

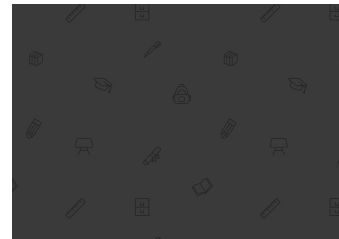
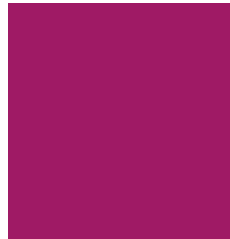
Effective Practices for Identifying and Serving English Learners in Gifted Education: A Systematic Review of the Literature

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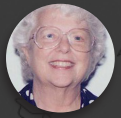
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Effective Practices for Identifying and Serving English Learners in Gifted Education: A Systematic Review of the Literature

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Abstract

While the number of English Learners (ELs) continues to grow rapidly in the United States, corresponding proportions of ELs are not found in gifted and talented education programs across the nation. The underrepresentation of ELs in gifted programs is both a societal and a research problem. This report presents the results of a systematic review of the literature related to the most effective practices used to identify and serve ELs for gifted education services. We examined and categorized a final selection of 45 theoretical and empirical articles under four major themes: nomination, screening/assessment, services, and identification models. Implications and areas of future research are discussed.

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Current Identification Practices and Overarching Services In Gifted Education

English Learners (ELs) are the fastest growing population of learners in the United States (National Center for Education Statistics, 2013). However, despite the growing numbers of EL students, their representation in gifted identification and programming continues to lag behind not only traditional populations of learners (Adler, 1967; Callahan, 2005), but also other underserved populations of learners (Matthews, 2014). The federal government recognizes giftedness as intellectual, creative, artistic, or leadership potential or capacity requiring services (No Child Left Behind, 2002). Further, the Javits Gifted and Talented Act asserts that “outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor” (United States Department of Education, 1993, p. 3). The severe underrepresentation of ELs in gifted programming, therefore, represents both a societal and research problem and merits a thorough investigation.

It is important to review the state of gifted education of ELs as their numbers continue to grow without equitable representation in gifted programming despite Congress’s 1974 Equal Educational Opportunity Act promoting the concept of academic potential in all groups. Although ELs are so designated according to their developing English proficiency, they are a diverse group by members’ immigration status (whether the child immigrated him or herself

versus being U.S. born to immigrant parents, as well as their legal documentation status), country of origin, socioeconomic level, prior access to education, and whether they are the only ones who speak that language at school or whether they have a large body of peers.

Definition of Giftedness

In the United States, the federal government plays a limited role in education due to the Tenth Amendment that states that powers not explicitly delegated to the federal government by the Constitution are reserved for the states and local communities (United States Department of Education, n.d.). Since education was not explicitly delegated, most educational policy resides at the state and local level (Ross, 1997; Stephens, 2008) and there is no federal mandate to identify or provide services to gifted learners (Castellano & Matthews, 2014). States retain the right to craft their own definition of giftedness and determine which, if any, gifted identification or program services to provide (National Association for Gifted Children and Council of State Directors of Programs for the Gifted, 2015). This means that how students are defined, identified and served may vary by state, district, and school depending on the legislative practices of each state. This echoes the variation involved in defining, identifying, and serving EL students, further complicating this issue. Students considered gifted in one school system, may not be identified as such in another (Borland, 2005; L. J. Coleman & Cross, 2005; J. R. Cross & Cross, 2005), lending credence to the claim that the process of identification



has arbitrary elements and involves subjective decision-making on the part of personnel (Hertzog, 2009). The *2014-2015 State of the States in Gifted Education* (National Association for Gifted Children and Council of State Directors of Programs for the Gifted, 2015) reflects this pattern of differential definitions and identification processes by state.

There is no global definition of giftedness due to a lack of consensus in the field reflecting an array of competing theories of giftedness and its varying manifestations (J. R. Cross & Cross, 2005; Dai, 2010; Sternberg & Davidson, 2005). At one extreme, giftedness is perceived as an in-born ability trait making those who possess this trait qualitatively different from those who do not. At the other extreme, giftedness is perceived as a social construct embedded in context (Borland, 2003; Plucker & Callahan, 2014) with remarkable achievement due to a serendipitous combination of opportunity and practice. Many early theorists conceptualized giftedness solely in terms of high intelligence identified by psychometrically derived measures such as IQ tests (Missett & McCormick, 2014; Tannenbaum, 1986). Since that time, theorists have increasingly emphasized “multidimensional constructs” (Plucker & Callahan, 2014, p. 391) and the influence of the environment. Renzulli’s (1978) three-ring conception of giftedness, Sternberg’s (1984) triarchic theory of intelligence, and Gardner’s (1983) theory of multiple intelligences are influential theories in the field that examined both intellectual and non-intellectual traits in the construct of giftedness. The importance of developmental considerations is also examined in Gagné’s (1995, 2004) differentiated model of giftedness and talent. More recently, Subotnik, Olszewski-Kubilius, and Worrell (2011) have proposed a new, comprehensive definition of giftedness that stresses the importance of high domain-specific performance, developmental trajectories, and both cognitive and psychosocial variables.

Identification Practices

A student is considered for gifted programs based on state and/or local policies. Traditional gifted identification practices typically involve assessments of cognitive abilities in combination with an achievement test to gauge students’ potential ability to learn and demonstrate understanding of subject material (L. J. Coleman & Cross, 2005; Newman, 2008). Scores on these assessments play a “dominant role” (Ford & Whiting, 2008, p. 298) in decisions regarding identification and placement with a majority of school districts using standardized test scores as part of the gifted identification process (Callahan, Moon, & Oh, 2013; Colangelo & Davis, 2003; Davis, Rimm, & Siegle, 2010). School personnel may also consider alternative sources of data to make placement decisions including nominations by parent, teachers, peers, or self; nonverbal ability tests; teacher rating scales; creativity scales; and student work portfolios (L. J. Coleman & Cross, 2005; Pfeiffer & Blei, 2008).

Overarching Services

Once students are identified as needing gifted services, the educational options may vary widely by district and even by individual schools (Castellano & Matthews, 2014). Ideally, the instruction, curriculum, and educational setting should reflect an optimal match with the learning needs of gifted students (N. M. Robinson & Robinson, 1982; VanTassel-Baska, 2014). The program/service delivery models most often referred to in the literature include integrated classroom support or inclusionary models, pull-out programs, special classes such as self-contained classrooms, honors or Advanced Placement (AP)/International Baccalaureate (IB) courses, and special schools like math and science academies (Brown & Stambaugh, 2014; Schroth, 2014). Some 20 forms of acceleration exist, all designed to achieve an optimal match referred to above (Assouline, Colangelo, VanTassel-Baska, & Lupkowski-Shoplik, 2015).

Integrated classroom support services such as differentiated instruction and cluster grouping are offered by the general education classroom teacher with or without guidance



from a gifted education specialist (Schroth, 2014). Differentiation is essentially a process that involves “adaptations in content, process, product, affect, and learning environment in response to student readiness, interests, and learning profile to ensure appropriate challenge and support for the full range of learners in the classroom” (Tomlinson, 2014, p. 198) and holds promise for meeting a variety of student needs in the general education classroom. The practice of effective differentiation, however, is complex and teachers may lack the desire or skill to make the appropriate modifications to their classroom instruction (Hertberg-Davis, 2009; Tomlinson, 2000, 2014). With the increased emphasis on high-stakes testing in schools due to No Child Left Behind, teachers may choose to focus their differentiated instruction on struggling learners, rather than high-ability ones, and they may also believe that gifted students do not need differentiation (Hertberg-Davis, 2009). Cluster grouping, where gifted students are grouped together in a general education classroom, has been found to work best when teachers present materials with increased depth and complexity at an accelerated rate (Brown & Stambaugh, 2014) and is often recommended for elementary students who spend much of their time with their classroom teacher (Gentry, 2014).

Pull-out programs, where students receive additional instruction or enrichment for a specified time period each week, represent one of the most popular delivery models (Schroth, 2014). While the number of students and the amount of instruction may vary by pull-out program, the part-time nature of instruction has raised concerns about failure to meet full-time needs of gifted learners (Brown & Stambaugh, 2014; Gubbins, 2013). Gubbins noted that pull-out programs were “partial solutions that must be combined with other services (e.g., mentorships, academic competitions, independent study)” (p. 185) to be truly effective.

In special classes and schools, students are often grouped together in self-contained classrooms, honors, or AP/IB courses so that they can learn

at an accelerated pace with teachers who have more flexibility in curriculum and time. Numerous forms of acceleration provide an educational intervention in which students are moved faster through an educational program or at an earlier age than is typical, and can be content or grade based (Assouline et al., 2015). In content-based acceleration, students may receive advanced instruction in their regular classrooms (e.g., single-subject acceleration, curriculum compacting, AP). In grade based acceleration,

students may enter kindergarten or first grade early, skip grade levels entirely, or even enter college before same-age peers.

There is abundant evidence of positive academic and career outcomes associated with acceleration (Assouline et al., 2015; Colangelo, Assouline, & Gross, 2004; Hertzog & Chung, 2015; Kulik, 2004; Lubinski & Benbow, 2006); the data on social-emotional impact are more mixed, but on the whole positive as well. Some studies suggest that students grouped in self-contained, accelerated classrooms may experience an (often temporary) decrease in feelings of self-acceptance and academic self-concept (Kulik, 2004; Marsh & Hau, 2003; Marsh & Parker, 1984; Robinson, 2004). The practice of grouping high-ability students separately in self-contained classrooms has also been criticized by some for promoting elitism (Brown & Stambaugh, 2014), although in fact there is little research exploring this possible effect.

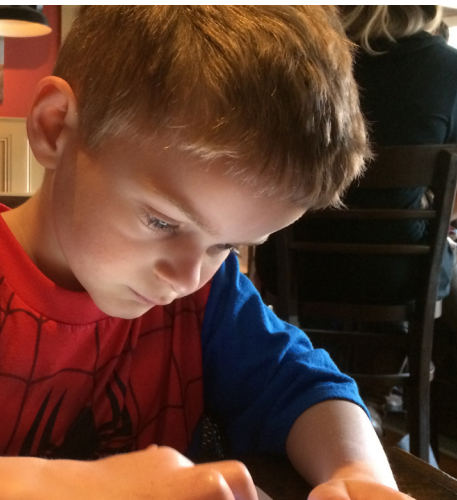
Unfortunately, some educators still believe that giftedness is exclusively equated with IQ-type intelligence and exists in only 3% to 5% of children ...

Issues in Identifying and Serving Diverse Populations

While progress has been made in the conceptual field of gifted education, and in the development of more inclusive definitions at the federal level, those insights and policies have not necessarily translated into inclusive identification practices



at the school level. How children are identified for gifted services in public schools is one of the most controversial and contested aspects of programming because the process results in some students being labeled gifted while others are simply “left behind” (Borland, 2014, p. 323)—particularly controversial when those left behind are students from low income, racial, cultural, and linguistically diverse populations (Borland, 2003; Ford, 2014; Ford & Whiting, 2008; Kitano, 2003; Worrell, 2014).



Unfortunately, some educators still believe that giftedness is exclusively equated with IQ-type intelligence and exists in only 3-5% of children, what Borland (2009) called a “giftedness-equals-high-IQ myth” (p. 237). Also, teachers

may have *deficit thinking* biases about dual language and/or culturally different students, which may result in fewer referrals for culturally and linguistically diverse students (Ford & Whiting, 2008). Even if referred, students may face barriers at the standardized intelligence testing stage, where on average Blacks score one standard deviation below the average of Whites on intelligence tests, and Hispanics and Native Americans score on average somewhere between Blacks and Whites (Gottfredson, 2003) with IQ differences apparent even in early childhood (Rushton & Jensen, 2005). These ethnic differences are highly correlated with low socioeconomic status, levels of parental education, and reduced opportunities to learn, indeed likely to be the major factors producing the differences due to a multiplicative effect of various disadvantages (Robinson, 2003).


Many scholars in the field of gifted education recommend the use of multiple assessments or criteria aligned with the adopted definition of giftedness to reliably select the students in need of gifted program services (Borland, 2014; L. J. Coleman & Cross, 2005; Kogan, 2001; Pfeiffer & Blei, 2008). L. J. Coleman & Cross (2005) warned against misuse of assessment techniques that could lead to relinquishing “control of the identification program to the developers of the measurement devices” (p. 72) rather than school personnel. Further, many scholars have advocated for using multiple criteria in the identification of students for their increased effectiveness in identifying culturally diverse and multilingual students (Davis et al., 2010; Granada, 2003; Kogan, 2001; Obi et al., 2014; Pfeiffer & Blei, 2008; Reis & Renzulli, 1984). Tannenbaum (2003) argued for widening the diagnostic net so as not to exclude any potentially gifted young students; along similar lines of reasoning, Reis and Renzulli (1984) recommended identifying a larger talent pool of 15-20% of the student population with above average abilities using the Revolving Door Identification Model (RDIM). Through RDIM, students in the talent pool receive a broad array of enrichment experiences. The way students respond to these experiences determines the type of advanced opportunities they receive (Renzulli, Reis, & Smith, 1981). Universal screening, where all students are assessed for gifted identification regardless of nomination, is another possibility that may offset the parent/teacher under-referral problem of low income, minority, and/or EL students (Card & Giuliano, 2015). In one study, the implementation of a universal screening program for second graders in a large, urban school district with no change in the minimum standards of gifted identification led to a “180% increase in the gifted rate among all disadvantaged students, with a 130% increase for Hispanic students and an 80% increase for black students” (Card & Giuliano, 2015, p. 20).

Simply using multiple criteria for gifted and talented identification is not enough—how districts choose to weigh and combine scores from each criterion also matters (McBee, Peters, & Waterman, 2013). If there are minimum requirements for each criterion (e.g., GPA, standardized achievement test, and cognitive



reasoning score), ELs who perform very well on two of those measures will still fail to be identified due to the third measure, despite their strong potential.

Gifted identification is, however, only a means to an end that allows educators to understand how children learn and how to best meet their needs (Brulles, Castellano, & Laing, 2010). Rogers' (2007) synthesis of research of gifted educational practices illuminated the need for gifted learners to receive daily challenge in their domain specific areas of talent to foster achievement. Similarly, VanTassel-Baska, Feng, and Evans (2007) determined practitioners should match program intervention to student ability and aptitude to optimize the benefits of programming. For example, Gavin, Casa, Adelson, Carroll, and Sheffield (2009) found that mathematically promising students experienced a positive increase in their achievement when provided with targeted math instruction based on exemplary practices in gifted and mathematics education.

Finally, matching student abilities—however identified—with the approaches and programs locally available, is imperative. Gifted children's abilities are typically highly uneven (Achter, Lubinski, & Benbow, 1996), and matching the need for advancement with an educational experience likely to provide it is essential. 



Gifted EL Students

EL students typically fall into three categories: foreign-born immigrants (also called first generation immigrants), native-born children with immigrant parents (second generation immigrants), and less commonly, native-born children of native-born parents who reside in monolingual, non-English speaking neighborhoods (third generation immigrants and beyond) (Kogan, 2001). Although the term EL is used interchangeably at the federal level with Limited English Proficient (LEP) (United States Department of Education: Office for Civil Rights, 2015), the latter designation is falling out of favor as “limited” is increasingly considered to have a negative connotation as a deficit rather than a difference that is outside a student’s control (Castellano & Díaz, 2002; Matthews, 2014).

Recent movements in educational literature have emphasized focusing on strengths rather than deficits (Aldridge, 2008; Ford & Grantham, 2003) and various forms of capital (i.e., cultural or social) that “disadvantaged” students bring with them (J. S. Coleman, 1988; Noguera, 2004). For example, *funds of knowledge* is the view that all people accumulate bodies of knowledge and skills for functioning and well-being over time and bring those to the learning context (Moll, Amanti, Neff, & Gonzalez, 1992). Using this framework, ELs can be viewed as possessing a wealth of previous knowledge, ability, skill, fluency in multiple languages as demonstrated in *code switching* (Hughes, Shaunessy, Brice, Ratliff, & McHatton, 2006) or “alternating use of two languages on the word, phrase, clause, or sentence level” (Valdes-Fallis, 1978, p. 6),

and experiences. Maintaining the student’s native language is particularly relevant for EL gifted students. N. M. Robinson noted that gifted students with limited skills in their native language experience difficulty conversing with their parents at the abstract level at which they are thinking, and since parents also have limited English skills, this results in a sizeable communication gap between parent and child (personal communication August 6, 2016).

For ELs with gifted potential, there are some indicators in addition to code switching that educators may look for such as speed of English language acquisition while retaining sophistication and acuity in the dominant language, strengths in leadership, creativity, visual and performing arts, and even rapid rates of acculturation (Granada, 2003). A major challenge, however, is in developing norms for these nontraditional indicators that teachers can utilize in the classroom. Despite offering general indicators of giftedness in students designated as ELs, Granada (2003) warned that we must also recognize that they are a diverse group and educators must be “knowledgeable of how giftedness is defined within a family and culture” (p. 4).

Immigrants/Children of Immigrants

There has been noticeable growth in the population of U.S. immigrants over the past 50 years reflecting the effect of the Immigration Act of 1965, which removed the highly discriminatory national origins quota system and opened up American shores for reuniting families and increasing numbers of skilled workers (Lee, 2014). With the Immigration Act of 1990, the rate of foreign-born population of



the U.S. doubled to 35.2 million between 1990 and 2005, with a 47% increase since 1990 of the number of U.S. residents above age 5 that speak a language other than English at home (Rong & Preissle, 2009). Many of the new immigrants are of Asian and Latin American descent (Grieco et al., 2012) but immigrants and their children are an increasingly diverse group with over 350 different languages being spoken according to the U.S. Census data collected through 2013 (American Community Survey, 2015). New immigrants also are more likely to experience poverty than are native-born families, with 23% of current immigrant households living in poverty compared to 13.5% of native-born



households in 2010 (Camarota, 2012).

Hope of a better life in the form of social, economic, and educational opportunities and family ties often lures immigrants to North American shores (C. Suarez-Orozco & Suarez-Orozco, 2001).

However, the adaptation of immigrants to the destination country has been difficult due in part to a lukewarm if not outright hostile reception from the native-born population and the immigrants who came before, and this pattern has been observed historically with new migrants, whether new migrants from Eastern Europe in 1920 or new migrants from Mexico in the last decade (Pozzetta, 1991; C. Suarez-Orozco & Suarez-Orozco, 2001). In the destination country, many migrants also face financial, educational, cultural, legal, political, societal, and linguistic challenges.

The process of immigration itself is often fraught with uncertainty, discomfort, stress, and even threat to life in the case of asylum-seekers and refugees, who are forced to leave their country of origin due to persecution or fear of persecution (McBrien & Ford, 2012). The United States resettled 644,500 refugees from 2002 to 2013 representing 113 countries. Of those students, 24% were school-aged children ranging from ages 5 to 18 (Dryden-Peterson, 2015). Many refugees suffer from post-traumatic stress syndrome (C. Suarez-Orozco & Suarez-Orozco, 2001). Despite the hardship, there are stories of children of refugees with remarkable resilience, who achieve well academically and pursue higher education in disproportionate numbers.

Family Background

Depending on the circumstances that bring ELs into the United States and/or their current economic situation, they will vary widely in family education level, socioeconomic status, and familiarity with the U.S. culture and school systems. Moll et al. (1992) found that immigrant families differ in their *funds of knowledge*, regardless of their income status and J. S. Coleman (1988) determined that immigrant families differ in the *financial, human, and social capital* that they bring with them. Financial capital refers to money and access to physical resources, human capital refers to parent education level and ability to set up a positive cognitive environment in the home, and social capital refers to the strength of relationships and networks (J. S. Coleman, 1988). Varying levels of capital across these three dimensions can influence children's achievement in school. For example, there are many incidences of immigrant parents who were well-educated professionals in their home country before giving up those credentials for a chance of a better life in the destination country as in the case of certain immigrants (Chung, 2015; Min, 1995; Portes & Rumbaut, 2001). They may take on menial jobs due to language and cultural barriers in America and have low socioeconomic status, but they may possess high levels of human capital and social capital, which they can utilize to improve educational outcomes for their children. On the other hand, children



may have parents who are less educated or without the same levels of capital to support their children in public schools (Darden, 2014), resulting in differential levels of achievement and identification for gifted programs. Different cultures hold different views on the nature of education and their role in the process. For example, some families may view school to be the domain of the educators. On the other hand, other families may feel that school alone is not enough. Thus, they are willing to take on heavy financial burdens to send their children to *cram schools*, or extracurricular academies where children can advance their education (Byun & Park, 2012).

EL Instruction

The United States Department of Education's Office for Civil Rights (2015) does not require any particular program or method of EL instruction, but does require schools to provide students with "appropriate language assistance services until they are proficient in English and can participate meaningfully in the district's educational programs without language assistance services" (p. 12). Furthermore, they require programs to be educationally sound in theory and effective in practice, and list common EL program options:

- **English as a Second Language:** A special curriculum with specific techniques and methodology to teach English explicitly, including academic vocabulary. Instruction is primarily in English with very little of the students' primary language.
- **Structured English Immersion:** A program to teach English skills to facilitate EL students' proficiency and transition to English-only mainstream classrooms. All instruction is in English.
- **Transitional Bilingual Education:** Instruction in the students' primary language helps to develop English proficiency while maintaining and developing skills in their primary language. Academic instruction is given in the students' primary language as necessary, but

the goal is to transition students to all-English instruction.

- **Dual Language Program:** The goal is for students to develop and maintain language proficiency in two languages through half instruction in English and half instruction in the other language. One-way models are comprised of students who are native speakers of the target language, while two-way models are comprised of a balance of native speakers of the target language and native English speakers.

In dual language education, students are taught in both their native language and English to help them master curriculum content while developing their English proficiency. Researchers found test score growth rates of ELs in dual immersion exceeded those of ELs in the other programs (Valentino & Reardon, 2014) with benefits in two-way models for both groups of speakers in reading and math (Marian, Shook, & Schroeder, 2013). In an empirical study of dual language immersion in Portland Public Schools in Oregon, researchers at RAND Education and the American Councils for International Education (2015) found that students who were randomly assigned to immersion classrooms "outperformed their peers in English reading by about 7 months in grade 5 and 9 months in grade 8" (p. 2). Proponents of this approach argue that it encompasses the language and culture of each linguistic group, which provides a better match between school and home where families speak the native language (Barkan & Bernal, 1991). The number of districts using a dual language approach has grown steadily, with a "dramatic increase" (Christian, 2016, p. 2) in the past decade. Researchers report a dual language approach fosters cognitive development under the threshold theory that dual language students with high proficiency levels in both languages benefit cognitively (Ricciardelli, 1992),

English as a Second Language (ESL) instruction operates in opposition to the threshold theory.




as well as grade level academic achievement (Iowa Department of Education, 2008). Additionally, the American Psychological Association, Presidential Task Force on Educational Disparities (2012) determined that grade level academic achievement becomes more difficult without explicit instruction in academic vocabulary to develop Cognitive-Academic Language Proficiency (CALP). CALP results from formal instruction and is essential for academic success beyond 4th grade when the curriculum begins to require reading for learning, and not just learning to read.

In contrast, English as a Second Language (ESL) instruction operates in opposition to the threshold theory. ESL instruction encompasses a range of services such as English Immersion (as referenced above) and Sheltered Instruction. Sheltered instruction provides grade level academic instruction in clear, direct, simple English with scaffolds in place to support academic learning and development of English proficiency. The focus of ESL instruction remains, however, on developing English proficiency (Jost, 2009).

Research on successful English language acquisition programs reveals that it can take 3-5 years for students to develop oral English proficiency and 4-7 to develop academic English proficiency (Hakuta, Butler, & Witt, 2000). Academic achievement of ELs in comparison to non-EL students is found to vary by the length of time in a program and the time of assessment. In an overview of EL research findings, K-3 students typically scored lower than their non-EL counterparts until later elementary, middle, and high school when their educational outcomes matched or exceeded their non-EL counterparts (Genesee, Lindholm-Leary, Saunders, & Christian, 2005).

Research Problem of Gifted EL Student Underrepresentation

The field of gifted education has been characterized as *elitist* and as mainly serving students from privileged backgrounds (e.g., high SES, White; Borland, 2003; Sapon-Shevin, 2003). Students with advantage are perceived as gaining even more advantages by enjoying the benefits of gifted pedagogy, smaller classrooms, and more skilled teachers, which runs counter to the American ideals of egalitarianism (Sapon-Shevin, 2003; Subotnik et al., 2011). Plucker and Callahan (2014) asserted that for gifted education to advance and thrive, the field *"needs to take several bold steps to shrink excellence gaps—and to do so by raising the achievement levels of underachieving groups, not by allowing already high-performing groups to slip"* (p. 400). Part of that advancement requires more research in the field of EL gifted education since what is known is quite limited (Granada, 2003). 



Purpose and Method

The purpose of this report is to provide a comprehensive review of literature related to the most effective practices used to identify and serve English Learners (ELs) for gifted education services by addressing the following research questions:

Research Questions

1. What empirical and non-empirical research exists on how to identify ELs for school gifted programs?
2. What is the status of ELs being identified and participating in school gifted and talented programs?
3. What are perceived best practices for identifying ELs for school gifted programs?
4. What types of personnel are involved in referring and assessing ELs for gifted programs?
5. What are perceived best practices for serving ELs in school gifted programs?

Based on the research questions, we conducted a *systematic* literature review (Jesson, Matheson, & Lacey, 2011; Petticrew & Roberts, 2006), which Jesson et al. (2011) defined as “a review with a clear stated purpose, a question, a defined search approach, stating inclusion and exclusion criteria, producing a qualitative appraisal of articles” (p. 12). To capture the initial batch of potential references, we applied a broad set of terms using “gifted or talented” and synonymous terms such as “advanced learn*” or “high achiev*” or “high abilit*” together with a

pre-identified set of terms for “English Learner” (see Table 1). Search terms for ELs were chosen in consultation with experts in dual language and multicultural education and included terms that are currently out of favor, such as “limited English proficient” to include as many related articles as possible.

We further limited the search to peer-reviewed journal articles to ensure the academic quality and reliability of the sources (Jesson et al., 2011). Only articles written in English and focused on K-12 education in the United States were included for review since this report was concerned with gifted EL students in the context of American schools. The dates of the search were purposefully undefined to capture the earliest references to ELs in education as well as the emergence of gifted and talented programs.

The search was conducted from September 9, 2015 to September 24, 2015 in relevant, social science related electronic databases including Educational Resources Information Center (ERIC), Academic Search Premier, PsychINFO, and Professional Development Collection (see Table 1). The initial search resulted in 593 citations, of which 344 were unique records and not duplicates. The abstracts of the unique records were reviewed against our inclusion/exclusion criteria (see Table 2) and all off-topic citations (e.g., not gifted related, not EL) were removed resulting in 109 potentially relevant articles. The remaining abstracts and articles were reviewed more critically for how they specifically related to gifted EL identification and services resulting in 53 articles. These 53 papers were reviewed in their entirety and refined down to the final collection of 45 papers according to most relevance to our research questions.



Table 1

Literature Search Databases, Search Terms, and Identified Articles

Database/Search Terms	Date searched	No. of references	No. of unique references
1. "gifted" or "talented" and "English Language Learner" or "ELL"			
ERIC	September 9, 2015	10	4
Academic Search Premier	September 9, 2015	4	4
PsychINFO	September 10, 2015	10	7
Professional Development Collection	September 10, 2015	4	0
2. "gifted" or "talented" and "English Learner" or "EL"			
ERIC	September 9, 2015	5	5
Academic Search Premier	September 9, 2015	31	31
PsychINFO	September 10, 2015	5	3
Professional Development Collection	September 10, 2015	5	0
3. "gifted" or "talented" and "English as a second language" or "ESL" or "ESOL"			
ERIC	September 9, 2015	10	8
Academic Search Premier	September 10, 2015	7	7
PsychINFO	September 10, 2015	13	8
Professional Development Collection	September 10, 2015	8	2
4. "gifted" or "talented" and "limited English proficient*" or "LEP"			
ERIC	September 9, 2015	15	7
Academic Search Premier	September 10, 2015	10	10
PsychINFO	September 10, 2015	8	3
Professional Development Collection	September 10, 2015	11	1



Table 2

Inclusion/Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Peer-reviewed journal articles	Non peer-reviewed articles
Unique Articles	Duplicates
Written in English	Non-English
Studies/Articles in U.S.	Non-U.S.
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	



Results

The 45 identified peer-reviewed journal articles were published between 1974 and 2015 and comprised 18 theoretical/descriptive articles and 27 empirical studies (see Table 3). A sample summary of studies by article type, study sample (if available), data sources, theoretical framework (quantitative, qualitative, or mixed methods), EL population of focus, and evidence/quality of study or theoretical paper was included as an example of how the studies were organized during the analysis process (see Table 4). The articles were assessed as having low, moderate, or high quality based on the presence of “clear methodology, generalizations of results, and strength of claims” (p. 440), a process inspired by Thurlings, Evers, and Vermeulen (2014) from their literature review. Additional categories were employed in our final spreadsheets, but for sake of simplicity, we only included these six. References for all of the literature search article citations are in Appendix A. The majority of articles ($n=33$) were published in the 2000-2015 time frame, and nearly half of those ($n=15$) were published in the last 5 years between 2010 and 2015, reflecting perhaps the increasing salience of the topic of EL identification in gifted education research. The societal problem of gifted EL underrepresentation, however, has been an ongoing one. Although we purposely left dates undefined in our search, the earliest article in this review was published in 1974, just 2 years after the Marland (1972) report. The Marland report contained the results of a critical examination of education of GT, with a resulting definition of children who are capable

of high performance in general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts, and psychomotor ability. Shortly thereafter, Congress established the 1974 Equal Educational Opportunity Act (EEOA) promoting the concept of academic potential in all peoples. Both the Marland report and the EEOA provided promise for the field of gifted education and all special populations within it.

The results for this search are organized sequentially and thematically into four broad areas, the first three reflecting the process in which children are typically identified and placed in gifted education programming: nomination, screening/assessment, and placement and services. The fourth and final section describes identification models, either theoretical or in practice, for use with gifted EL populations.

Nomination

Nomination is often the first step of any gifted program identification process. Depending on the local policies of the district, students, parents, teachers, administrators and/or other members of the community may nominate a child for assessment. Overall, teachers make the most nominations (McBee, 2006) and because they work closely with students in the classroom, they have the advantage of observing students’ critical thinking skills, reasoning abilities, content knowledge, subject interest, and social emotional regulation. However, implicit beliefs related to intelligence, giftedness, socioeconomic class, and language ability may color how teachers view the abilities and potential of ELs in their classrooms. In six empirical studies (A. Brice & Brice, 2004; de Wet & Gubbins, 2011; Fernandez, Gay, & Lucky, 1998;



Harradine, Coleman, & Winn, 2013; Kitano & Pedersen, 2002; Peterson & Margolin, 1997) and one theoretical/descriptive article (Hughes et al., 2006) teacher perceptions were examined as they related to identification and/or services for gifted ELs.

Two of the studies gathered qualitative data from group conversations with teachers (Kitano & Pedersen, 2002; Peterson & Margolin, 1997). Twelve teachers (8 White, 3 Latino, and 1 Filipino) certified in gifted education and teaching gifted ELs participated in 2-hour focus groups where they shared their observations of gifted ELs and recommended teaching strategies consistent with best practices in the literature (Kitano & Pedersen, 2002). Gifted EL students were described as enthusiastic, independent, and in possession of high-level thinking abilities, but challenged by the English language in terms of spelling, vocabulary, idioms, and reading comprehension. Some gifted EL student characteristics were attributed to family background, culture, and socioeconomic status. While differences between gifted EL and general EL students were more difficult for teachers to articulate, they broadly mentioned faster pace, preference for challenge, and independence as differentiating characteristics. Since oral expression was challenging at times for gifted ELs, teachers stressed the importance of having a safe and welcoming class environment. They also noted that EL children benefit from a mixture of learning methods such as use of visual prompts and hands-on activities. Teachers also agreed that these children needed challenging material that was not restricted by language.

Kitano and Pedersen (2002) approached their study with the assumption that teachers would have valid understandings of the characteristics and needs of their gifted EL students. On the other hand, Peterson and Margolin (1997) conducted their study of teachers with a very different assumption and raised the following provocative questions:

How do teachers, who are explicitly forbidden to separate students according to ethnic background and social class, manage to do just this, all the while appearing (both to themselves and others) nonbiased and nondiscriminatory? How do teachers, who often profess to be opposed to “the way things are,” manage to conserve that very system in their daily work? (p. 83)

To answer this question, they devised a “test” where they invited teachers from two Midwestern middle schools with a minority population of 16% (Latinos, 13.5%) to nominate children for a temporary new program for gifted children. Peterson and Margolin (1997) purposely did not provide a definition of gifted nor any guidelines for how to nominate students but invited teachers to engage and 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 definition or expectations. All 55 teachers who participated in the study were Anglo-American. From these nomination meetings, the researchers discovered that despite the lack of guidelines, teachers easily discussed “giftedness” as a concept and experienced few difficulties identifying “gifted” children. The authors reported that 21 minority students were nominated in total. Only 3 students of the 61 students nominated more than once were from minority groups and there were no minority students among the 18 who were nominated three or more times. The authors noted that Latinos were the dominant minority group in the community but did not specify the race or ethnicities of the nominated minority groups. Teacher nominations reflected strong valuing of verbal skills, social skills, achievement, and work ethic, which Peterson and Margolin (1997) argued were reflective of dominant cultural biases that ultimately led to no students with limited English proficiency being recommended. While strong verbal skills may reflect cultural biases, they are essential for a verbally intensive program.

Cultural bias may also be embedded in items on teacher rating scales. For example, a Florida district developed a teacher behavior checklist



T.A.R.G.E.T. B (only the acronym was provided) as a giftedness screening tool. Twenty-four percent of the items were arguably culturally biased against Hispanic and/or linguistically diverse students (A. Brice & Brice, 2004). Items such as being assertive, initiating activities, asking questions and contributing in class represent behaviors valued in Anglo-American culture, but are not necessarily culturally appropriate for some children who may be raised in a Hispanic family that values a collectivist culture. Furthermore, students who are still learning English may not yet feel comfortable verbally expressing themselves in the classroom (A. Brice



& Brice, 2004). These behavioral skills are *not* necessarily related to academic giftedness, but reflect social skills that can be taught or worked around.

Fernandez et al. (1998) investigated whether there were differences in teachers' perceptions between general gifted and Hispanic EL gifted students, and whether those

perceptions varied based on the teachers' own ethnicities. Likert-type scale surveys adapted from the *Survey on Characteristics of Gifted and Talented Hispanic Students* (Fernandez et al., 1998) were administered to 373 elementary school teachers (162 Hispanic, 137 White, and 74 African American) in the state of Florida. The surveys contained the same items except half of the teachers in each school were randomly sent a survey labeled as "Gifted" and the other half with a survey labeled as "Gifted Hispanic LEP" and directions in each survey reflected 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 "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, dance ability, and playing a musical instrument were items rated significantly higher for the gifted Hispanic LEP survey group as compared to the general gifted survey group, whereas having a large vocabulary and skill in oral expression were given significantly higher ratings in the general gifted group, supporting the premise that teachers evaluate students differently based on ethnic origin. However, both groups also gave high ratings to items that described characteristics typically ascribed to gifted children in the research literature such as curiosity, creativity, and motivation, suggesting that regardless of ethnicity, teachers have beliefs of what giftedness looks like across students.

Teacher perceptions about culturally, linguistically, and ethnically diverse (CLED) gifted students were more recently investigated through two different large-scale studies spanning multiple states, both with mostly White and female teachers (de Wet & Gubbins, 2011; Harradine et al., 2013). Three hundred eight participants (84% White, 90% female) out of a stratified, random sample of 4,000 teachers from 8 states (Florida, Georgia, Texas, Virginia, California, Colorado, Illinois, and Massachusetts), returned the *Teachers' Beliefs About Culturally, Linguistically, and Economically Diverse Gifted Students Survey*, which had a 30-item, Likert-scale section about teacher beliefs (de Wet & Gubbins, 2011). Respondents generally believed that above-average abilities existed in all populations regardless of ethnicity, socioeconomic status, and culture; that IQ tests are not accurate indicators of CLED abilities; and that gifted programs would benefit from the inclusion of CLED students. Results from a MANOVA indicated that there were no significant differences in means between responses of teachers who worked in non-diverse and diverse schools. One limitation of this study, however,



was the low response rate (7.7%), which may restrict generalizability of findings. The authors did note that the distribution of ethnicity and gender of survey respondents reflected national trends and that there were similar numbers of respondents represented from different work categories and from each of the states.

While the studies mentioned thus far have addressed what was already present (i.e., core teacher beliefs), Harradine et al. (2013) sought to find out if 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) would influence teachers' perceptions regarding recognition of high potential in students of color. This multi-year study was conducted as part of an evaluation for a larger study evaluating U-STARS~PLUS. 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 3-6 week period of time, followed by another 3-6 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% children of color. Teachers noted several barriers that may have prevented them prior to TOPS from recognizing potential in the culturally diverse children such as lack of parental advocacy, low expectations, and particularly oral language for Latino students. In the survey, which had a 38% response rate, 21% of teachers reported TOPS had "revolutionized the way they look at students" (p. 31), 56% indicated it assisted them in recognizing potential in students they might have missed, and 74% believed they could more readily recognize the high potential of young CLED students.

Summary. The empirical evidence in these six studies and the recommendations of the theoretical/descriptive articles, suggest that teachers have implicit beliefs about giftedness and EL students, which may in turn negatively influence nominations for gifted programming. In general, teachers may overlook academic potential in EL students due to (a) strong valuing of the English language as a characteristic of giftedness and (b) cultural bias in what "giftedness" should look like in children, with a tendency to favor behaviors that reflect dominant culture values such as individualism and verbal expression.

Findings from studies conducted in the last 5 years provide some hope for change. Teachers recognize that students with high abilities exist in all populations and that gifted programs benefit from the inclusion of linguistically diverse students. Also, teacher beliefs are not static, but can change with training and education. District personnel must take care to review the teacher observational scales and ensure they are culturally neutral. Due to methodological limitations, particularly limited response rates from survey data, caution must be taken in generalizing the results of these studies to all teacher populations.

Teachers' emphasis on verbal strengths may also reflect what they understand are necessary requirements for students to succeed in verbally intensive gifted programs. If we focus on domain specific giftedness, then children without sufficient English language skills may still have opportunities to flourish in other areas such as mathematics. Most gifted programs, however, require strong language skills putting program personnel in a quandary with regard to including ELs. To be successful, a system of identification and programming must work in concert.

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Screening/Assessments

If nominated for gifted programs, students are often screened or assessed by standardized cognitive tests that may include standardized tests of IQ, ability or aptitude, and achievement. For EL students, these cognitive assessments represent one of the greatest barriers to gifted identification. Researchers have long asserted that EL students will not perform as well on cognitive assessments with verbal components in English due to linguistic and cultural factors (Bernal, 2001; de Bernard & Hofstra, 1985; Esquierdo & Arreguin-Anderson, 2012; Ford, Grantham, & Whiting, 2008; G. Gonzalez, 1974; Harris, Rapp, Martinez, & Plucker 2007; Melesky, 1995). Stein, Hetzel, and Beck (2012) compared the plight of gifted ELs to the twice exceptional, or students with both gifts and disabilities, in the way their giftedness was masked by a perceived lack of ability in English. This problem has also prompted some scholars to examine alternative assessments for ELs such as nonverbal tests of ability or dynamic and performance based assessments, which involve observations of students on challenging tasks (Kirschenbaum, 1998; Lidz & Macrine, 2001; Sarouphim, 1999, 2000; Sarouphim & Maker, 2010).

Theoretical arguments. The authors of the eight theoretical/descriptive articles in this section addressed the problem of standardized tests as it related to the underrepresentation of general ELs (n=4) (Bernal, 2001; G. Gonzalez, 1974; Harris et al., 2007; Stein et al., 2012) and specifically, Hispanic ELs (n=4) (de Bernard, & Hofstra 1985; Esquierdo & Arreguin-Anderson, 2012; Ford et al., 2008; Melesky, 1985) in gifted programs. Additional barriers mentioned include such concerns as financial and physical resources in the schools to accommodate EL students, 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 report (Bernal, 2001; Harris et al., 2007). Common elements in their recommendations for identifying and serving gifted ELs are summarized here for brevity's sake:

- Need to acknowledge that giftedness exists in all populations regardless of race, ethnicity, and language, but that it can also manifest differently by culture (Esquierdo & Arreguin-Anderson, 2012; Ford et al., 2008; Harris et al., 2007; Melesky, 1985; Stein et al., 2012). For example, the Hispanic dual language gifted student may demonstrate strong interpersonal connections with family members, preference for collaboration, and strengths in social and academic language in both English and Spanish (Esquierdo & Arreguin-Anderson, 2012).
- Need to shift from deficit 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). Strengths-based thinking may manifest itself in nominations when, for example, teachers focus on speed of language acquisition, collaborative work behaviors, and strengths in nonverbal areas such as mathematics.
- Need to acknowledge that standardized testing is problematic in identifying gifted ELs due to language 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). Furthermore, "reliance on single standardized test score on IQ has been identified as major cause of demographic homogeneity in gifted and talented programming" (Harris et al., 2007, p. 27). However, standardized testing may be appropriate when a certain level of English language mastery is needed to be successful in the gifted program. *The alternative is to have transition programs, or programs that are domain specific in mathematics or art for example, without closing off opportunities for ELs to be considered for verbal programs as they master English.*



- Need to consider use of multiple measures and alternative assessments including but not limited to nonverbal ability tests, intelligence tests in 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; Melesky, 1985; Stein et al., 2012).
- Need for more professional development for school personnel, particularly for teachers, on identification of culturally and linguistically diverse students (Bernal, 2001; Esquierdo & Arreguin-Anderson, 2012; Ford et al., 2008; Harris et al., 2007; Melesky, 1985; Stein et al., 2012).

Changing the status quo will require a *paradigm shift* by parents and educators and more professional development for educators (Esquierdo & Arreguin-Anderson, 2012; Melesky, 1985; Stein et al., 2012). Program evaluation data may also be necessary to demonstrate to administrators the value of including diverse students into gifted programs and allaying fears of middle class, White parents (Bernal, 2001). Bernal recommended recruiting more teachers of color in gifted and talented programs to organically improve identification practices from the inside out. Minority teachers can model professional behavior to minority students and also bring unique, multicultural perspectives and approaches to White students. They can also work with their White teacher peers to “advocate for defensible changes to the admissions process and present curricular alternatives for all the GT children” (Bernal, 2001, p. 86).

Nonverbal assessments. Many educators and researchers have considered using nonverbal tests of ability to identify culturally and linguistically diverse students for gifted services. Students with advanced cognitive reasoning abilities should do well on them despite limited English or so the logic goes. However, within the field of assessment,

experts have debated the appropriateness of administering nonverbal ability tests with EL students. We identified seven studies on nonverbal assessments (Geissman, Gambrell, & Stebbins, 2013; V. Gonzalez, 2006; V. Gonzalez, Bauerle, & Felix-Holt, 1996; Lohman & Gambrell, 2012; Lohman, Korb, & Lakin, 2008; Matthews & Kirsch, 2011; Mills & Tissot, 1995). These studies included at least one of three popular cognitive assessments used with the EL population: the Raven’s Progressive Matrices (RPM; J. Raven, Raven, & Court, 1998), the Naglieri Nonverbal Ability Test (NNAT; Naglieri, 1997), and the Cognitive Abilities Test Form 6 (CogAT-6; Lohman & Hagen, 2001). Each of the three instruments is considered to be either a nonverbal test or a battery that includes a nonverbal component. These studies are chronologically presented to reveal the evolution of debate over the efficacy of these instruments for identifying ELs for gifted programs. We supplemented this section with some additional articles on the NNAT (Naglieri, Booth, & Winsler, 2004; Naglieri & Ronning, 2000) that were not identified in the search but were deemed particularly relevant to the discussion.

Raven’s Progressive Matrices (RPM), known as the Raven, is the oldest nonverbal test of cognitive ability, developed by John C. Raven in 1936. The Raven has remained popular over time because of its minimal verbal requirements—only for directions given at the beginning of the test—and because the geometric tasks of the test are not believed to require any specific cultural knowledge (Arthur & Day, 1994). However, the norms for the Raven have been controversial due to issues with a non-representative standardization sample. Mills and Tissot (1995) investigated the utility of Raven’s *Advanced* Progressive Matrices (APM; J. C. Raven, Court, & Raven, 1983) for identifying high academic potential in culturally and linguistically diverse students. They 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 who were identified as having ESL. Students' scores on the two tests were compared across gender, ethnic group, and ESL status, and further compared to achievement test scores in reading and math. Ethnic group differences were found on both tests, even after controlling for eligibility for free and reduced lunch and for ESL 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. The researchers also presented correlations across the SCAT, APM, and math and reading achievement scores. SCAT scores were significantly correlated with achievement scores in reading and in math; however, the APM and student achievement

were not significantly correlated. The authors argue that the correlations reflect the content of the SCAT as a measure of "crystallized intelligence, while the APM is a measure of 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 minorities and ELs, but only if used in combination with other tools like parent and/or teacher behavior ratings.



Naglieri et al. (2004) conducted a study of the NNAT, evaluating its efficacy in the identification of giftedness in ELs. The study group was formed from a sample of Hispanic children matched on their classification as limited in English proficiency (LEP) or not limited in English proficiency (non-LEP), as reported by their school district. The sample was drawn from the database of students who were administered the NNAT and the Stanford Achievement Test (SAT-9; Stanford Achievement Test, 1995) as part of the 1995 standardization group for the NNAT.

Investigators found only small differences between NNAT scores and SAT-9 achievement sub-scores between the LEP and the non-LEP group. Next, to determine the ability of the NNAT to predict academic achievement

for the students in this sample, the researchers regressed students' SAT-9 achievement scores on NNAT scores, LEP status, and the interaction between NNAT and LEP. This interaction term, if found to be significant, would indicate that the predictive ability of (i.e., the relationship between) the NNAT and SAT-9 scores is different pending LEP status. The only detected significant interaction was when NNAT and LEP were used to predict listening achievement (a section of the SAT-9). In this case, the correlation between NNAT and listening achievement was stronger for the LEP students compared to the non-LEP students.

Following the publication of a number of studies (Naglieri et al., 2004; Naglieri & Ronning, 2000), which advocated use of the NNAT as an unbiased measure of general ability, particularly with Hispanic and EL children, controversy erupted. In a study comparing the Raven, NNAT, and CogAT-6, Lohman et al. (2008) criticized the norming method used for the NNAT and noted that the Raven was not appropriately normed in the United States. The authors also called attention to the fluidity of the term English Language Learner, noting that there is

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no standard criteria in use, so children can be classified as ELs in one district and non-ELs in another, making comparison of one group to the other unreliable.

Lohman et al. (2008) also compared the performance of EL and non-EL students on the NNAT, Raven's Standard Progressive Matrices (SPM; J. C. Raven, Court, & Raven, 1996) and the Nonverbal battery of the CogAT-6 to analyze group differences. Additionally, they evaluated the efficacy of each measure in predicting those students with the strongest academic achievement. Their results indicated that on all three tests, EL students scored between .5 to .6 SD lower than non-EL students, which did not corroborate findings of Naglieri et al. (2004). Further, NNAT scores were found to have 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 gifted services, compared to a test that did not have extreme variability. They further concluded that the nonverbal tests did not predict achievement of EL students well.

Lohman et al. (2008) also concluded that when assessed by the Raven, non-EL students 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 gifted students—one that “incorporates a broader range of abilities and teacher ratings that formalizes the process of comparing students with their peers rather than a distant and often inadequate national norm group” (p. 292).

Continuing this work related to the efficacy, or lack thereof, of nonverbal tests to accurately identify gifted ELs, Lohman and Gambrell (2012) made the distinction and studied the differences between picture verbal (requires acquisition of oral language), picture quantitative (includes numerical symbols), and figural (e.g., figure matrices, paper folding, and figure classification) nonverbal assessments (i.e., NNAT) in a study

investigating the use of nonverbal tests in the process of identifying academically talented children. They purport that nonverbal tests are effective and better suited to identify ELs due to the purposeful exclusion of items that require reading. Additionally, they suggest that using local norms is more viable when assessing the academic talent of school-aged children, suggesting educators should attempt to identify the top performing students relative to *their cohort* instead of *the nation*. That is, they recommend using local norms instead of national norms for comparisons in the identification process. Over time, however, 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. EL students at the primary level (kindergarten through 2nd grade) 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 at the elementary level (grades 3 through 6) scored much lower on the English language verbal tests relative to the nonverbal tests. ELs had similar scores on the quantitative and figural tests.

Matthews and Kirsch (2011) evaluated aptitude tests, both verbal and nonverbal, used with linguistically diverse learners when identifying elementary students for gifted services. Interestingly, they operationally defined *aptitude testing* differently than Lohman and Gambrell (2012). Matthews and Kirsch used the term aptitude testing synonymously with standardized intelligence testing. They investigated a collection of eight aptitude tests to determine the efficacy of each assessment to identify ELs.

... administrators should consider the predictive validity of the selection tests for all students ...



Although all students in the sample ($n=432$) met the district's screening score criteria, 120 or higher on either the Kaufman Brief Intelligence Test (KBIT-2; A. S. Kaufman & Kaufman, 2004) or Slosson Intelligence Test (SIT-R3; Slosson, Nicholson, & Hibpshaman, 2002), before individual full-scale IQ testing, the scores were not recorded. Therefore, the researchers could not make the assumption that the students in the sample were of equal ability, which somewhat lessened the generalizability of the findings. 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. N. M. Robinson noted that the Stanford-Binet V identifies few gifted students in general, not just EL gifted students (personal communication, August 6, 2016). Of note, the differences between the means of the two nonverbal-format IQ test scores and the six verbal-format IQ test scores were not

significant. In other words, the SB5 scores were significantly lower than the average scores from the other seven assessments; yet no significant differences were found 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 gifted identification measures. In their study, Lakin and Lohman (2011) analyzed the predictive relationships of 4th grade CogAT Form 5 (CogAT-5; Thorndike & Hagen, 1993) and Iowa Tests of Basic Skills Form K (ITBS; Hoover, Hieronymus, Frisbie, & Dunbar, 1993) scores

to those students' 6th grade ITBS scores. The average test scores for ELs were all noticeably lower than average scores for non-ELs, 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 academic achievement, as measured by the 6th grade ITBS scores, which goes against the notion that nonverbal assessments are effective tools in predicting future achievement and in identifying gifted students, assuming an outcome of gifted services manifests itself as increased achievement test scores over time. Like many researchers before them, Lakin and Lohman (2011) suggest "administrators should 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).

Dynamic and performance-based

assessments. Two of the six articles focused on dynamic assessment (Kirschenbaum, 1998; Lidz & Macrine, 2001), and four reported on performance-based assessments, including the Problem Solving Assessment (PSA; Reid, Udall, Romanoff, & Algozzine, 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, minority, and linguistically diverse students (Kirschenbaum, 1998; Lidz & Macrine, 2001). In this type of assessment, children are given directions for how to perform certain tasks and then assessed on how well they learn similar tasks (Kirschenbaum, 1998). It typically follows a "pre-test-intervention—post-test format" (Lidz & Macrine, p. 75). While static assessments such as IQ or ability tests require the child to retrieve and apply previously acquired knowledge or abstract reasoning without assistance, dynamic assessment allows the examiner to intervene by providing "scaffolded instruction" (Kirschenbaum, 1998, p. 142), which may help the child complete the task. Interpretation of the assessment is based on how well the child took advantage of the intervention (Lidz & Macrine, 2001).



In a study examining dynamic assessment for the identification of culturally and linguistically diverse students, 81 students from a school with a large district proportion of minority 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% of two out of three individual assessments, ITBS Reading or Mathematics (Hoover et al., 1993), Kaufman Assessment Battery for Children (K-ABC; A. S. Kaufman & Kaufman, 1983) (Mental Processing Composite or Nonverbal), and the NNAT (Naglieri, 1997) pre or post test scores, would be identified for gifted services. To test the effects of dynamic assessment, the researchers modified the NNAT with a dynamic assessment component. Students were administered the NNAT initially with no intervention. They were then re-tested with the dynamic assessment approach, and 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 gifted identification of 23 of 25 total students who were selected for inclusion in gifted 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 to prior attempts of the school, which resulted in less than 1% of identified students for inclusion in gifted programming. While the results were promising, no predictive validity data were collected or reported for this

assessment. Concurrent validity, however, was assessed by correlations between K-ABC Mental Processing Composite score and the NNAT pretest (0.64) and posttest (0.74), both of which were statistically significant ($p < 0.01$).

DISCOVER stands for Discovering Intellectual Strengths and Capabilities through Observation while allowing for Varied Ethnic Responses (Sarouphim, 1999). This assessment, along with the PSA (Reid et al., 1999), is based on Gardner's (1983) multiple intelligences theory and Maker's (1993) gifted conception in which she emphasizes the importance of creative problem solving. The DISCOVER assessment was designed to identify gifted students among the culturally diverse. Typically, the assessment occurs on the classroom level and may take approximately 2.5 hours to complete. It is performance-based and students must use problem-solving skills to solve increasingly more complex and difficult spatial, linguistic, and logical-mathematical tasks while trained observers (1 observer to 5 students) 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 (or more) individuals. After completion of the assessment, observers meet to discuss student's strengths and complete a behavioral checklist. Based on the overall ratings of the child, he or she may be recommended for placement in gifted services or for more testing.

In a study that examined the internal structure of DISCOVER, 257 Navajo Indian and Mexican-American elementary school students were assessed in the five activities of the assessment (Sarouphim, 2000). Inter-rater correlations were performed on observations across the five activities to examine whether students received similar or different scores. Results

Dynamic assessment is an alternative approach to measuring cognitive ability that may be used successfully with low income, minority, and linguistically diverse students.



indicated low or non-significant inter-rater correlations for kindergarten and second grade students, with the exception of a significant correlation between Storytelling and Storywriting. For fourth and fifth graders, there were significant correlations between ratings on Math and Tangrams, Math and Storytelling, and Storytelling and Storywriting activities. Overall, the patterns of correlations were low to non-significant indicating that observers were giving different scores to students in each of the activities. Put another way, 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 study of the DISCOVER assessment examined potential ethnic and gender differences in identifying gifted learners (Sarouphim & Maker, 2010). A sample of 941 K-5th grade 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. A MANOVA test found significant interaction but no main effect for assessment activity or ethnicity. Using interaction plots, the authors found White Americans received the highest scores in Math, South Pacific/Pacific Islanders

in Oral Linguistic, and Native Americans in Spatial Artistic Oral Linguistic. There were no gender differences, but implications with use with diverse races/ethnicities were discussed. In conclusion, performance-based assessments may have potential for identifying more diverse groups of students than traditional tests of cognitive abilities alone, but there needs to be more studies of predictive validity for these assessments (Reid et al., 1999; Sarouphim, 2005; Sarouphim & Maker, 2010).

Summary. A total of 21 papers or 44% of all the literature search articles dealt with screening/assessment in the identification of gifted ELs. The authors of the eight theoretical/descriptive articles specifically addressed the problem of using traditional tests of IQ and intelligence to identifying gifted EL students and argued instead for the use of alternative assessments, such as nonverbal ability tests, dynamic and performance based assessments, checklists and rating scales, portfolios, and parental input. Our literature search identified six studies on the RPM, NNAT, and CogAT, three common tests that are either completely or partially nonverbal. While the RPM and NNAT may identify more EL students than traditional IQ tests, they may also identify more students in general raising questions about validity. EL students have been found to perform more poorly on the verbal component of the CogAT relative to nonverbal tests, but had comparable scores on the quantitative and figural sections of the test.

Nontraditional assessments that may also help identify more EL populations in gifted programming included dynamic and performance-based assessments. These assessments allow for the observation of real-time problem-solving. In the case of dynamic assessments, examiners also intervene and provide scaffolded instruction, allowing for observation of how students learn and apply new knowledge. Culturally and linguistically diverse students may benefit from this type of instruction as demonstrated in the increased rates of gifted identification after incorporating dynamic assessment into the NNAT (Lidz & Macrine, 2001). However, validity data supporting use of these instruments is practically non-existent. The main conclusion



from this section is that gifted identification assessments should be selected with care and that scores on these tests should be considered alongside other data that comprise a student's holistic profile.

Services

The 11 articles in this section are related to placement, potential services for gifted ELs, and student experiences. While 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 seven are empirical studies.

Instructional approaches. While gifted ELs typically learn in English, three studies have proposed dual language or heritage language (those taught in the student's first language) courses, which can simultaneously help students retain the dominant language and develop academic proficiency while exploring challenging content (Barkan & Bernal, 1991; Matthews & Matthews, 2004; Valencia, 1985). Valencia (1985) made three recommendations for dual language education programs in identifying and serving gifted ELs: In-service teacher training should include instruction for working with gifted students, strategies must be employed to increase parental involvement and cooperation in identifying their children as gifted, and finally, there should be in-service activities for dual language teachers to help in identifying and providing services to gifted ELs. Olszewski-Kubilius and Clarenbach (2014) also highlighted the importance of high teacher expectations and appropriate training as necessary and vital components of identifying and educating gifted ELs.

Curriculum. Three studies examined the effects of using two different math interventions with ELs through Mentoring Mathematical Minds (M³) curricular units (Cho, Yang, & Mandracchia, 2015), and cluster grouping model (Brulles, Peters, & Saunders, 2012; Brulles, Saunders,

& Cohn, 2010). ELs who received the M³ intervention were found to have significantly greater gains ($d=.63$) in math achievement when compared to a comparison group of students who had not received the intervention. Similarly, gifted students in the cluster group regardless of gender, grade, ethnicity, and EL status were found to have statistically significant achievement growth (Brulles, Saunders, 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).

Student experiences. Gifted EL students in a southeastern urban middle school were examined in three different studies that used the same sample of 16 Latino/a students, half of whom were receiving gifted education services and the other half of whom were receiving general education services (A. E. Brice, Shaunessy, Hughes, McHatton, & Ratliff, 2008; McHatton, Shaunessy, Hughes, Brice, & Ratliff, 2007; Shaunessy, McHatton, Hughes, Brice, & Ratliff, 2007). The students met with the research team for informal hour-long group discussions over 5 consecutive days. Findings from these studies indicated that gifted ELs were more aware of their academic abilities and characteristics as gifted learners, provided more comments and detailed explanations, and shared some experiences of perceived discrimination. Furthermore, gifted ELs perceived their teachers as having high expectations but acknowledged that they had already exceeded expectations by being both gifted and Hispanic (McHatton et al., 2007; Shaunessy et al., 2007). The general education EL students 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).

... there should be in-service activities for dual language teachers to help in the identification and servicing of gifted ELs.



In a separate 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 with Project HOPE (Having Opportunities Promotes Excellence), a 3-year project that provided 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 gifted services in their home schools. The authors discussed the need to focus on strengths not deficits and the importance of identifying high potential students from underrepresented populations for gifted education services.

Identification Models

The final six articles included descriptions of identification models (Bianco & Harris, 2014; Horn, 2015; Pierce et al., 2007) and studies of cases (Briggs, Reis, & Sullivan, 2008; Harris, Plucker, Rapp, & Martinez, 2009; Reed, 2007). For models to succeed in increasing representation of ELs, the support and participation of teachers, administrators, district coordinators, and parents are required (Horn, 2015; Reed, 2007). For example, teachers, administrators, and parents became involved in a school where a gifted and talented education (GATE) screening program was purposefully and successfully implemented for EL students (Reed, 2007). Likewise, school staff became active participants in supporting and implementing the Fairfax County Public Schools (FCPS) Young Scholars Model where early identification is stressed (Horn, 2015). Young Scholars are comprised of historically underrepresented gifted students, including high-poverty, EL, and twice exceptional learners. Longitudinal studies provided some indicators of success for identified Young

Scholars. At the K-8 level, half of the 5,266 Young Scholars students 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 challenging instruction on a daily basis. In addition, the majority of secondary level Young Scholars were placed in advanced courses such as Honors, Advanced Placement, or International Baccalaureate where they mainly received grades of As and Bs. Furthermore, Horn (2015) reported a “565% increase” (p. 28) in the number of Black and Hispanic students receiving high school gifted services 11 years after the model was put into place according to comparative data from the Annual Report to the State of Virginia on Gifted Education.

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 gifted program. The staff of Project CLUE employed four criteria to identify students for gifted 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 “sift down” process, parents and/or teachers completed an experimenter-designed teacher or parent rating scale called the Adams-Pierce Checklist (APC)—that was available in both English and Spanish—and was intended to help identify gifted minority or EL students who were missed in the first three steps. Three hundred twenty-two second grade students



(9%) were identified for the gifted program, 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 gifted 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 steps 3 and 4 were truly gifted. 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 gifted programs across the United States were examined through in-depth case studies of seven gifted 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 gifted programs: (a) modifying identification procedures, (b) preparing students for advanced content and critical thinking, (c) implementing curriculum/instructional changes with an emphasis on addressing CLED student needs, (d) connecting school and home and gathering support of families, and (e) developing plans for program evaluation.

An alternative model of identification for gifted ELs, Bianco and Harris (2014) and Harris et al. (2007) proposed their strength-based Response to Intervention (RTI) framework, which is based on a collaborative, multi-tiered, 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 strengths-based 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 gifted learners,

twice-exceptional learners, and culturally diverse gifted learners. The strengths-based RTI model involves three tiers of identification and 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 allow ELLs’ 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 EL students with academic potential have additional opportunities to be identified. The researchers recommend 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 do not name 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 possible examples of interventions at this level could include intensive acceleration, taking AP classes earlier than typical, or entering college early.


Summary. Successful models tested to date are characterized by a combination of school staff and parent involvement in identifying gifted ELs for appropriate services, and, if possible, intervention should begin early. Studies of existing programs can provide useful insight into effective and ineffective practices (Briggs et al., 2008; Harris et al., 2009), and models such as the three-tiered RTI framework, Young Scholars, and Project Clue hold promise for how districts can approach gifted identification for EL student populations (Bianco & Harris, 2014; Harris et al., 2007; Horn, 2015). The models seem promising and now we must follow up on results that show closing excellence gaps for ELs. 



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	Study
1996	1	Study
1997	1	Study
1998	2	Theoretical/Descriptive (1), Study (1)
1999	2	Theoretical/Descriptive (1), Study (1)
2000	1	Study
2001	2	Theoretical/Descriptive (1), Study (1)
2002	1	Theoretical/Descriptive
2004	2	Theoretical/Descriptive (1), Study (1)
2006	3	Theoretical/Descriptive (1), Study (2)
2007	4	Theoretical/Descriptive (1), Study (3)
2008	4	Theoretical/Descriptive (1), Study (3)
2009	1	Study
2010	2	Study
2011	2	Study
2012	4	Theoretical/Descriptive (2), Study (2)
2013	3	Study
2014	2	Theoretical/Descriptive
2015	2	Theoretical/Descriptive (1), Study (1)
Total Articles	45	



Table 4

Sample Overview of Articles Included for Review

Study	Article Type	Sample	Data Sources	Methods	EL Population	Quality of Studies
Nomination (n=7)						
A. Brice & Brice (2004)	Empirical	32 Mexican-American students (1st-4th grade); 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	Moderate
de Wet & Gubbins (2011)	Empirical	308 teachers from 8 different states	Questionnaire - Teachers Beliefs About Culturally, Linguistically, and Economically Diverse Gifted Student Survey	Quantitative	General EL	Moderate
Fernandez, Gay, & Lucky (1998)	Empirical	373 elementary teachers from 9 schools in Florida	Adapted version of the Survey on Characteristics of Gifted and Talented Hispanic Students	Quantitative	Hispanic EL	Moderate
Harradine, Coleman, & Winn (2013)	Empirical	1,115 teachers from 4 different states	TOPS - Teachers' Observation of Potential in Kids, TOPS Kid Profiles, U-STARS~PLUS closing Survey, TOPS observation	Quantitative	Hispanic EL, Other EL	High
Hughes, Shaunessy, Brice, Ratliff, & McHatton (2006)	T/D	N/A	N/A	N/A	General EL	High
Kitano & Pedersen (2002)	Empirical	12 teachers of EL	2 hour focus Groups	Qualitative	General EL	Low
Peterson & Margolin (1997)	Empirical	55 Anglo-American middle school teachers	Field notes, audiotaped transcriptions of nomination meetings with teachers	Qualitative	Teachers working with sizable Latino minority	Moderate

Note. EL = English Learner; T/D = Theoretical/Descriptive.



Discussion

For our first research question, we asked: ***What empirical and non-empirical research exists on how to identify EL students for gifted programs?***

The literature search on identifying and serving EL students resulted in a total of 45 articles, 18 theoretical and 27 empirical, over a period of 41 years. There were 34 articles specifically regarding identification. What is promising is the increased attention the underrepresentation of gifted EL has received in scholarly literature. In the last 5 years alone, 15 articles have been published on this topic.

While the number of papers is encouraging, the quality of empirical work in terms of methodological rigor, questionable generalizations, and strength of researcher claims vary greatly by article. For example, there were several purported “case studies” that did not have clear descriptions of study procedures and methods of analyses. Also, while the decision to include theoretical articles resulted in a rich body of suggestions, the authors’ recommendations generally lacked empirical evaluation. For example, various authors recommended dual language gifted programs, but provided no evidence for the effectiveness of either dual-language or heritage-language programs for gifted EL students. Lack of evidence does not mean dual language programs are not effective, just that more empirical research is needed. Also, while several descriptions of identification models are articulated in the literature, only one study empirically examined multiple gifted

programs on a national level to investigate the participation of CLED students in gifted programs (Briggs et al., 2008). More large-scale, high-quality empirical studies are necessary to empirically document what works for identifying and serving gifted ELs in practice rather than only in theory. These studies should also include more background information about their participants. We know there is much complexity in the subgroups that constitute ELs (e.g., generational differences, family backgrounds, social and educational capital) as elucidated in an earlier section of this report, 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. This would allow us to better comprehend and address the different conceptualizations of ELs and their subpopulations.

For our second research question, we asked: ***What is the status of EL students being identified and participating in gifted and talented programs?***

EL students are still very much underrepresented in gifted programs across the nation. Yoon and Gentry (as cited in Pereira & Gentry, 2013) analyzed Office of Civil Rights data and found an overrepresentation of Asian and Anglo Americans and an underrepresentation of Hispanics, Blacks, and Native Americans in gifted programs across the United States. Harradine et al. (2013) also cited data from the Office of Civil Rights from 2008 in which they noted: “Although roughly 40% of the total U.S. student population is of color, only 9% of the total number of enrolled students identified as gifted are African American and only 13% are



Latino” (p. 24). They also pointed to results from a meta-analysis by Tenenbaum and Ruck (2007) in which African American and Latino children were significantly less often referred by teachers to gifted programs than White children. With the growth of the Latino population, we might expect that the current identification practices will exclude greater numbers of gifted students from services. Bianco and Harris (2014) cited recent statistics from 2013 National Center for Education Statistics (NCES), where between 1980 and 2009, the number of U.S. school-aged children who spoke a home language other than English more than doubled, from 10% to 21%. The majority of these students were of Latino origin (85%). Pereira and Gentry (2013) cited a report from the Center for Evaluation and Education Policy, which stated that the *excellence* gap between non-English Language Learners and English Language Learners, as measured by math and reading scores, had increased between 1996 and 2007.

We next asked the following two questions:

What are perceived best practices for identifying EL students for gifted programs?

What types of personnel are involved in referring and assessing EL students for gifted programs?

The starting point of any successful gifted identification model for EL students should begin with the acknowledgment that gifted potential exists in all groups of children regardless of ethnicity, race, culture, and socioeconomic strata (Melesky, 1985). This acknowledgement must permeate the belief structures of all who are involved in the identification process from nomination through final identification and placement. For example, beginning with the general education teachers who are often the front line of nomination and evaluation of student, key decision makers need to adopt a proactive and non-biased exploration of potential in this population. District and school personnel should also rethink how giftedness could manifest itself in culturally and linguistically diverse students.

Best practices involve a fair and equitable nomination process. This may require a paradigm shift where the focus changes from identifying and remedying weaknesses to identifying strengths and the examination of giftedness through *multiple lenses* (Esquierdo & Arreguin-Anderson, 2012). The theoretical and empirical studies from this literature review provide ample evidence that deficit views regarding EL students are problematic and will drastically decrease the chance that they will be nominated for gifted services. Teachers in particular must self-reflect on their views regarding gifted ELs, because they are responsible for the majority of nominations. 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), which sidesteps the problem of teacher bias in nominations. However, the removal of teacher nominations may also result in a different problem: placing greater weight on test score performance.

In the evaluation process, foremost is the recommendation that *multiple strategies* be used, including: (a) assessment of students in their native language; (b) observation of students as they complete problem solving tasks; (c) assessment of student portfolio work; (d) teacher observations; (e) behavioral checklists; and (f) parental input. Standardized intelligence tests alone should not be used as they are one of the single greatest barriers to gifted EL identification (Harris et al., 2007). Even nonverbal tests of ability should be used with caution due to reliability and validity issues. 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 through these criteria,

The starting point of any successful gifted identification model for EL students should begin with the acknowledgment that gifted potential exists in all groups of children regardless of ethnicity, race, culture, and socioeconomic strata.



rather than more hurdles they must cross. In sum, the multiple criteria approach is important because the different pieces of data present a holistic picture of the child. This way, district and school personnel can make better informed decisions about which student exhibits greatest need and would receive most benefit from receiving gifted education services. We should work toward the goal of serving all students who meet evidence-based criteria.

In a widely cited analysis of the difficulties encountered by educators and families seeking fair and equitable inclusion of underrepresented children, Bernal (2001) was very clear about the need to gather data about successful identification approaches and student success, once identified. Bernal argued that “no meaningful changes in the identification process will take place in very traditional middle-class GT programs unless good data can be used to justify the outcomes of an alternative selection system” (p. 86). Program evaluation is an essential component of the identification system for gifted EL students and for justifying the value of such a system. Based on our search of the literature, the need for continued high-quality empirical investigations of best practices in identifying and serving EL is clear.


For our final question, we asked:

What are perceived best practices for serving EL students in gifted programs?

The major objective is not just identifying more EL students with potential, but also to address whether identification processes lead to improved student outcomes. In other words, as a result of participation over time, do ELs become indistinguishable from their non-EL peers in terms of academic achievement? We benefit maximally from understanding which identification processes lead to academic success for these groups of students.

While a variety of suggestions have been made ranging from making accommodations for English while receiving gifted services, servicing students through cluster groups in the

classroom, to providing dual language gifted programs, there is little clear empirical evidence for what works best in practice. Best practices may depend on the population that is receiving services and the resources of the district and/or school. For example, dual language gifted programs may be more effective when there are high proportions of students who speak the same language such as Spanish or Chinese. However, when there is a greater diversity of EL students, other services may be needed.

Investigations of cluster grouping as a grouping arrangement and Mentoring Mathematical Minds (M³) as a curricular option in mathematics have offered evidence of potential for providing successful service and curriculum. However, those are only two options with one not addressing curriculum and the other limited to mathematics instruction. The question on the range of services and curriculum effective with gifted EL students still remains. This is an area that would benefit from more empirical examination. 



Recommendations for Future Research and Best Practices

Recommendations for Researchers

The systematic review of the literature on effective practices in identifying and services English Learners in gifted education leads to the following recommendations:

- Design and implement empirical studies to document what works in identifying and serving gifted English Learners (ELs). Provide more participant background information beyond simple demographics to reflect the complexity in subgroups that constitute ELs (e.g. generational differences, family backgrounds, reason for immigration, social and educational capital) in these studies.
- Conduct an analysis of the excellence or opportunity gap in mathematics and reading between non-ELs and ELs.
- Conduct a national survey of current practices on identifying and serving English Learners in gifted education.
- Analyze the academic outcomes of programs serving gifted ELs identified by specific strategies (e.g., universal screening, achievement tests in native language, teacher nomination, performance-based assessments).
- Design a research study on the effectiveness of dual language and heritage language gifted programs in identifying and servicing gifted ELs.

- Examine speed of English language acquisition and code-switching as indicators of giftedness.
- Provide local, state, and national professional learning opportunities for educators about adopting a strength-based approach to identifying and serving English Learners in gifted education.

Best Practices for Practitioners

- Multiple strategies should be used in the identification process to provide a holistic picture of the student. Standardized intelligence tests used alone are one of the single greatest barriers to gifted EL identification. If used, they should be considered as one source of limited data due to the developing language skills of the EL student and in conjunction with other criteria. Care should be taken that students are given more opportunities through multiple criteria, rather than more hurdles.
- One approach to alleviating the underrepresentation of EL gifted students is to focus on providing services in their areas of strength as apposed to identifying for global giftedness across multiple content areas.
- During the screening and identification phases of determining which students need programming opportunities, it is important to base decisions on local norms versus national norms on national and state standardized tests. This approach allows school districts to carefully examine their talent base and find




ways to promote talents and abilities. Over time, programs should aim for participants to achieve national norms so that their education remains level with national peers.

- Dynamic assessment is a useful way to assess a skill, teach the skill, and retest the student's skill acquisition in a one-on-one teacher/student session. This allows the teacher to assess the speed and degree to which mastery occurs.
- It is important for EL gifted students to maintain and develop skills in their parents' native language. This promotes two-way communications between parents and children and allows the children to converse with parents and family members at abstract and adult levels.
- Program evaluation is an essential component of the identification system for gifted EL students and for justifying the value of such a system. Educators should gather data systematically about successful identification approaches and related student outcomes.
- Identification should be an ongoing process across all grade levels. As gifted EL students' language skills improve, they become more successful academically, and their giftedness is revealed.

Conclusion

As Plucker and Callahan (2014) made clear, the nation is not only becoming more diverse, it is already considerably diverse. The number of immigrant and refugee families is continuing to grow in this country at high rates. The problem of underrepresentation of ELs among students identified as gifted is an urgent one and requires immediate attention both in research and in practice. We must remember that gifted education serves two valuable purposes. On the macro level, gifted education should provide society with a continuous supply of innovative thinkers, problem-solvers, leaders, and

producers in a wide variety of disciplines to face the national and global challenges of the 21st century (Renzulli, 2012; Subotnik et al., 2011). More importantly, on the micro-level, gifted education should meet the individualized needs of gifted learners by providing appropriate services (Davis et al., 2010; Renzulli, 2012). All children have the right to learn in a climate of optimal growth where their potential can be fully realized. 



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Appendix A

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