Identifying and Serving English Learners in Gifted Education:

Looking Back and Moving Forward

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Abstract

The underrepresentation of English learners (ELs) in gifted and talented programs is a societal and research problem that merits investigation. Three state departments of education and their state directors of gifted programs supported our access to 16 schools across nine districts. In these three states with gifted identification and programming mandates, ELs were proportionally represented in gifted and talented programs in the 16 schools we visited. Interview data from 225 participants revealed four themes: adopting universal screening procedures, creating alternative pathways to identification, establishing a web of communication, and using professional development as a lever for change.
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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 African American/Black students (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 and National Association for Gifted Children, 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; Coleman & Cross, 2005; Cross & Cross, 2005), making GT identification arbitrary, subjective, and inexact, especially for ELs.

ELs

¹ We operate under the federal definition of 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 U.S, 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, socio-economic 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.
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; Matthews, 2014). Educators have instead focused on strengths (Ford & Grantham, 2003) and the various forms of capital (i.e., cultural or social; 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 U.S.; 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 U.S. 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 over 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, 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 socio-economic 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 paper 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:

1. What empirical and theoretical/descriptive research exists on how to identify ELs for school GT programs?

2. What are the current identification and participation rates of ELs in school GT programs?

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 U.S. were included for review since 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.

**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 which were 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 English Learners, and both research and practical recommendations. For sake of simplicity, we only included the main 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 assessed 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 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.
Results

The articles in our systematic literature review were published between 1974 and 2018 and are presented in Table 3. A sample 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 narrow 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 over 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.

The results of this search are organized thematically in this paper 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, though 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 (8 White, 3 Latino, and 1 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 understandings of the characteristics and needs of their GT ELs. On the other hand, 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 U.S. 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. Additionally, 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 African American) 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 MANOVA analysis revealed significant differences by survey group and ethnicity but
no overall multivariate interaction effect. 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 African American teachers compared to 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 to 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. While
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
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 to 9) systematically, using the Teacher’s Observation of Potential in Students (TOPS; Coleman & Shah-Coltrane, 2011), on teachers’ recognition of high potential in students of color (a population that often but not always includes ELs), and found that oral language was a barrier for both Latino boys and girls (Harradine et al., 2013). This multi-year study was conducted as part of an evaluation of a larger study evaluating U-STARS–PLUS, 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/Assessments**

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; Gonzalez, 1974; Harris et al., 2007; Melesky, 1985). Stein et al. (2012) compared the plight (authors’ term) of GT ELs to 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; 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 such concerns 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 nominations section of this paper (Bernal, 2001; Harris et al., 2007). Common elements in these authors’ recommendations for identifying and serving GT ELs include:

- 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; 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; 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; 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 opportunities to learn to be taken into account (see also Hodges et al., 2018; Peters & Engerrand, 2016).

A need for more professional development 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 development 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; Gonzalez, 2006; Gonzalez et al., 1996; Lakin & Lohman, 2011; Lohman & Gambrell, 2012; Lohman et al., 2008; 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; 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 non-
verbal test or a battery that includes a non-verbal 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.

Raven’s Progressive Matrices (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; Raven et al., 1983, 1996). Mills and Tissot also compared the APM to 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 to 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. Additionally, 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.
Additionally, 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 to .6 SD lower than non-ELs. Further, NNAT scores exhibited high variability across grade levels, especially at lower levels. Lohman et al. (2008) claimed this variability would result in a three-fold increase in the number of students identified for GT services, compared to a test that did not have extreme variability. The authors further concluded that the non-verbal 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. Additionally, 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) – though 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.

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, though they operationally defined aptitude testing differently than Lohman and Gambrell (2012). 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. They considered and included results with only four scores (Kaufman Assessment Battery for Children, or K-ABC; Kaufman & Kaufman, 1983) or one score (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 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. Additionally, 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 to 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 to 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 to 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. 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 non-verbal 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, Gonzalez (2006) furthered the work of 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, 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 four and six and a half years old. Gonzalez found comparable performance among students, regardless of their SES and language learning status, with all scoring higher on nonverbal classification tasks. Gonzalez 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 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. Eighty-one 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 post-test 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 re-tested 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. Post-test 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 pre-test version of the NNAT. To correct for potential practice effects, the estimated test-retest score was subtracted from the post-test 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 to
prior attempts of the school, which resulted in less than 1% of students being identified for inclusion in GT programming.

In addition to dynamic assessments, 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 U.S. that was 64% White, 31% Black, and 5% Asian, Hispanic, and American Indian. Students took the PSA and the Millers 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 to 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 Discovering Intellectual
Strengths and Capabilities through Observation while allowing for Varied Ethnic Responses
assessment (DISCOVER, 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 inter-rater reliability in DISCOVER’s spatial activity in particular, while the other
showed high inter-rater 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 inter-rater reliability on the spatial, linguistic, and logical-mathematical tasks when
observed by the DISCOVER observer when compared to 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. Inter-rater correlations were performed on observations across the five activities to examine whether students received similar or different scores. Results indicated low or non-statistically significant inter-rater 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 inter-rating observations were mentioned as another potential reason for the low and non-significant inter-rater 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 from four different countries, including the United States – White Americans, African Americans, Hispanics, Native Americans, South Pacific/Pacific Islanders, and Arabs – 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; Gonzalez, 2006; Gonzalez et al., 1996; Lakin & Lohman, 2011; Lohman & Gambrel, 2012; Lohman et al., 2008; 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 have 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; 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 (M³) curricular units (Cho et al., 2015), and a cluster grouping model (see also Allen et al., 2016; Brulles et al., 2012; Brulles et al., 2010). In the first, M³ 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 M³
intervention had greater gains ($d=.63$) in math achievement when compared to 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 M3, 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 but 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.,
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 three-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 home schools.

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 Edition). 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 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.
Three hundred twenty-two 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 over-
identified 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 U.S. 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, multi-tiered, and content neutral service delivery model often used in special education (Bianco, 2010; Brown, 2012; 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 nine years alone, over 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 development that fosters the acknowledgment that giftedness exists in all populations (Esquierdo & Arregúín-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 non-verbal assessments and/or dynamic and performance-based assessments. The use of non-verbal assessments is an as-yet unsettl
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 non-verbal tests in their studies (Lakin & Lohman, 2011; Matthews & Kirsch, 2011). The recommendation of dynamic and performance-based assessments relies on little recent empirical research, though Sarouphim & 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; Brulles et al., 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; Matthews & Matthews, 2004; Olszewski-Kubilius & Clarenbach, 2014; Valencia; 1985). Additionally, several descriptions of identification models were articulated in the literature, yet only one study empirically examined multiple GT programs on a national level to investigate the participation of CLED students in these 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 sub-populations.

**Current Identification and Participation Rates of ELs in School GT Programs**

ELs are still very much under-identified 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 U.S. 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, African Americans 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 & Arreguin-Anderson, 2012; Ford et al., 2008; Harris et al., 2007; Melesky, 1985; Stein et al., 2012). This acknowledgement 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 provide 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 development 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 under-researched, 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 US 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 under-nominated 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.


https://doi.org/10.1177/001698629103500306


https://doi.org/10.1080/02783190209554134


Psychoeducational Assessment, 30(1), 103-116.

https://doi.org/10.1177/0734282911428200


https://doi.org/10.1177/1932202X12451439


https://doi.org/10.1177%2F1076217514533277

https://doi.org/10.1207/s15430421tip4203_8


https://doi.org/10.1177/0016986213477190


https://doi.org/10.1080/15235882.1996.10668622


https://doi.org/10.1177/001698629804200302

https://doi.org/10.1177/016235320202600204


https://doi.org/10.1177/1932202X16630348

https://doi.org/10.1177/0016986217752099

https://doi.org/10.1177/016235321103400404

doi:10.1177/107621759401700511


Pearson. (n.d.) *Raven's™ Progressive Matrices (APM and SPM).*


https://doi.org/10.1177/016235329702100105


*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.


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<td>U.S. context</td>
<td>Non-U.S. context</td>
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<td>Related to identification or servicing of potentially gifted ELs</td>
<td>Unrelated to identification or servicing of potentially gifted ELs</td>
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<td>K-12 grades or corresponding age levels</td>
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**Total Articles** 50
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<td>Brice &amp; Brice (2004)</td>
<td>Empirical</td>
<td>32 Mexican-American students (1st-4th grade); 23 general education</td>
<td>Cumulative academic records including standardized test scores, administration of</td>
<td>Quantitative</td>
<td>Hispanic EL</td>
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<td></td>
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<td>teachers, rural district in Florida</td>
<td>teacher rating scale or checklist</td>
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<td>de Wet &amp; Cukbins (2011)</td>
<td>Empirical</td>
<td>308 teachers from 8 different states</td>
<td>Questionnaire - Teachers Beliefs About Culturally, Linguistically, and</td>
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<td>General EL</td>
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<td>373 elementary teachers from 9 schools in Florida</td>
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<td>Harradine, Coleman, &amp; Winn</td>
<td>Empirical</td>
<td>1,115 teachers from 4 different states</td>
<td>TOPS - Teachers' Observation of Potential in Kids, TOPS Kid Profiles, USTARS Plus closing Survey, TOPS observation</td>
<td>Quantitative</td>
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<td>Hughes, Shaunessy, Brice,</td>
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<td>2 hour focus Groups</td>
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<tr>
<td>Peterson &amp; Margolin (1997)</td>
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<td>55 Anglo-American middle school teachers</td>
<td>Field notes, audiotaped transcriptions of nomination meetings with teachers</td>
<td>Qualitative</td>
<td>Teachers working with sizable Latino minority</td>
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</tbody>
</table>

*Note: EL = English Learner; T/D = Theoretical/Descriptive.*
Figure 1

*PRISMA diagram of selected studies*

Records identified through database searching

\(n=625\)

Additional records identified through other sources

\(n=0\)

Records after duplicates removed

\(n=376\)

Records screened

\(n=376\)

Records excluded

\(n=253\)

Full-text articles assessed for eligibility

\(n=123\)

Full-text articles excluded, with reasons

\(n=73\)

Studies included in qualitative synthesis

\(n=50\)