of high performance in general intellectual, leadership, and psychomotor abilities; specific academic aptitude; creative or productive thinking; and visual/performing arts.

Table 4. Sample Overview of Articles Included for Review.

Study	Article type	Sample	Data sources	Methods	EL population
Nomination (n = 7)					
Brice & Brice (2004)	Empirical	32 Mexican American students (1st–4th grades); 23 general education teachers, rural district in Florida	Cumulative academic records including standardized test scores, administration of teacher rating scale or checklist	Quantitative	Hispanic EL
de Wet & Gubbins (2011)	Empirical	308 teachers from eight different states	Questionnaire—Teachers' Beliefs About Culturally, Linguistically, and Economically Diverse Gifted Students Survey	Quantitative	General EL
Fernández et al. (1998)	Empirical	373 elementary teachers from nine schools in Florida	Adapted version of the Survey on Characteristics of Gifted and Talented Hispanic Students	Quantitative	Hispanic EL
Harradine et al. (2013)	Empirical	1,115 teachers from four different states	TOPS—Teachers' Observation of Potential in Students, TOPS Kid Profiles, U-STARS~PLUS Closing Survey, TOPS observation	Quantitative	Hispanic EL, Other EL
Hughes et al. (2006)	T/D	N/A	N/A	N/A	General EL
Kitano & Pedersen (2002)	Empirical	12 teachers of EL	2-hr focus groups	Qualitative	General EL
Peterson & Margolin (1997)	Empirical	55 Anglo-American middle school teachers	Field notes, audiotaped transcriptions of nomination meetings with teachers	Qualitative	Hispanic EL

Note. EL = English learner; T/D = theoretical/descriptive; U-STARS~PLUS = Using Science, Talents, and Abilities to Recognize Students~Promoting Learning for Under-Represented Students.

The results of this search are organized thematically in this article into four broad areas, with the first three reflecting the process through which students are typically identified and placed in GT education programming: nomination, screening/assessment, and services. The fourth and final section describes identification models for use with GT ELs. We discuss the included studies in detail here so as to conduct and communicate a proper synthesis of already-known information on this topic and outline how the current work creates "a new dimension or fresh perspective that makes a distinct contribution" to the field's knowledge of GT ELs (Jesson et al., 2011, p. 10).

Nomination

Nomination is often the first step of any GT program identification process (McBee, 2006). Depending on the policies of the district, students, parents, teachers, administrators, and/or other members of the community may nominate a child for assessment, although overall, teachers make the most nominations (McBee, 2006). However, implicit beliefs related to intelligence, giftedness, SES, and language ability may also influence how teachers view the abilities and potential of ELs in their classrooms (Allen, 2017; Carpenter, 2019; Costello, 2017). Eight empirical papers (Allen, 2017; Brice & Brice, 2004; Costello, 2017; de Wet & Gubbins, 2011; Fernández et al., 1998; Harradine et al., 2013; Kitano & Pedersen, 2002; Peterson & Margolin, 1997) and one theoretical/descriptive article (Hughes et al., 2006) considered teacher perceptions as related to identification of and/or services provided for GT ELs.

Four empirical papers gathered data from interviews and group conversations with teachers (Allen, 2017; Costello, 2017; Kitano & Pedersen, 2002; Peterson & Margolin, 1997). In one study, 12 teachers (eight White, three Latino, and one Filipino) certified in GT education and teaching GT ELs participated in focus groups where they shared their observations of GT ELs and recommended teaching strategies consistent with best practices (Kitano & Pedersen, 2002).

Although differences between GT ELs and general ELs were more difficult for these teachers to articulate, they broadly mentioned GT ELs' preference for moving at a faster pace, being challenged, and having independence as examples. Given that oral expression was challenging at times for GT ELs, the teachers stressed the importance of having a safe class environment. Finally, the teachers also agreed that these children needed challenging material that was not restricted by language (Kitano & Pedersen, 2002; Peterson & Margolin, 1997).

Kitano and Pedersen (2002) approached their study with the assumption that teachers would have valid understanding of the characteristics and needs of their GT ELs. On the contrary, when considering how teachers' definitions of giftedness incorporated ethnic and social-class assumptions that influenced who was selected, Peterson and Margolin (1997) devised a "test" where they invited teachers—all 55 of whom were Anglo-American—from two Midwestern middle schools where "minorities comprise[d] 16% of the total school enrollment" (p. 84) to nominate children for a temporary new GT program. Peterson and Margolin (1997) purposely did not provide a definition of *gifted* nor any guidelines for how to nominate students, but invited

teachers to interact with each other during nomination meetings to justify their own selections and challenge the choices of others. This allowed the researchers to observe the process by which teachers nominated students without constraints of outside definitions or expectations. From these meetings, the researchers discovered that despite this lack of guidelines, teachers experienced few difficulties identifying GT children. The authors reported that 21 minority (authors' term) students were nominated in total. Only three of the 61 students who were nominated more than once were from minority groups, and there were no minorities among the 18 who were nominated three or more times. They also noted that Latinos were the dominant minority group in the community but did not specify the race nor ethnicities of the nominated minority groups. Teacher nominations reflected a valuing of verbal and social skills, achievement, and work ethic, which the authors argued were reflective of dominant cultural biases that ultimately led to no ELs being recommended (see also Costello, 2017).

Two additional empirical papers probed which factors affected ELs' nomination for GT education programs. Allen (2017) examined what influenced teachers to recommend certain students for GT evaluation and found the importance placed on linguistic knowledge that is often reported (Castellano, 1998; Ford et al., 2014; Harris et al., 2009) The researcher interviewed six female teachers (two general education, two GT, two English as a Second Language) in a Title I elementary school in the Southeast United States and found that their perceptions of the language barrier, along with an emphasis on standardized testing, prevented CLED students from being identified by teachers as GT. In addition, Costello (2017) conducted observations, interviews, and focus groups in urban elementary and middle schools in Florida and found that the language barrier and dominant cultural values often prevented GT ELs from being identified for and provided services.

Cultural biases may also be embedded in teacher rating scales that are developed to identify students for GT services. For example, a Florida district developed a teacher behavior checklist called T.A.R.G.E.T. B that was used as a giftedness screening tool, and Brice and Brice (2004) found that 24% of its items were arguably culturally biased against Hispanic and/or CLED students. Furthermore, students who were still learning English may not have yet felt comfortable verbally expressing themselves in the classroom (Brice & Brice, 2004).

Continuing with cultural influences on the identification of GT ELs, Fernández et al. (1998) investigated whether there were differences in teachers' perceptions between general GT and Hispanic EL GT students, and whether those perceptions varied based on the teachers' own ethnicities. The authors administered Likert-type scale surveys adapted from the Survey on Characteristics of Gifted and Talented Hispanic Students (Fernández et al., 1998) to 373 elementary school teachers (162 Hispanic, 137 White, and 74 Black) in Florida. All of the teachers took the same surveys, but for a random half of the teachers in each school, the surveys were labeled as *Gifted*, and for the other half, the surveys were labeled as *Gifted Hispanic LEP*, with directions in each survey reflecting the corresponding label. Results of a two-way multivariate analysis of variance (MANOVA) revealed significant differences by survey group and ethnicity but no overall multivariate interaction effect. The

Tukey–Kramer post hoc tests showed that mean responses to scale items such as *Likes to study* and *Does well in school* were significantly higher for Hispanic and Black teachers compared with White teachers, while mean responses to items related to having a variety of interests, working well with others, and listening well were significantly higher for Hispanic teachers than White teachers. Speaking more than one language, having athletic skill or dance ability, and playing a musical instrument were items rated significantly higher for the Gifted Hispanic LEP survey group as compared with the Gifted survey group, whereas skills such as having a large vocabulary and ability in oral expression were given significantly higher ratings in the Gifted group, supporting the premise that teachers evaluated students differently based on ethnic origin. However, both groups also gave high ratings to items that described characteristics typically ascribed to GT children in the research literature, such as curiosity, creativity, and motivation, which suggested that regardless of ethnicity, teachers shared common beliefs about the nature of giftedness.

Hughes et al. (2006) similarly addressed teachers' perceptions of code switching. Although they understood that students' ability to code switch was not commonly seen as a positive trait, they also argued that the advanced skills and higher order thinking necessary to negotiate two languages made code switching worthy of examination as an indicator of potential giftedness.

Teacher perceptions about CLED GT students were more recently investigated through two different large-scale studies spanning multiple states, both with mostly White female teachers (de Wet & Gubbins, 2011; Harradine et al., 2013). In de Wet and Gubbins's study (2011), 308 participants (84% White, 90% female), from a stratified random sample of 4,000 teachers from eight states, returned the Teachers' Beliefs About Culturally, Linguistically, and Economically Diverse Gifted Students Survey, which had a 30-item, Likert-type-scale section about teacher beliefs. Respondents generally believed that above-average abilities existed in all populations, that IQ tests were not accurate indicators of abilities, and that GT programs would benefit from the inclusion of CLED students (see also Costello, 2017). Specifically, de Wet and Gubbins's (2011) MANOVA revealed no significant differences in means between responses of teachers who worked in nondiverse and diverse schools.

The articles mentioned thus far have generally sought to understand what was already present (i.e., core teacher beliefs). In contrast, Harradine et al. (2013) examined the influence of a strengths-based approach to observing young children (ages 5–9) systematically, using the Teacher's Observation of Potential in Students (TOPS; M. R. Coleman & Shah-Coltrane, 2011), on teachers' recognition of high potential in students of color (a population that often, but not always, include ELs), and found that oral language was a barrier for both Latino boys and girls (Harradine et al., 2013). This multiyear study was conducted as part of an evaluation of a larger study evaluating U-STARS~PLUS (Using Science, Talents, and Abilities to Recognize Students~Promoting Learning for Under-Represented Students), and the 1,115 participants were from North Carolina, Colorado, Louisiana, and Ohio. Teachers used the TOPS Whole Class Observation Form to observe students for a 3- to 6-week period of time, followed by another 3- to 6-week period of observing specific

students on the Individual Student Observation Form. They also completed a TOPS Kid Profile for their TOPS students and completed surveys at the end of the study where they shared personal reflections. Participants indicated that without administering TOPS, they might have overlooked the academic potential of 22% of the children of color. Teachers noted several barriers that may have prevented them from recognizing potential in the CLED children prior to using TOPS, such as lack of parental advocacy, low expectations, and, particularly for Latino students, oral language abilities (see also Costello, 2017). In the survey, which had a 38% response rate, 21% of teachers reported that TOPS had "revolutionized the way they look at students" (Harradine et al., 2013, p. 31), 56% indicated that it assisted them in recognizing potential in students they might have missed, and 74% believed that they could now more readily recognize the high potential of young CLED students.

Summary. The evidence and recommendations in the articles included above suggest that teachers have implicit (cultural) beliefs about giftedness and ELs, which may in turn negatively influence these students' nominations for GT programming. However, more recent studies provide some evidence that these beliefs can change with training and education (e.g., Harradine et al., 2013).

Screening/Assessment

If nominated for GT programs, students are often screened or assessed by standardized cognitive tests that may include tests of IQ, ability or aptitude, and achievement (McClain & Pfeiffer, 2012; NAGC & CSDPG, 2015). Although there is support in the research for using screening systems as ways to "catch" underrepresented GT students who might be missed by a more traditional parent/teacher referral system (Card & Giuliano, 2016)—if these systems are accompanied by services and support for these students once they are enrolled in the programming (Lakin, 2016)—there is also an understanding that for ELs, these cognitive assessments can represent one of the greatest hurdles to GT identification. Researchers have long asserted that ELs do not perform as well as non-ELs on cognitive assessments with verbal components in English due to linguistic and cultural factors (Bernal, 2001; de Bernard & Hofstra, 1985; Esquierdo & Arreguín-Anderson, 2012; Ford et al., 2008; G. Gonzalez, 1974; Harris et al., 2007; Melesky, 1985). Stein et al. (2012) compared the plight (authors' term) of GT ELs with that of the twice-exceptional student (those with gifts and disabilities), in the way their giftedness was masked by a perceived lack of ability in English. This observation has also prompted some scholars to examine alternative assessments for ELs, such as nonverbal tests of ability or dynamic and performance-based assessments (e.g., Kirschenbaum, 1998; Lidz & Macrine, 2001; Sarouphim, 1999, 2000; Sarouphim & Maker, 2010).

Theoretical arguments. The authors of the nine theoretical/descriptive articles in this section addressed the problem of standardized tests as it related to the underrepresentation of ELs ($n = 4$; Bernal, 2001; G. Gonzalez, 1974; Harris et al., 2007; Stein et al.,

2012) and, specifically, Hispanic ELs ($n = 5$; de Bernard & Hofstra, 1985; Esquierdo & Arreguín-Anderson, 2012; Ford et al., 2008; Melesky, 1985; Salas et al., 2014) in GT programs. Additional barriers to their representation include concerns such as financial and physical resources in the schools to accommodate ELs, fear by middle-class parents and school personnel that the quality of the programs would be compromised by including students who were not admitted through tests, and educators with low expectations, a topic already discussed in the "Nomination" section of this article (Bernal, 2001; Harris et al., 2007). Common elements in these authors' recommendations for identifying and serving GT ELs include the following:

- The need to acknowledge that giftedness exists in all populations and that it can manifest differently by culture (Costello, 2017; Esquierdo & Arreguín-Anderson, 2012; Ford et al., 2008; Harris et al., 2007; Melesky, 1985; Pereira & de Oliveira, 2015; Stein et al., 2012).
- The need to shift from deficit-based to strengths-based thinking because beliefs matter in nomination, identification, and services (Bernal, 2001; Ford et al., 2008; G. Gonzalez, 1974; Melesky, 1985; Stein et al., 2012).
- The need to acknowledge that standardized testing is problematic in identifying GT ELs due to linguistic and cultural bias (Bernal, 2001; de Bernard & Hofstra, 1985; Ford et al., 2008; G. Gonzalez, 1974; Harris et al., 2007; Melesky, 1985; Stein et al., 2012), and that reliance on IQ tests has caused "demographic homogeneity" in GT programming (Harris et al., 2007, p. 27).
- A need to consider the use of multiple measures and alternative assessments, which could account for students' more rapid development in some domains than in others. These assessments might include nonverbal ability tests, intelligence tests in a student's own language, dynamic and authentic procedures, classroom observations, checklists and rating scales, portfolios, parental input, and self-identification (Ford et al., 2008; G. Gonzalez, 1974; Harris et al., 2007; Lakin, 2018; Melesky, 1985; Salas et al., 2014; Stein et al., 2012). This could even entail rethinking how a measurement tool is evaluated, as using group-specific norms to evaluate all students' performance on the same assessment tool would allow a student's prior learning opportunities to be taken into account (see also Hodges et al., 2018; Peters & Engerrand, 2016).
- A need for more professional learning for school personnel on the GT identification of CLED students (Bernal, 2001; Esquierdo & Arreguín-Anderson, 2012; Ford et al., 2008; Harris et al., 2007; Melesky, 1985; Stein et al., 2012).

As mentioned in this final bullet point, and in accordance with these recommendations, an alteration in the ways that ELs are currently assessed for GT programs can potentially result from more professional learning opportunities (Esquierdo & Arreguín-Anderson, 2012; Melesky, 1985; Stein et al., 2012). Bernal (2001) recommended recruiting more teachers of color in GT programs to organically improve identification practices, as they can model professional behavior for similar students; bring

unique, multicultural perspectives and approaches to White students; and work with their White teacher peers to advocate for change and present "curricular alternatives" for all GT students (p. 86).

In addition to the elements presented here of researchers' recommendations for identifying and serving GT ELs, the shared characteristic of English not being these students' home language meant that nonverbal assessments emerged as a key issue for consideration.

Nonverbal assessments. Many educators and researchers have considered using nonverbal tests of ability to identify CLED students for GT services under the premise that students with advanced cognitive reasoning abilities should do well on them, regardless of their perceived English proficiency. However, within the field of assessment, experts have debated the appropriateness of administering nonverbal ability tests to ELs. We identified eight empirical papers on nonverbal assessments (Giessman et al., 2013; V. Gonzalez, 2006; V. Gonzalez et al., 1996; Lakin & Lohman, 2011; Lohman et al., 2008; Lohman & Gambrell, 2012; M. S. Matthews & Kirsch, 2011; Mills & Tissot, 1995). They included at least one of three popular cognitive assessments used with the EL population: the Raven's Progressive Matrices (RPM; J. Raven et al., 1998), the Naglieri Nonverbal Ability Test (NNAT; Naglieri, 1997), and the Cognitive Abilities Test, Form 6 (CogAT-6; Lohman & Hagen, 2001). Each of these instruments is considered to be either a nonverbal test or a battery that includes a nonverbal component. These eight empirical papers are presented here in this order to reveal the evolution of debate over the efficacy of these instruments for identifying ELs for GT programs.

RPM, known as the Raven, is the oldest nonverbal test of cognitive ability, developed by John C. Raven in 1936. Mills and Tissot (1995) investigated the utility of Raven's Advanced Progressive Matrices (APM), which is based on Raven's Standard Progressive Matrices (SPM) but has additional items to differentiate "between people at the high end of intellectual ability" (Pearson, n.d., para. 4; J. C. Raven et al., 1983, 1996). Mills and Tissot also compared the APM with the School and College Ability Test (SCAT; Educational Testing Service, 1980), a standardized test of verbal and quantitative ability. Both the APM and the SCAT were administered to 347 ninth-grade students, including 67 identified as ELs. Students' scores on the two tests were compared across gender, ethnic group, and EL status, and further compared with achievement test scores in reading and math. The researchers found ethnic group differences on both tests, even after controlling for eligibility for free and reduced-price lunch and for EL status; White students outperformed Black and Hispanic students on the SCAT and, with slightly less disparity, the APM.

The two measures were also compared to see how each would perform as a selection tool using a hypothetical cut score at the 90th percentile. More students scored at or above the 90th percentile on the APM (17%) than on the SCAT (5%). The SCAT was not administered to ELs because the language demands were deemed to be too great, but 12% of ELs achieved at or above the 90th percentile on the APM. Mills and Tissot (1995) also presented correlations across the SCAT, APM, and math and reading achievement scores. SCAT scores were significantly correlated with reading and

math achievement scores; however, the APM and student achievement were not significantly correlated. The authors argued that the correlations reflected the content of the SCAT as a measure of "crystallized intelligence," while the APM measured "fluid intelligence" (Mills & Tissot, 1995, p. 215). Using this rationale, the authors identified the APM as a promising measure for use as a more equitable screening tool for identification of academic potential for CLED students (including ELs), but only if used in combination with other tools like parent and/or teacher behavior ratings.

In another similar study, which compared the Raven with the NNAT and CogAT-6, Lohman et al. (2008) criticized the NNAT for overestimating high-scoring children, for primary-grade ELs scoring notably poorly, and for having a standard error of more than twice that of the Raven or CogAT. The authors also called attention to the fluidity of the term EL, noting that there are no standard criteria in use to define it uniformly, so children can be classified as EL in one district and non-EL in another, making comparison of one group to the other unreliable.

Lohman et al. (2008) also compared the performance of ELs and non-ELs on the NNAT, SPM, and the nonverbal battery of the CogAT-6. They found substantial differences in the nonverbal scores of ELs and non-ELs on average and across multiple points in the score distribution. In addition, Lohman et al. (2008) characterized the norms for all three tests as "seriously awry" (p. 290) when placing the scores for ELs on all three tests on the same scale. Finally, Lohman et al. (2008) analyzed how the tests correlated with each other and predicted reading and mathematics achievement, finding that normative scores were not interchangeable yet appeared to measure a "common ability dimension" (p. 291), and that higher correlations for all three tests were higher for non-ELs and represented student ability to reason in the symbol system, which was not necessarily predictive of mathematical or reading achievement.

In addition, Lohman et al. (2008) evaluated the efficacy of each measure in predicting students with the strongest achievement. Their results indicated that on all three tests, ELs scored between .5 and .6 *SD* lower than non-ELs. Furthermore, NNAT scores exhibited high variability across grade levels, especially at lower levels. Lohman et al. (2008) claimed this variability would result in a threefold increase in the number of students identified for GT services, compared with a test that did not have extreme variability. The authors further concluded that the nonverbal tests did not predict EL achievement well and that when assessed by the Raven, non-ELs were much more likely to earn very high scores on the matrices. Based on their study's results, the researchers cautioned that nonverbal tests should be part of a larger system of identifying GT students that considers a wider range of abilities and teacher ratings and compares students with local peers rather than national norms (Lohman et al., 2008).

Continuing this work related to the efficacy, or lack thereof, of nonverbal tests to accurately identify GT ELs, Lohman and Gambrell (2012) made the distinction *and* studied the differences between picture verbal, picture quantitative, and figural nonverbal assessments (i.e., NNAT) in a study investigating the use of nonverbal tests in the process of identifying GT students. They purported that nonverbal tests were effective and better suited to identify ELs due to the purposeful exclusion of items that

required reading. In addition, they suggested that using local norms was more viable when assessing the academic talent of school-aged children, recommending that educators attempt to identify the top-performing students relative to their cohort instead of the nation (see also Peters & Engerrand, 2016)—although over time, programs should aim for participants to achieve national norms so that their education remains on par with their national peers.

Lohman and Gambrell (2012) also identified several underserved groups and examined the differences in their performance on the three types of nonverbal tests just mentioned. K–2 ELs performed best on the picture verbal and picture quantitative tests; however, the scores were not statistically significantly different after controlling for background variables. As one might anticipate, ELs in third through sixth grades scored much lower on the English-language verbal tests relative to the nonverbal tests, and had similar scores on the quantitative and figural tests.

M. S. Matthews and Kirsch (2011) also examined means of assessing GT students by evaluating aptitude tests, both verbal and nonverbal, used with CLED learners when identifying elementary students for GT services, although they operationally defined *aptitude testing* differently than Lohman and Gambrell (2012). M. S. Matthews and Kirsch (2011) used the term *aptitude test* synonymously with *standardized intelligence testing*. They investigated eight aptitude tests to determine the efficacy of each assessment to identify ELs. In a comparsion of means, they also considered and included scores from an additional test that was only used with four students (Kaufman Assessment Battery for Children [K-ABC]; Kaufman & Kaufman, 1983) and scores from tests that were completed by only one student (the Comprehensive Test of Nonverbal Intelligence, the NNAT, the Woodcock–Johnson III Tests of Cognitive Abilities, and the Wechsler Preschool and Primary Scale of Intelligence–Revised), bringing their total to 432 students.

Although all students in the sample met the district's screening score criteria, 120 or higher on either the Kaufman Brief Intelligence Test (Kaufman & Kaufman, 2004) or Slosson Intelligence Test (Slosson et al., 2002), before individual full-scale IQ testing, the scores were not recorded. That being said, an examination of the average scores on the eight IQ tests revealed that the Stanford–Binet V (SB5; Roid, 2003) mean score was well below the means of all other measures. Of note, there were no differences among the means of two nonverbal-format IQ test scores and six verbal-format IQ test scores. In other words, the SB5 scores were lower than the average scores from the other seven assessments, but there were no differences between the nonverbal- and verbal-format tests.

Lakin and Lohman (2011), when examining the predictive accuracy of verbal, quantitative, and nonverbal reasoning tests, concurred with M. S. Matthews and Kirsch (2011) regarding the selection of identification measures for GT programs. In their study, Lakin and Lohman (2011) analyzed the predictive relationships of fourth-grade CogAT Form 5 (CogAT-5; Thorndike & Hagen, 1993) and Iowa Tests of Basic Skills Form K (ITBS; Hoover et al., 1993) scores to those students' sixth-grade ITBS scores. The ELs' average test scores were all noticeably lower than non-EL average scores, including an average nonverbal test mean that was more than half a standard

deviation below the national standardized mean. In addition, the nonverbal test was less accurate in predicting future achievement, as measured by the sixth-grade ITBS scores, which contradicts the idea that nonverbal assessments are effective in predicting future achievement and in identifying GT students, assuming an outcome of GT services manifests itself as increased achievement test scores over time. Like others, Lakin and Lohman (2011) suggested that administrators "consider the predictive validity of the selection tests for all students and seek evidence that critically evaluates the expectation that unadjusted test scores will actually result in greater fairness and diversity" (p. 617).

Also comparing the CogAT and the NNAT, Giessman et al. (2013) compared the performance of 5,833 White and CLED second graders who took the CogAT-6, and 4,038 White and CLED K–2 students who took the NNAT-2 between 2005 and 2011 for the purpose of GT program identification. They found the same gap for Black students on the CogAT-6 composite with a slightly larger gap for Hispanics and ELs when compared with White students, and an overall outcome of the nonverbal battery of CogAT-6 producing smaller gaps than the NNAT-2 for CLED students when compared with White students. The authors used their findings to support additional adjustments to identification procedures rather than relying on figural screening tests.

Finally, two articles addressed the assessment of bilingual children's cognitive and language development. V. Gonzalez et al. (1996) reviewed three instruments used to identify GT Hispanic bilingual kindergarteners: a home language survey, a locally designed Teachers' and Parents' Rating Scale of Creativity, and the Qualitative Use of English and Spanish Tasks (QUEST; described below). Through chi-square tests and case studies, the authors identified patterns that influenced how one school assessed bilingual students' cognitive and language development of home and additional languages, verbal and nonverbal assessment protocols, multiple measures and informants, individualizing assessments, and evaluators' personalities. They argued that these patterns represent common dilemmas in identifying ELs for GT services, including evaluators' misperceptions due to lack of awareness of the complexities of being bilingual, bicultural, and bicognitive; contradictory results from qualitative and standardized assessments; and the effect of the evaluators' personalities on assessment.

Later, V. Gonzalez (2006) furthered the work of V. Gonzalez et al. (1996) by studying kindergarteners' performance on QUEST to determine the effect of SES, language learning, and culture on the performance of English and Spanish tasks. Together, the verbal and nonverbal tasks were designed to assess bilingual children's conceptual processes. Through QUEST, V. Gonzalez (2006) found evidence for the developmental appropriateness of using nonverbal problem-solving tasks for assessing young children's cognitive processes, as the 106 kindergarteners the author studied were between 4 and 6.5 years old. V. Gonzalez (2006) found comparable performance among students, regardless of their SES and language learning status, with all scoring higher on nonverbal classification tasks. V. Gonzalez (2006) further posited that bilingualism enhanced the children's ability to think at a "metalinguistic" (p. 166) level in relation to both linguistic and cultural variables.

Dynamic and performance-based assessments. Beyond looking at nonverbal assessments, researchers also examined the potential of alternative approaches to be used on their own or in conjunction with traditional assessments. Of the six articles in this section, two address dynamic assessment (Kirschenbaum, 1998; Lidz & Macrine, 2001) and four address performance-based assessments, including the Problem-Solving Assessment (PSA; Reid et al., 1999) and the Discovering Intellectual Strengths and Capabilities through Observation while allowing for Varied Ethnic Responses (DISCOVER) assessment (Sarouphim, 1999, 2000; Sarouphim & Maker, 2010).

Dynamic assessment is an alternative approach to measuring cognitive ability that may be used successfully with low-income, CLED students (Kirschenbaum, 1998; Lidz & Macrine, 2001). In this type of assessment, children are directed how to perform certain tasks and then assessed on how well they learn similar tasks in which the examiner is allowed to intervene by providing "scaffolded instruction" (Kirschenbaum, 1998, p. 142) that may help the child complete the task. Interpretation of the assessment is based on how well the child takes advantage of the intervention (Lidz & Macrine, 2001).

Kirschenbaum (1998) examined the use of dynamic assessment with underrepresented groups in GT populations. He found that it was successfully used in identifying underserved populations through both standardized measures, such as the RPM, domain-specific tasks such as math and the arts, and processes such as portfolio reviews. Beyond identification, Kirschenbaum noted the use of dynamic assessment in programming to foster increased success and achievement for students, including those who did not meet the traditional criteria for entry into a program. Finally, he examined the effects of dynamic assessment on teacher perceptions, including increased flexibility and a change in viewing what they once considered to be negative behaviors as potential indicators of "exceptional potential" (Kirschenbaum, 1998, p. 144).

In a more specific approach, Lidz and Macrine (2001) studied dynamic assessment for the identification of CLED students; 81 students from a school in a district with a large percentage of CLED and immigrant students were selected for individual testing using dynamic assessment (Lidz & Macrine, 2001). These students, many of whom were dual language, had already performed in the top 10th percentile of at least two screening tests. The researchers determined that of these students who were individually assessed, those who scored in the top 3% on two out of three individual assessments, ITBS (Reading or Mathematics), K-ABC (Mental Processing Composite or Nonverbal), and the NNAT—pre- or posttest scores—would be identified for GT services. To test the effects of dynamic assessment, the researchers modified the NNAT with a special component. Students were administered the NNAT initially with no intervention and were retested with the dynamic assessment approach where the examiner provided assistance for the first five items missed on the test. Students were then asked to solve the remainder of items they had missed on their own. Posttest scores using the dynamic assessment process of the NNAT contributed to the GT identification of 23 of 25 total students who were selected for inclusion in GT services. Only five of those students would have qualified with just the pretest version of the

NNAT. To correct for potential practice effects, the estimated test–retest score was subtracted from the posttest raw score of each student before generating standard scores. Using dynamic assessment as part of the identification procedures in this study allowed for the selection of 5% of the school population—a sharp increase when compared with prior attempts of the school, which resulted in less than 1% of students being identified for inclusion in GT programming.

In addition to dynamic assessment, researchers have examined the efficacy of performance-based assessments for screening GT ELs. One performance-based assessment, the PSA, synthesizes the problem-solving aspects of Gardner's (1983) multiple intelligences and Sternberg's (1999) triarchic theories of human intelligence with Maker's (1993) conceptualization of giftedness as the ability to solve complex problems "in effective, efficient, elegant, and economical ways" (Reid et al., 1999, p. 253). The PSA involves linguistic, logical/mathematical, and spatial intelligences in synthetic, analytic, and practical problem-solving activities, as well as Maker's problem types emphasizing unstructured, open-ended tasks (Reid et al., 1999). In their study, Reid and associates (1999) administered the PSA as part of an identification process of 2,000 second-grade students in a large school district in the Southeastern United States that was 64% White, 31% Black, and 5% Asian, Hispanic, and American Indian. Students took the PSA and the Miller Analogies Test–Short Form (MAT-SF). For the PSA, students engaged in activities involving solving simple and complex math computations and oral and pictorial math story problems, completing contextual clue challenges, writing and telling stories, using tangrams to solve puzzles, and constructing with colorful cardboard pieces. Throughout the process, trained observers used standards and rubrics to monitor student participation and noted student performance and anecdotal notes about student strengths and weaknesses to discuss and recommend students. These recommendations were compared with the results of students taking the MAT-SF test of solving 34 abstract design problems, designed to test students' nonverbal reasoning ability in a "short administration time and a reliable score related to academic performance" (Reid et al., 1999, p. 265). As a result, 62% of nontraditional students were identified using the PSA, including 32% of Black students—compared with 8% using the MAT-SF. Reid and associates (1999) considered the PSA's standards and rubrics as potential supports in answer to the issue of subjective professional judgment and the process as a way to look to strength-based performance of diverse learners beyond pencil-and-paper assessments.

Another example of a performance-based assessment, the DISCOVER assessment (Sarouphim, 1999), is based on Gardner's (1983) multiple intelligences theory and Maker's (1993) gifted conception, which emphasizes the importance of creative problem solving and was designed to identify CLED GT students. To complete this assessment, students must use problem-solving skills to solve increasingly more complex tasks while trained observers record behaviors using standard observation sheets. To prevent bias, observers rotate after each activity, so students have opportunities to be observed by at least two individuals.

Sarouphim (1999) addressed the preliminary reliability and validity studies of DISCOVER by examining the results of five different studies. Of two validity studies, one showed high interrater reliability in DISCOVER's spatial activity in particular,

while the other showed high interrater reliability across all spatial, linguistic, and logical–mathematical tasks. Of three validity studies, one found comparable results of the specific tasks of DISCOVER to the related subtests of the Wechsler Intelligence Scale for Children–Third Edition. Another study showed interrater reliability on the spatial, linguistic, and logical–mathematical tasks when observed by the DISCOVER observer when compared with the observations of independent observers and teachers. Finally, the third study found statistically significant correlations between students' Raven scores and DISCOVER ratings for nonverbal reasoning abilities.

In examining the internal structure of DISCOVER, Sarouphim (2000) assessed 257 Navajo Indian and Mexican American elementary school students in the five activities of the assessment. Interrater correlations were performed on observations across the five activities to examine whether students received similar or different scores. Results indicated low or nonstatistically significant interrater correlations for kindergarten and second-grade students, with the exception of a significant correlation between the activities of storytelling and storywriting. For fourth and fifth graders specifically, there were statistically significant correlations between ratings on math and Tangrams, math and storytelling, and storytelling and storywriting activities. Overall, the patterns of correlations were quite low, indicating that observers were giving different scores to students in each of the activities. In other words, students identified with high potential in one area (e.g., logical–mathematical) were not necessarily identified as high in another area (e.g., linguistic), a finding consistent with multiple intelligence theory. Inconsistency in interrating observations was mentioned as another potential reason for the low and nonsignificant interrater correlations, but this explanation was not a finding supported in prior reliability studies, as mentioned by the authors (Sarouphim, 2000).

A more recent empirical study of DISCOVER examined potential ethnic and gender differences in identifying GT learners (Sarouphim & Maker, 2010). A sample of 941 K–5 students (49% male, 51% female) that included six races/ethnicities (White Americans, Blacks, Hispanics, Native Americans, South Pacific/Pacific Islanders, and Arabs) from four different countries, including the United States were assessed using DISCOVER. Although there was no main effect for assessment activity or ethnicity, ethnicity moderated assessment activity results: White Americans received the highest scores in math, South Pacific/Pacific Islanders in oral linguistic categories, and Native Americans in spatial artistic oral linguistic categories. As such, performance-based assessments may have potential for identifying more diverse groups of students than tests of cognitive abilities (Reid et al., 1999; Sarouphim, 2005; Sarouphim & Maker, 2010).

Summary. A total of 23 papers, or 46% of all the literature search articles, dealt with screening/assessment in the identification of GT ELs and argued for the use of alternative assessments, such as nonverbal ability tests and dynamic and performance-based assessments, over IQ and intelligence tests. Our literature search identified eight empirical papers on the RPM, NNAT, and CogAT, three common tests that are either completely or partially nonverbal (Giessman et al., 2013; V. Gonzalez, 2006; V. Gonzalez et al., 1996; Lakin & Lohman, 2011; Lohman et al., 2008; Lohman & Gambrell,

2012; M. S. Matthews & Kirsch, 2011; Mills & Tissot, 1995), as well as several examining the use of dynamic and performance-based assessments in identifying ELs for GT programs. CLED students may benefit from this type of instruction as demonstrated in the increased rates of GT identification after incorporating dynamic assessment with the NNAT (Lidz & Macrine, 2001).

Services

The 12 articles in this section are related to instructional approaches, curriculum, and student expectations—in other words, what schools must address and provide to GT ELs once they are identified for and placed in GT programs. They adhere to the belief that content and instruction in GT programs must be adjusted to meet the needs of ELs, as these students should not be simply placed in these programs according to identification processes without support while they are enrolled (Pereira & de Oliveira, 2015). Although some of these articles may also refer to identification, we included them here due to their description of services. Four of the articles are theoretical/descriptive, and the remaining eight are empirical.

Instructional approaches. Four empirical papers proposed that dual or heritage language courses (those taught in the student's home language) can simultaneously help students retain the home language and develop academic proficiency in the new language while exploring challenging content (Barkan & Bernal, 1991; P. H. Matthews & Matthews, 2004; Olszewski-Kubilius & Clarenbach, 2014; Valencia, 1985). Valencia (1985) made three recommendations for dual language education programs in identifying and serving GT ELs: The in-service teacher training component should include instruction for working with GT students; strategies must increase parental involvement and cooperation in identifying their children as GT; and finally, there should be in-service activities for dual language teachers to help in the identification and servicing of GT ELs. Olszewski-Kubilius and Clarenbach (2014) also highlighted the importance of high teacher expectations and appropriate training as necessary and identified vital components of identifying and educating GT ELs, including building awareness of the diversity of high-ability learners and providing supportive networks for students.

Curriculum. Four empirical papers examined the effects of using two different math interventions with ELs through Mentoring Mathematical Minds (M^3) curricular units (Cho et al., 2015) and a cluster grouping model (see also Allen et al., 2016; Brulles et al., 2010, 2012). In the first, M^3 curricular units combine the teaching practices of GT education with the content and process standards of the National Council of Teachers of Mathematics. ELs who received the M^3 intervention had greater gains ($d = .63$) in math achievement when compared with a comparison group of students who did not receive the intervention.

Second, cluster grouping is an inclusion model in which identified GT students are clustered into classrooms with one or more teachers designated as the GT cluster teacher(s) in each grade (Brulles et al., 2010). Similar to the results of M^3, GT students

in the cluster group, regardless of gender, grade, ethnicity, and EL status, showed achievement growth in mathematics (Brulles et al., 2010). Comparison of achievement between general education students in the cluster group and students not in the cluster group demonstrated similar growth levels, indicating that cluster grouping is not harmful to general education students in a classroom where cluster groups are implemented (Brulles et al., 2012).

Considering student voices and experiences. Separate studies examined EL voices and experiences related to giftedness. GT ELs in a Southeastern U.S. urban middle school were examined in three different empirical studies that used the same sample of 16 Latino/a students, half of whom were receiving GT education services and the other half of whom were receiving general education services (Brice et al., 2008; McHatton et al., 2007; Shaunessy et al., 2007). The students met with the research team for informal hour-long group discussions over five consecutive days. Findings from these studies indicated that GT ELs were more aware of their academic abilities and characteristics as GT learners, provided more comments and detailed explanations, and shared some experiences of perceived discrimination. In interviewing students, McHatton et al. (2007) found that Hispanic GT students had confidence in their abilities and high expectations, and also held a prevailing view that "Hispanics are not supposed to do well in school, and that's the expectation. So if you are gifted and Hispanic, then you've exceeded expectations" (p. 17; see also Shaunessy et al., 2007). The general education ELs in comparison spoke more Spanish, were less confident about their academic abilities, and voiced more experiences of discrimination (McHatton et al., 2007; Shaunessy et al., 2007).

In a separate empirical study, the schooling experiences of high-potential Hispanic ELs from four different Midwestern schools, in second to sixth grade, were examined by interviewing 22 students, 20 parents, and 22 teachers as a follow-up to Project HOPE (Having Opportunities Promotes Excellence), a 3-year project that gave high-potential, low-income students Saturday and summer enrichment programs (Pereira & Gentry, 2013). Results indicated that participants were overall well integrated into the school, enjoyed their school experiences, had positive experiences with peers and teachers, and were committed to succeeding academically. Interestingly, none of the students in this study were identified for GT services in their homeschools.

In considering the voices and experiences of GT ELs, researchers asserted that better understanding the relation of bilingualism to giftedness may contribute to more effective programming and assessment (Brice et al., 2008), educators should become more knowledgeable about ELs' cultural and curricular needs (Shaunessy et al., 2007), and that it is important for educators to be aware of the messages they convey about ethnically and linguistically diverse populations (McHatton et al., 2007). Researchers also discussed the need to focus on students' strengths and the importance of identifying high-potential students from underrepresented populations for GT education services (Pereira & Gentry, 2013).

Identification Models

In addition to the articles presented above that addressed nominating, assessing, and providing services to ELs in GT programs, the final six articles in our search included descriptions of specific identification models (Bianco & Harris, 2014; Horn, 2015; Pierce et al., 2007) and case studies of GT programs (Briggs et al., 2008; Harris et al., 2009; Reed, 2007).

For models to succeed in increasing the representation of ELs in GT education, the support and participation of teachers, administrators, district coordinators, and parents are required (Horn, 2015; Reed, 2007). In Reed (2007), teachers, administrators, and parents became involved in a school where a Gifted and Talented Education (GATE) screening program was purposefully and successfully implemented through identifying a pool of potential GT ELs to take the Otis–Lennon School Abilities Test (8th ed.). Likewise, in Horn (2015), school staff became active participants in supporting and implementing the Fairfax County Public Schools' Young Scholars Model, where early identification of underrepresented GT students, including high-poverty, EL, and twice-exceptional learners, is stressed. Longitudinal studies provided indicators of success for identified Young Scholars. At the K–8 level, half of the 5,266 Young Scholars received classroom differentiation services, one quarter received more direct service from the GT resource teacher, and one quarter were placed in full-time programming where they received daily challenging instruction. In addition, the majority of secondary-level Young Scholars were placed in courses like Honors, Advanced Placement (AP), or International Baccalaureate, where they mainly received grades of As and Bs. Furthermore, Horn (2015) reported a 565% increase in the number of Black and Hispanic students receiving high school GT services 11 years after the model was implemented, according to comparative data from the Annual Report to the State of Virginia on Gifted Education.

Along with these empirical papers, the study of Project Clustering Learners Unlocks Equity (CLUE; Pierce et al., 2007) provided some evidence that a specific set of identification practices increased Hispanic and EL participation in a GT program. First, the staff of Project CLUE employed four criteria to identify students for GT services. Students who attained a total score at or above the 90th percentile on a previous administration of the TerraNova assessment made the first cut. Second, students' scores on the subtests of the TerraNova were considered; those scoring at or above the 90th percentile on any two subtests joined the inclusion pool. Students who were not identified in the first two steps were administered Raven's Colored Progressive Matrices (Raven CPM-C), a group-administered, nonverbal test of fluid intelligence. Students scoring at or above the 90th percentile on the Raven CPM-C were also added to the pool of eligible students. In the fourth and final step in the process, parents and/or teachers completed an experimenter-designed rating scale called the Adams–Pierce Checklist (APC), which was available in both English and Spanish and was intended to help identify GT CLED students or ELs who were missed by the first three steps; 322 second-grade students (9%) were identified as GT, 26 of whom were included because of scores on the Raven CPM-C nonverbal test and/or the APC behavior rating

scale. Researchers noted that almost 30% of Hispanic ELs identified for GT services were eligible based on the final two criteria. The researchers concluded their study by acknowledging that teachers did not believe that all of the students identified through alternative assessments in the third and fourth steps were truly gifted. Relatedly, teachers believed the Raven CPM-C overidentified students and that teacher ratings would provide a more accurate assessment of student abilities, but evidence for their comments was not provided.

Methods to increase participation of CLED students in GT programs across the United States were also examined through in-depth case studies of seven programs (Briggs et al., 2008). Data sources included questionnaires, documents, interviews with teachers and administrators, and onsite observations. Review of data revealed five key categories vital to increasing representation of CLED students in these programs: (a) modifying identification procedures, (b) preparing students for advanced content and critical thinking, (c) implementing curricular/instructional changes with an emphasis on addressing CLED student needs, (d) connecting school and home and gathering the support of families, and (e) developing plans for GT program evaluation.

Bianco and Harris (2014) and Harris et al. (2009) also proposed an alternative model of identification for GT ELs called a strengths-based Response to Intervention (RTI) framework. This framework is based on a collaborative, multitiered, and content neutral service delivery model often used in special education (Bianco, 2010; Brown, 2012; M. R. Coleman, 2014). Bianco and Harris (2014) conceptualized a flexible system of supports that could help ELs access language services while also developing their gifted potential. The authors noted that more recently other scholars have examined how this framework could apply to GT learners, twice-exceptional learners, and CLED GT learners. The strengths-based RTI model involves three tiers of identification and a continuum of services. Tier 1 represents the main curriculum of the school, which "must provide a culturally and linguistically responsive, high-quality curriculum and instruction that allows ELs' gifted potential to emerge" (Bianco & Harris, 2014, p. 172). In Tier 1 of this model, all students are universally screened regardless of nominations, meaning that ELs with academic potential have additional opportunities to be identified. The researchers recommended the use of culturally and linguistically sensitive screening tools that can assess student abilities across various domains, with high ceilings to capture a greater breadth of potential achievement (but they did not suggest specific tools). Based on the results of the screening, student needs are addressed through Tier 2 interventions at the general classroom level. For example, differentiation of content and enrichment opportunities may be offered to students in this tier. Tier 3 interventions are necessary when students' needs are not met at the Tier 2 level and require more intensive measures. Some examples of interventions at this level are intensive acceleration, taking AP classes early or entering college early.

Summary. Successful models tested to date are characterized by a combination of school staff and parental involvement in identifying GT ELs for appropriate services and, if possible, intervention should begin early. Studies of existing programs can

provide useful insight into more or less effective practices (Briggs et al., 2008; Harris et al., 2009; Pierce et al., 2007), and models like Young Scholars, Project CLUE, and the three-tiered RTI framework hold promise for how districts can approach GT identification for ELs (Bianco & Harris, 2014; Harris et al., 2007; Horn, 2015; Reed, 2007).

Discussion

Extant Empirical and Theoretical/Descriptive Research on How to Identify ELs for School GT Programs

Research on ELs in GT programs has become more relevant and widespread in the almost 50 years since the publication of the Marland (1972) report. In the last 9 years alone, more than 20 articles have been published on the underrepresentation of ELs in GT education. Looking specifically at these more recent publications, empirical work addressing issues of nomination found that factors such as the language barrier (Allen, 2017; Costello, 2017; Harradine et al., 2013), emphasis on standardized testing (Allen, 2017), existing teacher beliefs about ELs and GT students (de Wet & Gubbins, 2011), and generally low expectations of this population (Harradine et al., 2013) often prevented teachers from nominating ELs for GT services. Articles pertaining to the use of screening procedures for GT ELs have argued (a) that a shift to a strengths-based mindset is necessary to increase this population's participation and this can potentially be achieved through professional learning that fosters the acknowledgment that giftedness exists in all populations (Esquierdo & Arreguín-Anderson, 2012; Stein et al., 2012), and (b) that standardized tests are not the best way to determine said giftedness (Stein et al., 2012). Rather, multiple/alternative assessments should be used to assess EL giftedness (Salas et al., 2014; Stein et al., 2012). These could include nonverbal assessments and/or dynamic and performance-based assessments. The use of nonverbal assessments is an as-yet unsettled recommendation, given the argument by some that they are better suited to ELs because of their lack of reliance on items that required reading (Lohman & Gambrell, 2012) and evidence that they produced smaller score gaps when comparing CLED with White students (Giessman et al., 2013), compared with work of others who found no difference between the predictive ability of verbal and nonverbal tests in their studies (Lakin & Lohman, 2011; M. S. Matthews & Kirsch, 2011). The recommendation of dynamic and performance-based assessments relies on little recent empirical research, though Sarouphim and Maker (2010) found in their use of DISCOVER that they were able to identify diverse groups of students with gifts in varied skill sets.

In addition to ways to nominate and screen potential GT ELs, more recent literature has also addressed recommendations for serving this population once they are enrolled in GT programs. As related to instruction, empirical work has suggested providing students with access to dual or heritage language courses and providing teachers with training that can raise their expectations of GT ELs and help them provide supportive networks for students (Olszewski-Kubilius & Clarenbach, 2014).

Regarding curriculum, more empirical work has identified particular intervention efforts and grouping models that resulted in achievement growth for this population (Allen et al., 2016; Brulles et al., 2010, 2012; Cho et al., 2015). Finally, one particular Saturday/summer enrichment program for potentially GT ELs resulted in positive academic experiences for these students with their peers, teachers, and school (Pereira & Gentry, 2013). Outside of nominating, screening, and serving GT ELs, some literature has documented specific identification models that fostered the active participation of school staff in helping GT ELs to access language support while realizing their gifted potential (Bianco & Harris, 2014; Harris et al., 2009; Horn, 2015).

Although the 50 articles highlighted in this review are encouraging and offer plausible recommendations for nominating and screening ELs identified as potentially GT, the quality of empirical work in terms of methodological rigor, questionable generalizations, and strength of researcher claims vary greatly by article. For example, several purported case studies did not have clear descriptions of study procedures and methods of analyses. Also, although the theoretical articles included a rich body of suggestions, the authors' recommendations generally lacked empirical evaluation. For example, various authors recommended dual language GT programs but provided no evidence for the effectiveness of either these nor heritage language programs for GT ELs (Barkan & Bernal, 1991; P. H. Matthews & Matthews, 2004; Olszewski-Kubilius & Clarenbach, 2014; Valencia, 1985). In addition, several descriptions of identification models were articulated in the literature, yet only one study empirically examined the participation of CLED students across multiple GT programs (Briggs et al., 2008).

In light of these findings, we see a need for more large-scale, high-quality empirical studies to document what works for identifying and serving GT ELs in practice. These empirical studies should also include more background information about their participants. We know that ELs constitute a complex set of subgroups, but the articles we reviewed typically only contained a simple demographic breakdown of participants (e.g., percentage Hispanic). More complex, qualitative and demographic information about EL study participants would provide richer data to draw from and allow us to better comprehend and address the different conceptualizations of ELs and their subpopulations.

Current Identification and Participation Rates of ELs in School GT Programs

ELs are still very much underidentified and underrepresented in GT programs across the nation (e.g., Adler, 1967; Callahan, 2005; Coronado & Lewis, 2017; Hodges et al., 2018). Yoon and Gentry (as cited in Pereira & Gentry, 2013) analyzed Office for Civil Rights data and found an overrepresentation of Asian and Anglo-Americans and an underrepresentation of Hispanics, Blacks, and Native Americans in GT programs across the United States. Harradine et al. (2013) also cited data from the Office for Civil Rights from 2008 in which they noted that while approximately 40% of the total U.S. student population is of color, Blacks and Latinos make up 9% and 13% of the

total number of enrolled students identified as GT, respectively. With the growth of the Latino population (see Bianco & Harris, 2014), we might expect that current identification practices will exclude greater numbers of GT ELs from services if changes are not made.

Suggested Practices for Identifying ELs for School GT Programs

The starting point of any successful GT identification model for ELs should be the acknowledgment that gifted potential exists in all groups of children (e.g., Esquierdo & Arreguín-Anderson, 2012; Ford et al., 2008; Harris et al., 2007; Melesky, 1985; Stein et al., 2012). This acknowledgment must permeate the belief structures of all who are involved in the identification process, from nomination through final identification and placement. District and school personnel should also rethink how giftedness could manifest itself in CLED students. Research suggests that teacher nominations may be biased against underrepresented students and that teachers typically nominate students who fit within their own ideals and definitions of giftedness (e.g., Hamilton et al., 2018; McBee, 2006; Peterson & Margolin, 1997).

To rephrase, suggested practices involve a fair and equitable nomination process, which may require a paradigm shift where the focus changes from identifying and remedying weaknesses to identifying strengths and undertaking the examination of giftedness through multiple lenses (Esquierdo & Arreguín-Anderson, 2012). The empirical work included in this literature review provides ample evidence that deficit views regarding ELs are problematic and will drastically decrease the chance that they are nominated for GT services. Teachers in particular must self-reflect on their views regarding GT ELs because they are responsible for the majority of nominations (McBee, 2006). High-quality professional learning is also key in educating teachers and school personnel on this matter. Another solution is implementing a universal screening method where every child is assessed (Bianco & Harris, 2014; see also Card & Giuliano, 2016), which sidesteps the problem of teacher bias in nominations. However, the removal of teacher nominations may also result in a different problem, that of placing greater weight on test performance.

In the evaluation process, foremost is the recommendation that multiple strategies be used to assess ELs' potential for giftedness. This recommendation echoes the field's caution that standardized intelligence tests are one of the single greatest barriers to GT EL identification when used alone (Harris et al., 2007). The structure of these multiple criteria decisions is also equally important and underresearched, and care should be taken that students are given more opportunities, not more hurdles they must cross, through these criteria. In sum, the multiple criteria approach provides different pieces of data that present a more holistic picture of the child. This way, district and school personnel can make more informed decisions about which students exhibit greatest need and would most benefit from receiving GT education services.

Bernal (2001) was adamant about the need to gather data on successful identification approaches and student success, arguing that "no meaningful changes" (p. 86) would take place without it. Program evaluation is an essential component of the identification system for GT ELs and for justifying the value of an alternative system. Based on our review, the need for continued high-quality empirical investigations of suggested practices in identifying GT ELs is clear.

Suggested Practices for Serving ELs in School GT Programs

In addition to identifying more ELs with GT potential, another major objective of this line of research is addressing whether identification processes lead to improved student outcomes. In other words, as a result of participation over time, do ELs become indistinguishable from non-EL peers in terms of academic achievement? There exist a variety of suggestions for serving ELs in GT programs; making accommodations for English-language needs while receiving GT services, servicing students through cluster groups in the classroom, and providing dual language GT programs are three examples. Unfortunately, there is little clear empirical evidence for what works best in practice. It may depend on the population that is being serviced and the resources of the district and/or school. Teachers' emphasis on verbal strengths (Harradine et al., 2013; Peterson & Margolin, 1997) may also reflect what they understand are necessary requirements for students to succeed in verbally intensive GT programs. Focusing on domain-specific giftedness may allow children with more developing English-language skills to have advanced opportunities in less verbally loaded areas like mathematics. Most GT programs, however, require a certain level of language skills, putting programs in a quandary with regard to including ELs of varying proficiency levels. To be successful, a system of identification and programming must work in concert and GT ELs must have access to the support system(s) they need to succeed (Costello, 2017). Investigations of curricular (M^3) and instructional (cluster grouping) strategies have offered evidence of potential for providing successful service and curriculum for GT ELs. However, the question on the range of services and curricula effective with GT ELs still remains. This is an area that would benefit from more empirical examination.

Limitations

We aimed for comprehensiveness within the scope of our review through extended search terms and by choosing not to limit the years of publication. However, a limitation of this review and of systematic reviews in general is that relevant studies may have been missed. Also, the decision to include only published, peer-reviewed journal articles, while helping to validate the research included in this review, may have excluded studies such as those conducted through dissertations and government reports. Finally, we included theoretical, qualitative, quantitative, and mixed methods studies that reflected varying levels of quality. Our purpose was to examine trends, patterns, and recommendations across these studies, not to determine any causal relationships.

Conclusion

The population of ELs in the United States is growing at remarkable rates, and the CLED population is projected to outnumber the non-Hispanic White population by 2030 (Hernandez et al., 2010). High-potential and high-ability ELs as members of this population require GT education services to help cultivate their strengths and talents. Results from this systematic literature review clearly indicate that ELs are undernominated and underserved and will continue to be overlooked for GT education if systematic changes do not occur. *All* children have the right to learn in a climate of optimal growth where their potential can be fully realized.

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Notes

1. We operate under the federal definition of English learner (*EL*) because it is what schools must abide by when identifying and providing services to members of this population. According to this definition, an EL is someone who was not born in the United States, whose home language is one other than English, who comes from an environment where a language other than English is dominant, or whose "difficulties" in using or understanding English may prevent that individual from meeting academic standards or "participat[ing] fully in society" (U.S. Department of Education, 2016, p. 43). We also acknowledge that *EL* is an institutional label given to students upon matriculation in schools and not an inherent quality that students possess. Similarly, we acknowledge that although these students are all labeled as such based upon their developing English proficiency, they experience diversity on categories such as immigration statuses, countries of origin, socioeconomic statuses, prior access to education, and home language(s).
2. We use demographic terms (i.e., *Hispanic/Latino/a/Latin American*) intentionally to reflect the original authors' use.

References

*Citations identified in the literature review.

Adler, M. (1967). Reported incidence of giftedness among ethnic groups. *Exceptional Children*, *34*(2), 101–105. https://doi.org/10.1177/001440296703400204

*Allen, J. K. (2017). Exploring the role teacher perceptions play in the underrepresentation of culturally and linguistically diverse students in gifted programming. *Gifted Child Today*, *40*(2), 77–86. https://doi.org/10.1177/1076217517690188

*Allen, J. K., Robbins, M. A., Payne, Y. D., & Brown, K. B. (2016). Using enrichment clusters to address the needs of culturally and linguistically diverse learners. *Gifted Child Today*, *39*(2), 84–97. https://doi.org/10.1177/1076217516628568

American Community Survey. (2015, November 3). *Census bureau reports at least 350 languages spoken in U.S. homes* (Release Number: CB15-185).

Antrop-Gonzalez, R., Velez, W., & Garrett, T. (2004). Challenging the academic (mis)categorization of urban youth: Building a case for Puerto Rican high achievers. *Multiple Voices for Ethnically Diverse Exceptional Learners*, *7*(2), 16–32. https://doi.org/10.5555/muvo.7.2.5u881q042050k8uj

*Barkan, J. H., & Bernal, E. M. (1991). Gifted education for bilingual and limited English proficient students. *Gifted Child Quarterly*, *35*(3), 144–147. https://doi.org/10.1177/001698629103500306

*Bernal, E. (2001). Three ways to achieve a more equitable representation of culturally and linguistically different students in GT programs. *Roeper Review*, *24*(2), 82–88. https://doi.org/10.1080/02783190209554134

Bianco, M. (2010). Strength-based RTI: Conceptualizing a multi-tiered system for developing gifted potential. *Theory Into Practice*, *49*(4), 323–330. https://doi.org/10.1080/00405841.2010.510763

*Bianco, M., & Harris, B. (2014). Strength-based RTI: Developing gifted potential in Spanish-speaking English language learners. *Gifted Child Today*, *37*(3), 169–176. https://doi.org/10.1177/1076217514530115

Borland, J. H. (2003). The death of giftedness: Gifted education without gifted children. In J. H. Borland (Ed.), *Rethinking gifted education* (pp. 105–124). Teachers College Press.

Borland, J. H. (2005). Gifted education without gifted children: The case for no conception of giftedness. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 1–19). Cambridge University Press.

Borland, J. H. (2014). Identification of gifted students. In J. A. Plucker & C. M. Callahan (Eds.), *Critical issues and practices in gifted education* (2nd ed., pp. 323–342). Prufrock Press.

*Brice, A. E., & Brice, R. (2004). Identifying Hispanic gifted children: A screening. *Rural Special Education Quarterly*, *23*(1), 8–15. https://doi.org/10.1177/875687050402300103

*Brice, A. E., Shaunessy, E., Hughes, C., McHatton, P. A., & Ratliff, M. A. (2008). What language discourse tells us about bilingual adolescents: A study of students in gifted programs and students in general education programs. *Journal for the Education of the Gifted*, *32*(1), 7–33. https://doi.org/10.4219/jeg-2008-819

*Briggs, C. J., Reis, S. M., & Sullivan, E. E. (2008). A national view of promising programs and practices for culturally, linguistically, and ethnically diverse gifted and talented students. *Gifted Child Quarterly*, *52*(2), 131–145. https://doi.org/10.1177/0016986208316037

Brown, E. F. (2012). Is response to intervention and gifted assessment compatible? *Journal of Psychoeducational Assessment*, *30*(1), 103–116. https://doi.org/10.1177/0734282911428200

*Brulles, D., Peters, S. J., & Saunders, R. (2012). Schoolwide mathematics achievement within the gifted cluster grouping model. *Journal of Advanced Academics*, *23*(3), 200–216. https://doi.org/10.1177/1932202X12451439

*Brulles, D., Saunders, R., & Cohn, S. J. (2010). Improving performance for gifted students in a cluster grouping model. *Journal for the Education of the Gifted*, *34*(2), 327–350.

Callahan, C. M. (2005). Identifying gifted students from underrepresented populations. *Theory Into Practice*, *44*(2), 98–104. https://doi.org/10.1207/s15430421tip4402_4

Camarota, S. A. (2012). *Immigrants in the United States: A profile of American's foreign-born population* [Research report]. Center for Immigration Studies. http://www.cis.org/sites/cis.org/files/articles/2012/immigrants-in-the-united-states-2012.pdf

Card, D., & Giuliano, L. (2016). Universal screening increases the representation of low-income and minority students in gifted education. *Proceedings of the National Academy of Sciences of the United States of America*, *113*, 13678–13683. https://doi.org/10.1073/pnas.1605043113

Carpenter, A. Y. (2019). *Stakeholders' conceptions of giftedness* [Unpublished doctoral dissertation]. University of Connecticut.

Castellano, J. A. (1998). *Identifying and assessing gifted and talented bilingual Hispanic students* (ED423104). ERIC. https://eric.ed.gov/?id=ED423104

Castellano, J. A., & Díaz, E. I. (2002). Introduction. In J. A. Castellano & E. I. Díaz (Eds.), *Reaching new horizons: Gifted and talented education for culturally and linguistically diverse students* (pp. xii–xxvi). Allyn & Bacon.

Castellano, J. A., & Matthews, M. M. (2014). Legal issues in gifted education. In J. P. Bakken, F. E. Obiakor & A. F. Rotatori (Eds.), *Gifted education: Current perspectives and issues* (pp. 1–19). Emerald Group.

*Cho, S., Yang, J., & Mandracchia, M. (2015). Effects of M3 curriculum on mathematics and English proficiency achievement of mathematically promising English language learners. *Journal of Advanced Academics*, *26*(2), 112–142. https://doi.org/10.1177/1932202X15577205

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, *94*, S95–S120. https://doi.org/10.1086/228943

Coleman, L. J., & Cross, T. L. (2005). *Being gifted in school: An introduction to development, guidance, and teaching* (2nd ed.). Prufrock Press.

Coleman, M. R. (2014). RTI as a framework for meeting the needs of gifted learners. In J. A. Plucker & C. M. Callahan (Eds.), *Critical issues and practices in gifted education* (2nd ed., pp. 533–544). Prufrock Press.

Coleman, M. R., & Shah-Coltrane, S. (2011). *U-STARS~PLUS: Professional development kit manual*. Council for Exceptional Children.

Coronado, J. M., & Lewis, K. D. (2017). The disproportional representation of English language learners in gifted and talented programs in Texas. *Gifted Child Today*, *40*(4), 238–244. https://doi.org/10.1177/1076217517722181

*Costello, A. M. (2017). Exploring English learners' learning opportunities in gifted programs. *National Teacher Education Journal*, *10*(2), 31–44.

Council of State Directors of Programs for the Gifted, & National Association for Gifted Children. (2015). *State of the states in gifted education: National policy and practice data* [CD-ROM].

Cross, J. R., & Cross, T. L. (2005). Social dominance, moral politics, and gifted education. *Roeper Review*, *28*(1), 21–29. https://doi.org/10.1080/02783190509554333

*de Bernard, A. E., & Hofstra, U. (1985). Why José can't get in the gifted class: The bilingual child and standardized reading tests. *Roeper Review*, *8*(2), 80–82. https://doi.org/10.1080/02783198509552939

*de Wet, C. F., & Gubbins, E. J. (2011). Teachers' beliefs about culturally, linguistically, and economically diverse gifted students: A quantitative study. *Roeper Review*, *33*(2), 97–108. https://doi.org/10.1080/02783193.2011.554157

Educational Testing Service. (1980). *School and College Ability Tests (SCAT-III). Manual and technical report*. Addison-Wesley.

*Esquierdo, J. J., & Arreguín-Anderson, M. (2012). The "invisible" gifted and talented bilingual students: A current report on enrollment in GT programs. *Journal for the Education of the Gifted*, *35*(1), 35–47. https://doi.org/10.1177/0162353211432041

*Fernández, A. T., Gay, L. R., & Lucky, L. F. (1998). Teacher perceptions of gifted Hispanic limited English proficient students. *Journal for the Education of the Gifted*, *21*(3), 335–351. https://doi.org/10.1177/016235329802100305

Ford, D. Y. (2014). Underrepresentation of African American and Hispanic students in gifted education: Impact of social inequality, elitism, and colorblindness. In J. P. Bakken, F. E. Obiakor & A. F. Rotatori (Eds.), *Gifted education: Current perspectives and issues* (pp. 101–126). Emerald Group.

Ford, D. Y., Coleman, M. R., & Davis, J. L. (2014). Racially, ethnically, and linguistically different gifted and talented students. *Gifted Child Today*, *37*(3), 133–134. https://doi.org/10.1177%2F1076217514533277

Ford, D. Y., & Grantham, T. C. (2003). Providing access for culturally diverse gifted students: From deficit to dynamic thinking. *Theory Into Practice*, *42*(3), 217–225. https://doi.org/10.1207/s15430421tip4203_8

*Ford, D. Y., Grantham, T. C., & Whiting, G. W. (2008). Culturally and linguistically diverse students in gifted education: Recruitment and retention issues. *Exceptional Children*, *74*(3), 289–306. https://doi.org/10.1177/001440290807400302

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. Basic Books.

*Giessman, J. A., Gambrell, J. L., & Stebbins, M. S. (2013). Minority performance on the Naglieri Nonverbal Ability Test, second edition, versus the Cognitive Abilities Test, Form 6: One gifted program's experience. *Gifted Child Quarterly*, *57*(2), 101–109. https://doi.org/10.1177/0016986213477190

*Gonzalez, G. (1974). Language, culture, and exceptional children. *Exceptional Children*, *40*(8), 565–570. https://doi.org/10.1177/001440297404000802

*Gonzalez, V. (2006). Profiles of cognitive developmental performance in gifted children: Effect of bilingualism, monolingualism, and socioeconomic status factors. *Journal of Hispanic Higher Education*, *5*(2), 142–170. https://doi.org/10.1177/1538192705285467

*Gonzalez, V., Bauerle, P., & Felix-Holt, M. (1996). Theoretical and practical implications of assessing cognitive and language development in bilingual children with qualitative methods. *Bilingual Research Journal*, *20*(1), 93–131. https://doi.org/10.1080/15235882.1996.10668622

Gottfredson, L. S. (2003). The science and politics of intelligence in gifted education. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp. 24–40). Allyn & Bacon.

Grieco, E. M., Trevelyan, E., Larsen, L., Acosta, Y. D., Gambino, C., de la Cruz, P., Gryn, T., & Walters, N. (2012). *The size, place of birth, and geographic distribution of the foreign-born population in the United States: 1960 to 2010*. https://www.census.gov/content/dam/Census/library/working-papers/2012/demo/POP-twps0096.pdf

Hamilton, R., McCoach, D. B., Tutwiler, M. S., Siegle, D., Gubbins, E. J., Callahan, C. M., Brodersen, A. V., & Mun, R. U. (2018). Disentangling the roles of institutional and individual poverty in the identification of gifted students. *Gifted Child Quarterly*, *62*(1), 6–24. https://doi.org/10.1177/0016986217738053

*Harradine, C. C., Coleman, M. B., & Winn, D. C. (2013). Recognizing academic potential in students of color: Findings of U-STARS~PLUS. *Gifted Child Quarterly*, *58*(1), 23–34. https://doi.org/10.1177/0016986213506040

*Harris, B., Plucker, J. A., Rapp, K. E., & Martinez, R. S. (2009). Identifying gifted and talented English language learners: A case study. *Journal for the Education of the Gifted*, *32*(3), 368–393. https://doi.org/10.4219/jeg-2009-858

*Harris, B., Rapp, K. E., Martinez, R. S., & Plucker, J. A. (2007). Identifying English language learners for gifted and talented programs: Current practices and recommendations for improvement. *Roeper Review*, *29*(5), 26–29. https://doi.org/10.1080/02783193.2007.11869221

Hartley, E. A., & Wasson, E. (1989). "An ounce of prevention . . .": A case study of a migrant gifted student. *Rural Special Education Quarterly*, *10*(1), 26–30. https://doi.org/10.1177/875687058901000104

Hernandez, D. J., Denton, N. A., & Macartney, S. E. (2010). Children of immigrants and the future of America. In E. L. Grigorenko & R. Takanishi (Eds.), *Immigration, diversity, and education* (pp. 7–25). Routledge.

Hodges, J., Tay, J., Maeda, Y., & Gentry, M. (2018). A meta-analysis of gifted and talented identification practices. *Gifted Child Quarterly*, *62*(2), 147–174. https://doi.org/10.1177/0016986217752107

Hoover, H. D., Hieronymous, A. N., Frisbie, D. A., & Dunbar, S. B. (1993). *Iowa Tests of Basic Skills*. Riverside.

*Horn, C. V. (2015). Young scholars: A talent development model for finding and nurturing potential in underserved populations. *Gifted Child Today*, *38*(1), 19–31. https://doi.org/10.1177/1076217514556532

*Hughes, C. E., Shaunessy, E. S., Brice, A. R., Ratliff, M. A., & McHatton, P. A. (2006). Code switching among bilingual and limited English proficient students: Possible indicators of giftedness. *Journal for the Education of the Gifted*, *30*(1), 7–28. https://doi.org/10.1177/016235320603000102

Jackson, N. E., & Lu, W. H. (1992). Bilingual precocious readers of English. *Roeper Review*, *14*(3), 115–120. https://doi.org/10.1080/02783199209553404

Jesson, J., Matheson, L., & Lacey, F. M. (2011). *Doing your literature review: Traditional and systematic techniques*. Sage.

Kaufman, A. S., & Kaufman, N. L. (1983). *K-ABC: Kaufman Assessment Battery for Children*. American Guidance Service.

Kaufman, A. S., & Kaufman, N. L. (2004). *Kaufman Brief Intelligence Test* (2nd ed.). Pearson.

*Kirschenbaum, R. (1998). Dynamic assessment and its use with underserved gifted and talented populations. *Gifted Child Quarterly*, *42*(3), 140–147. https://doi.org/10.1177/001698629804200302

*Kitano, M. K., & Pedersen, K. S. (2002). Action research and practical inquiry teaching gifted English learners. *Journal for the Education of the Gifted*, *26*(2), 132–147. https://doi.org/10.1177/016235320202600204

Kogan, T. (2001). *Gifted bilingual students: A paradox?* Peter Lang.

Lakin, J. M. (2016). Universal screening and the representation of historically underrepresented minority students in gifted education: Minding the gaps in Card and

Giuliano's research. *Journal of Advanced Academics*, *27*(2), 139–149. https://doi.org/10.1177/1932202X16630348

Lakin, J. M. (2018). Making the cut in gifted selection: Score combination rules and their impact on program diversity. *Gifted Child Quarterly*, *62*(2), 210–219. https://doi.org/10.1177/0016986217752099

*Lakin, J. M., & Lohman, D. F. (2011). The predictive accuracy of verbal, quantitative, and nonverbal reasoning tests: Consequences for talent identification and program diversity. *Journal for the Education of the Gifted*, *34*(4), 595–623. https://doi.org/10.1177/016235321103400404

Lara, S. (1994). Alfonzo: Portrait of a gifted ESL student. *Gifted Child Today*, *17*(5), 32–34. https://doi.org/10.1177/107621759401700511

*Lidz, C. S., & Macrine, S. L. (2001). An alternative approach to the identification of gifted culturally and linguistically diverse learners. *School Psychology International*, *22*(1), 74–96. https://doi.org/10.1177/01430343010221006

*Lohman, D. F., & Gambrell, J. L. (2012). Using nonverbal tests to help identify academically talented children. *Journal of Psychoeducational Assessment*, *30*(1), 25–44. https://doi.org/10.1177/0734282911428194

Lohman, D. F., & Hagen, E. P. (2001). *Cognitive Abilities Test (Form 6)*. Riverside.

*Lohman, D. F., Korb, K. A., & Lakin, J. M. (2008). Identifying academically gifted English-language learners using nonverbal tests. *Gifted Child Quarterly*, *52*(4), 275–296. https://doi.org/10.1177/0016986208321808

Maker, C. J. (1993). Creativity, intelligence, and problem solving: A definition and design for cross-cultural research and measurement related to giftedness. *Gifted Education International*, *9*(2), 68–77. https://doi.org/10.1177/026142949300900202

Marland, S. P. (1972). *Education of the gifted and talented. Report to Congress*. U.S. Government Printing Office. https://www.valdosta.edu/colleges/education/human-services/document%20/marland-report.pdf

Matthews, M. S. (2014). Advanced academics, inclusive education, and English language learners. In M. S. Matthews & J. A. Castellano (Eds.), *Talent development for English language learners* (pp. 11–14). Prufrock Press.

*Matthews, M. S., & Kirsch, L. (2011). Evaluating gifted identification practice: Aptitude testing and linguistically diverse learners. *Journal of Applied School Psychology*, *27*(2), 155–180. https://doi.org/10.1080/15377903.2011.565281

*Matthews, P. H., & Matthews, M. S. (2004). Heritage language instruction and giftedness in language minority students: Pathways toward success. *The Journal of Secondary Gifted Education*, *15*(2), 50–55. https://doi.org/10.4219/jsge-2004-448

McBee, M. T. (2006). A descriptive analysis of referral sources for gifted identification screening by race and socioeconomic status. *The Journal of Secondary Gifted Education*, *17*(2), 103–111. https://doi.org/10.4219/jsge-2006-686

McBrien, J., & Ford, J. (2012). Serving the needs of refugee children and families through a culturally appropriate liaison service. In F. E. McCarthy & M. H. Vickers (Eds.), *Refugee and immigrant students: Achieving equity in education* (pp. 107–126). Information Age Publishing.

McClain, M., & Pfeiffer, S. (2012). Identification of gifted students in the United States today: A look at state definitions, policies, and practices. *Journal of Applied School Psychology*, *28*(1), 59–88. https://doi.org/10.1080/15377909.2012.643757

*McHatton, P. A., Shaunessy, E., Hughes, C., Brice, A., & Ratliff, M. A. (2007). Part 1: Advancing the conversation: You gotta represent! Ethnic identity development

among Hispanic adolescents. *Multicultural Perspectives*, *9*(3), 12–20. https://doi.org/10.1080/15210960701443557

*Melesky, T. J. (1985). Identifying and providing for the Hispanic gifted child. *The Journal for the National Association for Bilingual Education*, *9*(3), 43–56. https://doi.org/10.1080/08855072.1985.10668498

*Mills, C. J., & Tissot, S. L. (1995). Identifying academic potential in students from underrepresented populations: Is using the Raven's Progressive Matrices a good idea? *Gifted Child Quarterly*, *39*(4), 209–217. https://doi.org/10.1177/001698629503900404

Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory Into Practice*, *31*(2), 133–141. https://doi.org/10.1080/00405849209543534

Mun, R. U. (2016). Identifying and assessing highly capable students. *Washington Educational Research Association Educational Journal*, *8*, 14–17.

Naglieri, J. A. (1997). *Naglieri Nonverbal Ability Test*. Harcourt Brace Educational Measurement.

National Association for Gifted Children, & Council of State Directors of Programs for the Gifted. (2015). *State of the states in gifted education: National policy and practice data*.

National Center for Education Statistics. (2013). *English language learners*. http://nces.ed.gov/fastfacts/display.asp?id=96

Nelson, R. L., & Davis-Wiley, P. (2017). Marginalization of U.S.-born English language learners through English-only policies: Myths, reality and implications. *Journal of Education & Social Policy*, *4*(2), 103–112.

Nisbett, R. E., Aronson, J., Blair, C., Dickens, W., Flynn, J., Halpern, D. F., & Turkheimer, E. (2012). Group differences in IQ are best understood as environmental in origin. *American Psychologist*, *67*(6), 503–504. https://doi.org/10.1037/a0029772

Noguera, P. A. (2004). Social capital and the education of immigrant students: Categories and generalizations. *Sociology of Education*, *77*(2), 180–183. https://doi.org/10.1177/003804070407700206

*Olszewski-Kubilius, P., & Clarenbach, J. (2014). Closing the opportunity gap: Program factors contributing to academic success in culturally different youth. *Gifted Child Today*, *37*(2), 103–110. https://doi.org/10.1177/1076217514520630

Pearson. (n.d.). *Raven's™ Progressive Matrices (APM and SPM)*. https://www.pearsonclinical.com/talent/products/100000634/ravens-advanced-progressive-matrices-apm-and-spm-talent-assessment.html#tab-details

Pereira, N., & de Oliveira, L. C. (2015). Meeting the linguistic needs of high-potential English language learners: What teachers need to know. *Teaching Exceptional Children*, *47*(4), 208–215. https://doi.org/10.1177/0040059915569362

*Pereira, N., & Gentry, M. (2013). A qualitative inquiry into the experiences of high-potential Hispanic English language learners in Midwestern schools. *Journal of Advanced Academics*, *24*(3), 164–194. https://doi.org/10.1177/1932202X13494204

Peters, S. J., & Engerrand, K. G. (2016). Equity and excellence: Proactive efforts in the identification of underrepresented students for gifted and talented services. *Gifted Child Quarterly*, *60*(3), 159–171. https://doi.org/10.1177/0016986216643165

*Peterson, J. S., & Margolin, L. (1997). Naming gifted children: An example of unintended "reproduction." *Journal for the Education of the Gifted*, *21*(1), 82–101. https://doi.org/10.1177/016235329702100105

Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide*. Blackwell Publishing.

*Pierce, R. L., Adams, C. M., Speirs Neumeister, K. L., Cassady, J. C., Dixon, F. A., & Cross, T. L. (2007). Development of an identification procedure for a large urban school corporation: Identifying culturally diverse and academically gifted elementary students. *Roeper Review*, *29*(2), 113–118. https://doi.org/10.1080/02783190709554394

Plucker, J. A., & Callahan, C. M. (2014). Research on giftedness and gifted education: Status of the field and considerations for the future. *Exceptional Children*, *80*(4), 390–406. https://doi.org/10.1177/0014402914527244

Raven, J., Raven, J. C., & Court, J. H. (1998). *Manual for Raven's Progressive Matrices and vocabulary scales: Section 1. General overview*. Oxford Psychologists Press.

Raven, J. C., Court, J. H., & Raven, J. (1983). *Manual for Raven's Progressive Matrices and vocabulary scales, section 4: Advance Progressive Matrices, sets I and II*. H. K. Lewis.

Raven, J. C., Court, J. H., & Raven, J. (1996). *Manual for Raven's Progressive Matrices and vocabulary scales, section 3: Standard Progressive Matrices*. Oxford Psychologists Press.

*Reed, C. F. (2007). We can identify and serve ESOL GATE students: A case study. *Gifted Child Today*, *30*(2), 16–22. https://doi.org/10.4219/gct-2007-29

*Reid, C., Udall, A., Romanoff, B., & Algozzine, B. (1999). Comparison of traditional and problem solving assessment criteria. *Gifted Child Quarterly*, *43*(4), 252–264. https://doi.org/10.1177/001698629904300404

Roberge, M. M. (2002). California's generation 1.5 immigrants: What experiences, characteristics, and needs do they bring to our English classes? *The CATESOL Journal*, *14*(1), 107–129. http://www.catesoljournal.org/wp-content/uploads/2014/07/CJ14_roberge.pdf

Robinson, N. M. (2003). Two wrongs do not make a right: Sacrificing the needs of academically talented students does not solve society's unsolved problems. *Journal for the Education of the Gifted*, *26*(4), 251–273. https://doi.org/10.4219/jeg-2003-307

Roid, G. H. (2003). *Stanford-Binet Intelligence Scales, Fifth Edition*. Riverside.

Rong, X. L., & Preissle, J. (2009). *Educating immigrant students in the 21st century* (2nd ed.). Corwin Press.

*Salas, S., Musetti, B., & Plaisance, M. (2014). Latino transnationals (not) in advanced academics: Asking hard questions together. In M. S. Matthews & J. A. Castellano (Eds.), *Talent development for English language learners* (pp. 87–100). Prufrock Press.

Sapon-Shevin, M. (2003). Equity, excellence, and school reform: Why is finding common ground so hard? In J. H. Borland (Ed.), *Rethinking gifted education* (pp. 127–142). Teachers College Press.

*Sarouphim, K. M. (1999). DISCOVER: A promising alternative assessment for the identification of gifted minorities. *Gifted Child Quarterly*, *43*(4), 244–252. https://doi.org/10.1177/001698629904300403

*Sarouphim, K. M. (2000). Internal structure of DISCOVER: A performance-based assessment. *Journal for the Education of the Gifted*, *23*(3), 314–327.

Sarouphim, K. M. (2005). DISCOVER across the spectrum of grades: Identifying gifted minority students. *Gifted and Talented International*, *20*(2), 70–77. https://doi.org/10.1080/15332276.2005.11673455

*Sarouphim, K. M., & Maker, C. J. (2010). Ethnic and gender differences in identifying gifted students: A multicultural analysis. *International Education*, *39*(2), 42–56.

*Shaunessy, E., McHatton, P. A., Hughes, C., Brice, A., & Ratliff, M. A. (2007). Understanding the experiences of bilingual Latino/a adolescents: Voices from gifted and general education. *Roeper Review*, *29*(3), 174–182. https://doi.org/10.1080/02783190709554406

Siegle, D., Gubbins, E. J., O'Rourke, P., Langley, S. D., Mun, R. U., Luria, S. R., Little, C. A., McCoach, D. B., Knupp, T., Callahan, C. M., & Plucker, J. A. (2016). Barriers to underserved students' participation in gifted programs and possible solutions. *Journal for the Education of the Gifted*, *39*(2), 103–131. https://doi.org/10.1177/0162353216640930

Slosson, R. L., Nicholson, C. L., & Hibpshaman, T. L. (2002). *The Slosson Intelligence Test–Revised* (3rd ed.). Slosson Educational Publications.

*Stein, J. C., Hetzel, J., & Beck, R. (2012). Twice exceptional? The plight of the gifted English learner. *Delta Kappa Gamma Bulletin*, *78*(2), 36–41.

Stephens, K. R. (2008). Applicable federal and state policy, law, and legal considerations in gifted education. In S. Pfeiffer (Ed.), *Handbook of giftedness in children* (pp. 387–408). Springer.

Sternberg, R. J. (1999). A triarchic approach to the understanding and assessment of intelligence in multicultural populations. *Journal of School Psychology*, *37*(2), 145–159. https://doi.org/10.1016/S0022-4405(98)00029-6

Suárez-Orozco, C., & Suárez-Orozco, M. M. (2001). *Children of immigration*. Harvard University Press.

Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking giftedness and gifted education: A proposed direction forward based on psychological science. *Psychological Science in the Public Interest*, *12*(1), 3–54. https://doi.org/10.1177/1529100611418056

Thorndike, R. L., & Hagen, E. (1993). *The Cognitive Abilities Test: Form 5*. Riverside.

Thurlings, M., Evers, A. T., & Vermeulen, M. (2014). Toward a model of explaining teachers' innovative behavior: A literature review. *Review of Educational Research*, *85*(3), 430–471. https://doi.org/10.3102/0034654314557949

U.S. Department of Education. (2016). *Non-regulatory guidance: English learners and title III of the Elementary and Secondary Education Act (ESEA), as amended by the Every Student Succeeds Act (ESSA)*.

U.S. Department of Education Office for Civil Rights. (2015). *Dear colleague letter: English learner students and limited English proficient parents*.

*Valencia, A. A. (1985). Curricular perspectives for gifted limited English proficient students. *The Journal for the National Association for Bilingual Education*, *10*(1), 65–77. https://doi.org/10.1080/08855072.1985.10668506

Worrell, F. C. (2014). Ethnically diverse students. In J. A. Plucker & C. M. Callahan (Eds.), *Critical issues and practices in gifted education* (2nd ed., pp. 237–253). Prufrock Press.

Zong, J., & Batalova, J. (2015). *The limited English proficient population in the United States*. Migration Policy Institute. http://www.migrationpolicy.org/article/limited-english-proficient-population-united-states#Age,%20Race,%20and%20Ethnicity

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Carolyn M. Callahan, PhD, has conducted research across a broad range of topics, such as areas of program evaluation, the development of performance assessments, and curricular and programming options for highly able students, including Advanced Placement and International Baccalaureate. She was awarded the Distinguished Scholar Award and the Distinguished Service Award from the NAGC. She is a past president of the Association for the Gifted and the NAGC.

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