

CHALLENGES ON THE IDENTIFICATION AND DEVELOPMENT OF GIFTEDNESS IN SOUTH AMERICA

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There is considerable diversity among South American countries in relation to regulations and procedures for identifying and developing giftedness in children and adolescents. The experiences of three South American countries (Brazil, Peru, and Uruguay) are described to illustrate the variety of approaches. Although these countries do not share the same cultural or linguistic backgrounds, there are commonalities among them regarding the development of gifted children and adolescents. Despite of federal and state regulations regarding education for high-ability and gifted children, educators still face many challenges when implementing these laws, including myths regarding giftedness in the general population. Resources provided to public education in these countries are scarce, however several programs are being offered to improve motivation and excellence among gifted children and adolescents. The role of professional associations and research on giftedness is considered of vital importance to increase public awareness of the social and educational needs of this special population.

IMPORTANCE OF THE TOPIC

South America is the fourth largest continent in the world, with 12 countries and a population estimated of 389 million people (World Population Statistics, 2014). Spanish is the official language for all countries except Brazil, where Portuguese is the official language. An analysis of the educational policies in South America reveals an uneven scenario; because

of the economic difficulties faced by these countries, the quality of public education offered to children and adolescents is limited.

Educational policies focusing on the needs of exceptional children, including gifted children, exist in South American countries, although their implementation is sporadic (Alencar, Fleith, & Arancibia, 2009). Misconceptions about gifted children, lack of teacher preparation, and insufficient investment into public education are the main barriers to promote talent and excellence among children in these cultures.

Professional associations and university efforts are important influences on public opinion regarding the need to attend to gifted students in different areas. The growing number of publications concerning gifted children may help disseminate the importance of nurturing these children's high abilities. The challenges undertaken in Brazil, Peru, and Uruguay to identify and develop giftedness are described in the next sections.

HISTORICAL AND CONTEMPORARY PERSPECTIVES: BRAZIL

Brazil is the largest country in South America with a population of 200 million people, which is richly diverse—57% White, 33% biracial, 10% Black, 0.7% Asian, and 0.1% Indian. Portuguese is the national language, and there are no dialects. Approximately 50% of the population is under 30 years old, indicating this is a predominantly young country (Brazilian Institute of Geography and Statistics, 2009).

The Brazilian basic educational system includes elementary school (Grades 1–5; ages 6–11), middle school (Grades 6–8; ages 12–14), and high school (Grades 9–11; ages 15–17). Elementary education is mandatory for all children and has a 98% registration rate. State and municipal governments support public education, and 80% of students, mainly from low-income families, attend public schools; the other 20% of students, mainly from high-income families, attend private schools (Brazilian Institute of Geography and Statistics, 2010).

The quality of public education in Brazil is worrisome. When compared with students from 65 countries on the Program for International Student Assessment (PISA), Brazilian children in elementary and secondary school ranked in the lowest level (57th) for mathematics, reading, and science. Although there have been improvements in Brazilian education over the past 10 years, as there was an expansion of enrollment in primary and secondary schools, grade repetition and school drop-out are prevalent among socioeconomically disadvantaged children (Organisation for Economic Co-operation and Development [OECD], 2015).

Educational provisions for exceptional Brazilian children can be traced back to the Portuguese imperial times (1854–1876), with the foundation of national institutes for children who were blind, deaf, or intellectually disabled (Ministry of Education, 2007). However, establishing the first program offered to gifted Brazilian children is credited to Helena Antipoff, a Russian psychologist who came to work in Brazil in 1945 and was concerned with children's rights and the influence of the socioeconomic environment on developing children's intelligence (Campos, 1992). Antipoff proposed an experimental program to stimulate gifted children coming from low socioeconomic environments. This program was established in Rosario Farm (state of Minas Gerais), where children could choose activities of their interest with supportive teachers to stimulate their creativity (Antipoff, 1956).

A federal law defining the need to educate gifted children was established in 1971 (Law of Guidelines and Bases of National Education, 1971), but it was only in 1994 that the Secretary of Special Education elaborated a comprehensive document

suggesting that *giftedness* and *high ability* could be used as synonyms. According to this definition, gifted/high-ability students demonstrate high performance or potential in any of the following areas: general intellectual ability; specific academic attitude; creative or productive thinking; leadership ability; music, visual and performance arts; and psychomotor abilities (Ministry of Education, 1994).

At the time this law was passed, no further directions were given on how to identify gifted/high-ability students, which created confusion among educators on ways to comply with the law. Additionally, Brazilian psychologists questioned the validity of existing psychological tests for this population (Wechsler et al., 2014). This task was made more complex by the absence of school psychologists in public schools (Oakland, Wechsler, & Maree, 2013), who could have helped teachers identify giftedness.

Considering the need for more guidelines in attending this special population, a federal law was passed in 1996 defining the concept of multifunctional resource environments for gifted students. According to this regulation, specialized programs in an environment with adequate equipment and prepared educators should be made available to gifted students to supplement their basic education (Law of Guidelines and Bases of National Education, 1996).

The definition of high ability/giftedness was revised in 2001 to a focus on learning and mastering concepts easily (National Guidelines for Special Education in Basic Education, 2001). This new definition emphasized that high-ability/gifted children should receive more educational challenges than students in regular education classrooms (e.g., through programs that enable students to finish school early). This constituted a change from the previous concern, which was limited to gifted identification, to a more broad conception of the development of gifted students, where teachers could make a contribution (Virgolim & Konkiewitz, 2014). The Brazilian government began to offer pedagogical material and more specific orientations for teachers of gifted children from kindergarten through Grade 8.

PRACTICE AND POLICY ISSUES: BRAZIL

Despite of federal regulations, the number of students who attend special programs for giftedness is still limited. The continental dimensions of the country and the diversity among public schools (e.g., those in developed cities in the south and southeast vs. those in rural areas in the north and northeast) bring great challenges to the implementation of federal laws. In 2005, the Ministry of Education implemented a High Abilities/Giftedness Center of Activities in 27 Brazilian states to increase the number of gifted students in different regions of the country. These centers were developed through joint efforts of the Ministry of Education, UNESCO, and state educational departments (Ministry of Education, 2005).

These centers include teachers, students, and students' families, combining efforts to alert parents to students' special needs. The main goals of NAAH/S include enhancing teacher training focusing on the gifted identification process on the basis of student characteristics and enhancing the use of creative strategies to motivate gifted students to express their potential (Center for Specialized Educational Support, 2012). These centers receive support from universities and other nongovernmental agencies through consultation, equipment, and libraries that facilitate student learning. In addition, students are encouraged to develop projects attending to their communities' needs. Students' families are also invited to the centers to participate in seminars and conferences, and to participate in parent support groups. It is hoped that these centers will increase public awareness of attending to gifted students in the coming decades. The main purpose of these centers is to increase awareness of attending to gifted children in schools and in families (Alencar et al., 2009).

After the foundation of NAAH/S, the Ministry of Education, Secretary of Special Education (2006) created programs for teachers on how to identify and teach gifted students in their classrooms. Various criteria were recommended on how to identify high-ability/gifted students on the basis of classroom observations, interviews, and students' achievements in different academic domains. Education materials

were also created with strategies to motivate students in the classroom or during after school periods. Focus was given to methodologies that could be used in regular education classroom or during alternative school periods to motivate high-ability/gifted students.

There are federal regulations implementing teacher training to attend to children with special needs, including gifted students; however an analysis of the main teachers' programs for specialized education indicate that there is a high emphasis on children with special needs not presenting with giftedness (Pérez & Freitas, 2011). Teachers' inability to identify high-ability/gifted children is evident in the latest census of the National Institute for Education and Research (2009)—of 250,512 students in Brazilian public schools who are identified as special needs, only 261 are identified as gifted, which is much lower than the expected 3% to 5% of this population.

Programs for Gifted Children

The need to devise special educational strategies for gifted children is highlighted at the state and municipal educational secretaries after the federal regulation was passed defining the NAAH/As. The efforts made in the states of the Federal District and São Paulo, as well as Minas Gerais at the municipal levels, exemplify these educational programs.

The Enrichment Program for Gifted and Talented is offered at the public schools of the Federal District, in the city of Brasilia. This program, which was established in 1975, is the best organized in the country at the state level. An average of 1,000 primary and secondary students is enrolled in this program. Teachers are prepared to observe and identify high ability/gifted students during in-service training. The identification procedure is based on the School Wide Enrichment Model defined by Renzulli and Reis (1997), which offers opportunities to high-ability/gifted students to develop their potential (see Chapter 12, this handbook). The program is offered in school resource rooms, twice a week, during the school day. Enrichment activities are provided to children, on the basis of their observed talents, in many academic areas, such as science, mathematics, literature, and computer science. This program

has a considerable impact on the quality of public education in the Federal District, as the majority of children who attend this program come from low socioeconomic families (Alencar et al., 2009).

In São Paulo, the Center for Specialized Teacher Support was created in 2012 to provide professional development for teachers of gifted children. The purpose of this center is to prepare teachers to meet the needs of gifted children, offering educational materials with strategies to stimulate high-ability/gifted students to achieve in regular education classrooms. Information on federal or state policies is provided to teachers so they can nominate students for accelerated learning courses (Cuppertino & Arantes, 2012).

The Center for Talent Development (CEDET) was established in the state of Minas Gerais in 1993 with the support of municipal and local organizations. This center was created with the aim of helping children to develop their capabilities and talents (Guenther, 1995, 2000). Children who attend public schools and demonstrate special talents are screened by trained teachers and asked to participate in CEDET's activities. Supervised teachers working as volunteers are trained in attend to the needs of high-ability/gifted children. An estimated 500 students are enrolled in CEDET's activities. Each child has an individual plan guided by a mentor. Research groups of children with common interests are formed. The program is based on Renzulli and Reis's (1997) enrichment model and is offered twice a week or during school vacations with the purpose of identifying gifted children from low socioeconomic families in public schools and helping them to develop their talents.

There are programs to enhance the academic skills of gifted students, as well as to identify and motivate talents in different areas, offered through olympic competitions. These competitions are excellent opportunities to identify gifted children in public and private schools. Mathematics Olympiads have been offered since 1979 by the National Institute of Applied and Pure Mathematics and the Brazilian Society of Mathematics, and provide annual contests at regional, national, and international levels. The objective of the competitions is to stimulate teachers and students about the importance of

mathematics, to discover mathematics talent among children and youth, and to give students the opportunity to have contact with professionals in this area. The Olympiads for the Portuguese Language, "Writing for the Future," was established in 2003. This program was initially sponsored by private banks and the Center of Studies and Research on Education, Culture and Community Action and is currently supported by the Ministry of Education. This program aims to stimulate reading and writing at in public schools. The Olympiads for Sciences is another national competition in physics, chemistry, biology, mathematics, and astronomy. This olympiad started in 2004 and provides opportunities to elementary students to present projects and compete at international levels.

An important federal program designed to improve the quality of college education, the Tutorial Education Program, is supported by the Ministry of Education. Established in 2005, this program is another opportunity to discover and nurture talents in different areas at the college level (Ministry of Education, 2005). The goals of this program are to provide interdisciplinary academic preparation for students who demonstrate high performance; to develop higher level of thinking and communication skills among students; and to develop pedagogical experiences to improve college education. Students are selected by teachers on the criteria of high academic achievement and high motivation to carry out studies on specific topics of interests. A professor acts as a mentor to groups of four to six students and is responsible for planning activities, supervising students, and writing annual reports on their achievements. Mentors, as well as students, receive governmental scholarships to participate in this program. There are approximately 10,104 college students enrolled in 121 universities attending this program.

Another national program, the Junior Scientific Initiation Program, funded by the National Council of Research, links gifted students from high schools to universities. This program offers annual scholarships to public high school students with the aim of stimulate scientific vocation by offering students research activities guided by university professors in different areas. Programs offering scholarships to

undergraduate college students selected by the professors as initiation to scientific research (Iniciacao Cientifica) are annually offered by federal and state granting agencies and some private universities.

Placing high school gifted students into university environments through these national programs has been successful, as reported by Delou (2012). Other projects offered by private schools and organizations to identify gifted students and provide them scholarships can be found in the cities of São Paulo and Rio de Janeiro.

Providing scholarships and academic competitions through olympiads has created more domain-specific opportunities for talented students. These opportunities are provided for all students who are motivated and show excellence in different fields, and although they do not mention the word gifted, as this may bring opposite reactions, these programs can be considered as enriching possibilities in gifted education.

Although there are programs for the gifted students in elementary and secondary schools, these are mainly located in the capitals of the central, south, and southeast states (São Paulo, Rio de Janeiro, Brasilia, and Minas Gerais) where there are higher educational and socioeconomic statuses. Much still needs to be done to reach the poorest Brazilian regions (in the north and northeast). Programs established by the Ministry of Education for gifted high school and college students in these regions are more well-known across various communities. However, elementary schools have low enrollment and participation in these programs because of poor communication inside the schools and a lack of teachers' motivation or preparation to work with gifted students.

Professional Associations and Research on Giftedness

There are two national associations for gifted children in Brazil. The Brazilian Association for the Gifted was founded in 1981 at the State University of Rio de Janeiro by Maria Helena Novaes (Motta, 1999). The main goal was to start a debate of gifted children's rights to receive special educational provisions in the classroom, or through accelerated programs.

The Brazilian Council for the Gifted (ConBraSD) was founded in 2003 and has been very active in providing information about gifted children and adolescents through conferences, publications and other related materials to bring awareness to this population's needs. Lately, ConBraSD is integrating with other Iberian Latin American associations to expand knowledge about gifted identification procedures and programs in those countries. The VI Conference for the Gifted was held in Iguacu Falls City in 2014, and the first journal on giftedness, *Brazilian Journal on High Abilities and Giftedness*, was also initiated by ConBraSD in 2013.

There has been a significant number of theses and dissertations focusing on gifted children. In the last 3 years, for example, 16 theses and three dissertations were found in the national electronic database of the Council for Improvement of University Personnel with the keyword *superdotacao* (giftedness). In addition, 22 scientific publications in Brazilian journals were found in the scientific electronic library SCIELO during the same period and with the same keyword. There also has been an increase of books published on the topics of talent/high abilities/giftedness for teachers, parents, educators, and psychologists in the last 4 years. Although the great majority of these publications are in Portuguese, thus limiting their availability by other international educators, they demonstrate Brazilians interest and concerns for identifying and attending gifted children.

HISTORICAL AND CONTEMPORARY PERSPECTIVES: PERU

Peru, an ethnically and linguistically diverse and multicultural country, is the third-largest country in South America. Peru has achieved a high degree of education coverage and gender equality compared with similar multiculturally and ethnolinguistically diverse countries in Latin America (Transformation Index BTI, 2014; World Bank, 2007). However, education and training facilities vary widely in terms of quality. Primary education enrollment and completion rates for marginalized urban and rural children are high, but the quality of public education is still low, constituting a barrier to further

development in other areas. Per capita expenditures in the primary education system are among the lowest in the region, around 3% of the gross domestic product. In 2006, the National Education Project (PEN) was established long-term priorities in education. The first evaluation of PEN in 2011 showed that the quality of general education and gender equality in school achievement (no significant difference between achievements of boys and girls) had improved. However, Peruvian quality of education was still behind international levels because (a) differences between socioeconomic status groups remained; (b) decentralization and social participation needed to be promoted; and (c) the tertiary education system exhibited low quality, with relatively few internationally accredited programs.

Services for high achievers in Peruvian history have been marked by the convenience of those who ran its political destiny along the different historical eras (Blumen & Cornejo, 2006). Since 1837, the educational system in Peru, run by the Ministry of Education, has used a central system in which the norms and regulations for the education are dictated from Lima City, without participation of individual regions. Education is compulsory from kindergarten to 11th grade. Academically, high achievers coming from deprived conditions usually are awarded fellowships to continue their studies in all public and some private universities. The Ministry of Education (1983) formulates, implements, and supervises the national educational policy of the country.

In the 19th and 20th centuries, high achievement was western influenced, associated with geniality, an innate quality of an individual that needed to be identified. By the end of the 1980s, the concept of high ability and giftedness was referred to as general intelligence (*g*) in the policies and practices given by the Ministry of Education (1983). However, research findings and initiatives from scientific settings (Alencar, 2008; Blumen, 2009; Mönks, Ypenburg, & Blumen, 1997; Robinson, 2006) revealed that intellectual and motivational factors, as well as academic achievement, are all significant in affecting educational outcomes and life success. Moreover, the development of expertise involves training and interventions in domain-specific skills (Blumen, 2014), as well as self-regulated thinking

to achieve levels of expertise and outstanding performance in adulthood (Subotnik & Rickoff, 2010). But, the lack of culturally fitted foundations for establishing provisions for those who surpass others in academic achievement and other domains, as well as the inability to identify these high-ability children, reframed the policies (Blumen, 2013a, 2013b). In 2010, the government assumed a pragmatic approach, focusing on the academically high achievers. Moreover, psychometric norms were established taking into consideration the particular Peruvian ethnic-linguistic group in which the youth belonged, instead of a unique national norm strongly influenced by Western-influenced Lima City. This situation provided a more inclusive approach, allowing academically high achievers from both urban and rural areas to attend special educational services.

In 1983, the Ministry of Education of Peru launched an educational law recognizing and defining gifted individuals as “special girl[s] or boy[s] that exhibit high abilities that significantly surpasses the normal level of intellectual functioning, and need special programs in different modalities” (Ministry of Education, 1983, p. 16). The definition was focused on cognitive skills and academic achievement relating to intellectually gifted children. This norm (a) promoted advocacy toward the needs of gifted and talented children with gender equity, (b) underlined the importance of identification services and talent development provisions in the educational setting, (c) established the foundations for teacher training programs, and (d) established the need of psychological interventions in and out of school (Blumen, 2014; Gonzales, 1991; Pereyra, 1987).

Three decades ago, the psychology program of the Pontifical Catholic University of Peru (PUCP), together with the Center for the Study of Giftedness at Radboud University and under the leadership of Franz Mönks, created a laboratory to promote creativity and talent development in the different areas of knowledge. Moreover, the interdisciplinary research group Creativity, Technology, and Talent was founded in 2004 at the PUCP. Its main goal was to identify the highly able living under poverty conditions, and to develop intervention programs for

talent development to improve Peruvian competitiveness and to promote international accreditation processes (Blumen, 2012). The need to promote the development of creativity in schools was underlined from the podium of the First Conference on Creativity, Technology, and Talent in 1994, held at the PUCP. Therefore, the need to promote programs for the highly able in schools was adopted by the Peruvian policy-makers as a significant topic to be addressed (Blumen, 2014). Therefore, a teacher-training module on the psychopedagogical needs of the high- and low-achievers was included for the first time at the Ministry of Education, under the support of the Van Leer Foundation.

Today, international and national conferences about creativity and talent development are being multiplied at the school setting and the organizational setting (Blumen, 2016a). Although Peru has significantly advanced within the global community, it still is working on developing activities based on knowledge and related to the improvement of the quality of education (i.e., activities that significantly support the generation of human capital in learning and innovation; Blumen, 2013a).

RESEARCH REVIEW: PERU

Studies of high-achieving youth in Peru underlie the relevance of context for talent development. These studies have resulted in several conclusions: (a) Children can be called “high achievers” at very different levels of achievement, depending on their school setting (Alencar, Blumen, & Castellanos, 2000; Blumen, 2016a), as seen in the processes for identifying the high achievers living under poverty conditions; (b) context factors should be considered in any definition that aims to explain high achievement, because of the empirical data collected on the impact of nutrition and schooling on the cognitive performance of rural/urban and private/public school-age children (Blumen, 2014; Pollit, 2007); (c) the relationship between resilience and high achievement should be considered for high-achieving children living under disadvantaged and poverty conditions; (d) high achievement would be more appropriate to consider as a developmental expertise (Sternberg,

2000), which depends on environmental stimulation, as observed by monitoring the progress of college students who obtain a full scholarship to finish their undergraduate studies (Blumen, 2014); (e) scientific theory should support the pedagogical demands and theoretical construct that supports the identification process (Blumen, 2002); (f) diagnostic decisions should be made on the basis of valid results from standardized testing, a particularly sensitive topic taking into consideration the informality in psychological testing practices in Peru (Blumen, 2014); and (g) discussions should remain in relation to the nature of high achievement, and the importance of specialized teacher training and formation (Blumen, 2013b, 2014).

There are still unsolved issues concerning high achievement in Peru, from the need of a comprehensive paradigm to more practical issues related to identification and intervention. In Spanish-speaking Latin American countries, the term *superdotado* (giftedness) involves exclusion, leading to the rejection of gifted children. Results from a study that examined social representations of high achievers as described by school teachers (Blumen, 2007) showed that (a) misconceptions and stereotypes prevailed, because traits related to pathology and physical characteristics were still given; (b) the legal framework to provide special services for high achievers must be reviewed, because it bans acceleration as well as early entrance to universities; (c) topics about education for high achievers should be part of any initial teacher-training program that aims to provide a quality education (Subotnik, Olszewski-Kubilius, & Worrell, 2011); and (d) it is necessary to develop advocacy in the media to support the high achievers’ cognitive and affective needs, avoiding misconceptions that lead to reinforcing misunderstandings and myths about high achievement (Subotnik & Rickoff, 2010).

PRACTICE AND POLICY ISSUES: PERU

Talent development is considered a right of high-achieving children in Peru. By the end of the 1990s, inclusive policies gained popularity promoting differentiated teaching in regular schools. Teachers were trained on gifted education following the

inclusive school model (Blumen, 2002), and creative enrichment programs for highly able children attending public schools were launched in primary public schools (Blumen, 2016b). Clustering through ability grouping was another common enrichment provision for students in Grades 1 through 5 (Costa, 2001), providing opportunities for students to be grouped together with academic peers. However, ethnic bias was observed as a significant variable related to the enrichment programs (Alencar et al., 2000). A comparative study of urban and rural talented children coming from multicultural settings in Peru exhibited similar results (Blumen & Cornejo, 2006).

When Peruvian administration needed to make decisions about the domain-specific area of focus, math prevailed. However, Peru does not have a rich math culture or a long history of olympic math competition. Therefore, for mathematically high-achieving students, the use of talent search testing in secondary schools became a motivating space to compete and optimize their mathematical talent. Students are trained under the philosophy that learning can improve intelligence (Bloom & Sosniak, 1981; Gladwell, 2008), and they stay at school longer and work harder than their average-ability peers. Moreover, counseling support services are provided for posttraumatic stress disorder, because most high-achieving children live under poverty conditions in Peru, and need to cope with the characteristics of poverty life in the country (e.g., violence, verbal and physical aggression, emotional abuse). Moreover, Peru does not have a large population by global standards, so the talent pool available is considerably smaller.

From 2006 through 2011, the government of Peru provided generously to assist high-achieving children living in poverty. A residential academy of arts and sciences was created in September 2009, and was launched in January 2010 to serve the needs of 800 high-achieving ninth to 11th graders coming from impoverished conditions (Blumen, 2014). The admissions committee reports directly to the office of the Ministry of Education, and guarantees the public transparency of the identification process. The Academic Aptitude test is prepared at the Direction of Secondary Education of the

Ministry of Education and applied in the 26 regions of Peru in coordination with the regional governments, education regional directions, national Peruvian police, ministry of health, and other public institutions who guarantee test security, transparency, and student support through the identification process. Results are published on the website of *Colegio Mayor Secundario Presidente del Perú* (Ministry of Education, 2014).

Also, the regional government of the Callao Province launched a secondary day-school for academically talented children attending public schools in Callao. This school promotes the maximum development of abilities and attitudes of 10th and 11th graders in the Callao region (Blumen, 2014). A high profile, qualified, and dedicated staff promotes values and ethical principles and applies e-learning to form future leaders sensitive to the well-being of their communities, region, and country.

In 2015, the government launched nationwide 12 residential schools for high-achieving youth (COARs) serving 1,600 high achievers, following the pedagogical model of *Colegio Mayor*. The COARs decentralize public educational services for low-income, high-achieving children in urban and rural areas. The admission process involves testing academic achievement, psychological development, and social abilities, and includes personal interviews. All high-achieving children coming from poverty conditions are awarded a fellowship that covers tuition, pedagogical formation, educational materials, a laptop, and a uniform. Moreover, COARs are residential schools that provide housing facilities, meals, laundry services, health services, social assistance, nutrition, and psychology counseling services. COARs aim to provide a global education that allows students to successfully enter college and graduate school. Facilities include access to libraries, scientific labs, technological support, cultural activities, and grants to continue college studies. Two more COAR schools are expected to be launched soon: one focusing on visual arts and music, and the other on sports (Blumen, 2014; Crea Talentum, 2015).

Taking into consideration the increasing governmental support given to high-achieving youth living in poverty, on-going cross-cultural studies

were launched with the support of the University of Nuremberg and the International Research Association for Talent Development and Excellence (Oh et al., 2015). Because COAR schools are mainly residential, it is of utmost importance to assess the perception of teachers and peers toward gifted boys and girls.

At the college level, special resources such as universities, research institutions, museums, and other professional organizations, are also increasingly committed to talent development (Blumen, 2014). Furthermore, provisions for talented college students are beginning to be considered in tertiary education (e.g., mentoring programs; Blumen, 2011, 2014; Treffinger, Selby, Isaksen, & Crumel, 2007). It seems that significant academic relationships between college students and mentors might constitute a creative and enriching learning space (Blumen, 2012). Mentors play an important role in the talent development process with college students, and high achievement is not only the result of their high ability, but also the result of their motivation and opportunity.

FUTURE CONSIDERATIONS AND DIRECTIONS: PERU

In recent decades, Peru has made remarkable progress in the field of high ability. In this sense, Peru is one of the pioneering Latin American countries in providing a legal framework to serve the needs of gifted and talented students, although its application depends on the political administration. Peru has consolidated a significant body of scientific studies related to (a) screening and identification of the academically talented in urban and rural areas, from preschool to adulthood (Blumen, 2007), and successful matriculation through schooling (Blumen, 2016b); (b) psychoeducational intervention and the impact of the inclusive enrichment programs in developing creativity and cognition (Alencar et al., 2002); (c) teacher training and formation in the development of creativity and talent in student-teachers (Colangelo, Assouline, & Gross, 2004), as well as with students in enrichment programs in the school settings (Blumen, 2002); (d) social-emotional development involving

identifying personality traits related to the highly mathematically talented who compete internationally; (e) attitudes about academically talented children and gender (Blumen, 2007); (f) social representations about teachers in the different education levels (Blumen, 2012); and (g) perception of talent development from the Amazon tribes and Andean culture worldview (Blumen, 2007).

Peru was also the first Latin American country to launch a residential academy of arts and sciences in 2010, to serve the needs of 800 high-achieving students coming from impoverished contexts nationwide (Blumen, 2014). Moreover, intensive networking along international events, as well as the possibility of having an International Templeton Fellow in the country, led to the organization of four biennial International Seminars on Creativity, Technology, and Talent, as well as the 2008 FICOMUNDYT Iberian-American Conference on Gifted Education with the International Iberian-American Summit of Talented Youth. It also gave more public exposure to the topic of high achievement and talent development, generating advocacy toward the needs of this population. Furthermore, media exposure in relation to advocacy toward talent development significantly improved in terms of frequency for TV programs, radio interviews, and newspaper stories.

To provide spaces to facilitate the emergence of talent along the different educational levels, and taking in consideration the need to generate a human capital of excellence in learning and innovation to become globally competitive, the creativity, innovation, and talent intervention model (CIT; Blumen, 2007) was proposed. This model reorients intervention spaces from classrooms in elementary and secondary settings toward college education. The CIT model aims to identify the highly able living under poverty conditions and to foster their talents and creative abilities in science, technology, business, humanistic, and social development domains.

It is possible that the most sustainable provisions and efforts come from research centers at university settings. In this sense, the Annual International Seminar on Creativity, Technology, and Talent, held at PUCP, is an example of a dynamic academic and professional meeting in which educators and psychologists can analyze different provisions for

high-achieving, low-income youth in an academic context.

The main constraint is to rank policy prescriptions in terms of potential cost-effectiveness on the basis of research. Some Peruvian public schools produce high-achieving students even though these students are low income (Chauvin, 2000). However, there are few credible models of systemic interventions that truly work in driving cognitive development among those living in poverty conditions. The most significant difficulty that remains is related to clear policy agreements on the variables affecting learning, as well as implementing solutions that agree on standards, management, and the spending needed (World Economic Forum, 2010).

In conclusion, there is a need for a theoretical framework in Peru to identify gifted and talented children in a context shaped with multiculturalism and poverty, taking into consideration that (a) girls and children from the native population are underrepresented in domain-specific academic talents; (b) nutrition and schooling are significant variables in any screening or identification process; (c) resiliency factors must be considered in socially excluded and marginalized communities; (d) the central system style curriculum exhibits low levels of flexibility; and (e) the definition of giftedness and talent needs to include culturally friendly variables.

HISTORICAL AND CONTEMPORARY PERSPECTIVES: URUGUAY

Uruguay is the second smallest country in South America with a population of just 3.2 million, and is situated to the south of Brazil. Uruguay was the first Latin American country to offer free and compulsory schooling, and today, public education in Uruguay is free from kindergarten through college. Uruguay is recognized internationally for having introduced innovative educational programs such as One Laptop Per Child (OLPC), where all elementary and secondary students received a computer designed for learning. It also offers free services in education, including early childhood and learning disabilities programs.

Despite a history of progressive ideas, education in Uruguay is in crisis. PISA is a worldwide study by

OECD (2015), which examined the student performance of 15 year olds in mathematics, science, and reading. Results showed Uruguay toward the middle of the table among developing nations, but lagging substantially behind the OECD countries.

Unfortunately, innovative programs such as OLPC were implemented ad hoc to traditional practices without any changes in the system. Even though Uruguay offers many services for children with learning disabilities, gifted education is not incorporated into the school system at all. Teachers are not trained to work with gifted students and do not receive any instruction or professional development in college or afterward.

Compounding the problem, curriculum in Uruguay is not flexible; teachers are not given freedom to implement changes or recognize diversity in the classroom. Teachers are required to keep daily logs of what they teach to make sure they follow a curriculum designed decades ago. Teachers have goals that every child should achieve, regardless of students' interests, strengths, or weaknesses.

Education authorities are beginning to understand the status quo is untenable, and are starting to make changes to the system, albeit at the periphery. Gifted education in Uruguay has the opportunity to start with a clean slate, and incorporate the best practices and lessons learned in other countries.

PRACTICE AND POLICY ISSUES: URUGUAY

Uruguay is one of the 92 governments that signed the Salamanca Statement in 1994. This statement established the right of all children to receive an education on the basis of their own characteristics, interests, capabilities, and needs.

Every educational system should design programs that consider these different characteristics and needs, and provide a pedagogy centered in every child. . . . All schools must accommodate all children regardless of their physical, intellectual, social emotional, linguistic or other conditions. Schools should attend disabled and gifted children, homeless and working children, children from remote or

nomadic populations, children from ethnic or cultural linguistic minorities and children from other groups or disadvantaged or marginalized areas. (UNESCO, 1994, p. 6)

The education system of Uruguay interpreted this statement as only requiring the attention of the needs of children with learning disabilities, not the needs of gifted students. Many misconceptions guide the absence of policies and services to assist gifted children in Uruguay. The belief that gifted children do not need any special help or attention because of their intelligence is widespread. It is also very common to believe that all gifted children excel at school and do not develop problems or learning disabilities. Another misconception is assuming gifted students should be separated from same-age peers.

It is convenient to blame the lack of resources in Uruguay for the lack of a gifted program, but there are multiple factors explaining the current situation. Most important, Uruguay has inflexible curriculums which afford little freedom to teachers, and authorities and teacher unions resist changes to the current structure. In fact, the most promising development regarding gifted education, the OLPC initiative, was developed completely outside of the standard educational system.

The OLPC program was formulated by a U.S. nonprofit organization whose goal is the creation of affordable educational devices for use in the developing world. It is inspired by the constructionist philosophy of “learning by doing and making.” Uruguay embraced the challenge of the OLPC project through Plan Ceibal, an educational reform initiative, becoming the first country to provide one laptop per child for every primary and secondary student and teacher. Through this program the government allegedly committed to develop the nation to its full creative and productive capacity by encouraging students from an early age to become problem solvers, knowledge creators, and self-learners (Báez, García, & Rabajoli, 2011).

Plan Ceibal is an innovative plan in a conservative country. Unfortunately, the educational

plans have not been redesigned from scratch to take advantage of this technology. Nevertheless, the promise of the program is undeniable. It gives the students the chance to learn by themselves. It has adaptive software and it was designed for the students to learn with minimum guidance, where the teacher serves as a facilitator and the student can explore and investigate to learn. Activities conducted with the laptops have allowed students to engage with more complex and intellectually challenging practices.

Gifted Education Without Labels Using Technology

The laptops are wonderful tools to attend the needs of all students, offering programs to consider students’ strengths, weaknesses, and learning necessities. One of the main beneficiaries is that gifted students can now learn at their own pace and feel challenged through the different tools that the system offers. There is software to create and design games, and a mathematics platform which adapts to students’ own pace, among others. Yet, to take full advantage of this technology, educational plans should be redesigned, and more important, teachers should be prepared to integrate them into their lessons.

Enrichment Clusters

One of the programs of Plan Ceibal, the Digital Technology Laboratory (LabTED), proposes the redefinition of computers in the classroom at the secondary level, transforming the classroom into a workspace that promotes collaborative learning and integration of the technology and cognition, whereas logical thinking and creativity is stimulated.

The project facilitates the development of new knowledge that enables students to acquire skills needed to cope with a changing world, as protagonists of their own development. LabTED consists of two laboratories that complement each other: The Technological Innovation Lab, which includes projects such as robotics, video games and programming, physicochemical sensors, QR codes, augmented reality, and 3D printers; and the

Multimedia Laboratory, which integrates experimental laboratory sound and audiovisual laboratory experimentation.

The Technological Innovation Lab launched an enrichment project for gifted students in the robotics area in 2014. A group of young children (ages 9–14) meets once a month in the lab to work on different projects in robotics. A teacher, who works in a secondary school at LabTED, and other specialists facilitate the activity. The project gives children an outlet to express their creativity. In the words of one 12-year-old student, “Can I stay here, forever? For me this is paradise.”

This experience is being replicated, and the Technological Innovation Lab is planning to identify students with talents in video games and 3D printers to create other enrichment programs.

The Challenge of Training Teachers

Things occur in reverse; I am the student and the students are the teachers. As I do not master the computer, when I try to do, they have already discovered an easier path. . . . They have no fear; they explore. And what has changed is the teacher–student relationship. (Gomar & Ravela, 2012, p. 31)

Interviews with teachers revealed that when the technology is not being used to its full potential, it is because teachers felt the need to strengthen their control over the classroom. In terms of classroom dynamics, most teachers are concerned by the difficulty of adapting to these changes, particularly because they feel children are naturally more adept at digital technologies than the teachers could ever be. The switch from sole providers of knowledge to facilitators of the learning process has been difficult for many teachers. Rather than using the tool to change the way instruction takes place in the classroom, where the students can explore by themselves and learn directly, most teachers still choose an undifferentiated classroom. One study, conducted in 2011 by the Institute of Educational Evaluation at the Social Sciences Department at the Catholic University of

Uruguay, showed that only 20% of teachers use laptops at least two or more times per week and believe the technology can contribute in the classroom (Báez et al., 2011).

Initially teacher training was too focused on how to use the laptops themselves, neglecting how to use them as part of the learning process. This led to many situations in which the students were using laptops for activities that could have been done more naturally with pen and paper. Different approaches have been tried out over the past years to improve the use of laptops in the classroom, but none of them managed to meet the required combination of effectiveness and efficiency. As a result, the 18,000 teachers of the public education system are not currently using laptops as extensively and effectively as envisioned. Until the preparation of teachers changes the way they approach diversity, and how they use the technology to differentiate instruction, the needs of gifted children will continue to be neglected.

In 2014, after years of meetings and projects related to the attention of gifted students, the Ministry of Education started to offer a professional development program in gifted and talented education for the first time in the history of the country. The program is intended for primary and secondary teachers, psychologists, and educational psychologists who interact directly with children daily and are interested in pursuing a specific training on how to attend the needs of gifted students in the classroom. The program consists of three consecutive courses: an introduction, a course on the needs of gifted students, and a course on more practical aspects in the classroom. The courses are available for free online, with some on-site locations, to be able to reach educators all over the country.

Teachers, psychologists, and educational psychologists have taken the course from every province in the country and there were participants from Argentina, Chile, and Spain. Since then, professional development has been extended beyond the Ministry of Education: last year universities in Uruguay offered gifted education seminars, and undergraduate courses including gifted education for the first time.

SUMMARY AND CONCLUSIONS: CHALLENGES FOR THE FUTURE IN SOUTH AMERICA

Thinking about the future of gifted and talent development it is of utmost importance to improve our comprehension about talent development under ethno-linguistic diverse and poverty contexts. Federal educational policies for talent promotion are needed, which could foster the commitment of civil society, as well as policy-makers, enterprises, and colleges/universities. This could promote the fulfillment of individual potential in all these countries and could help society, under a global perspective, generate creative and innovative ideas. This should be a mission in all countries in South America that need to achieve higher levels of social, educational, and economic development.

The experiences with high-achieving children in Brazil, Peru, and Uruguay show that the success of the identification process and talent development strategies depend mainly on the following conditions:

- The awareness and commitment of the governmental to recognize and serve the cognitive, conative, and affective needs of high-achieving children from a comprehensive psychoeducation model, so they can become citizens committed to support the local, regional, and national needs of the democratic society toward a culture of peace, for the personal and collective well-being of their countries.
- The meaningful integration of the identification and provision functions in the government administration at a national, sectorial, and program level.
- The development of human and financial resources to support professional groups of evaluators and specialists in gifted education.
- The development of social and human values to achieve a peaceful growth in these societies, diminishing violence, drugs, and other problems that affect children from poor environments.
- The creation of mentoring programs to provide high-achieving children with models to

succeed in different professions, as often this is not possible for families living in poverty environments.

- To face the challenges of a changing and complex world, high-achieving/gifted children need help to develop their talents or area of expertise. Moreover, they need to develop strategies, which are not academically related, but can be beneficial to achieve success in their lives, such as creativity, assertiveness, and social skills to help them solve daily problems. High-achieving children from poverty conditions might contribute to building a society on the basis of knowledge, respect, tolerance, valuing cultural diversity in different regions of the world.

After neglecting gifted education to focus on other aspects of education, many countries in South America are finally starting to address the issue. Despite the fact these countries are experimenting with innovative ideas, these efforts are not yet consolidated and face resistance and indifference from school directors, especially at the elementary education level. Therefore, to promote teachers' awareness of the fact there are gifted children in their classrooms in different areas that may or may not be academically related, there must be a comprehensive education that offers opportunities and recognition to all types of talents.

Neighboring countries can help one another to advance the attention of gifted children in the upcoming decades. Brazil has laws to support gifted education and has enrichment options for gifted students in public programs. Peru is experimenting with innovative strategies to attend to gifted children. Uruguay can benefit from experiences from these countries to pass federal laws that regulate programs for high-ability/gifted children.

Professional associations can play an important role in disseminating experiences not only inside each country but also in other Iberian Latin American countries that may be facing similar challenges to educate high-ability/gifted children. Considering that research conducted in these countries has mainly been published in Spanish and Portuguese, there are language barriers to overcome to reach

international educators interested in the same issues. Finally, international conferences bringing experiences from South America to other nations are highly desirable to improve knowledge of this special population.

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