Review

Finding Talent: An Overview of Research about Best Practices in Identification

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Abstract: Instead of the traditional identification approaches that focus on selecting students for specific programs, talent identification models are tailored to individual student talents across a variety of domains and identify emerging talents needing to be developed. This flexibility is incorporated within The Talent Identification Cycle that includes (a) pre-identification development opportunities; (b) a variety of assessments to develop individual student profiles; (c) services that are customized to each student's interests, strengths, and needs; (d) ongoing assessments of student performance that consider program revisions and changes in placements; (e) an overall assessment of the identification process to ensure that all students receive appropriate services. Research evidence is summarized for each component of the cycle, along with considerations and concrete examples for practitioners. The conclusion incorporates possible challenges for schools that are engaged in moving away from more traditional to more flexible identification approaches.

Keywords: talent development; identification; assessments; gifted and talented; student profiles; finding talent

1. Introduction

The identification of talent refers to the formal and informal processes used in recognizing students who exhibit behaviors that indicate potential talents within a specific domain. These talents are malleable and developmental, with varying beginning and ending points that need nurturing from those who are more skilled and knowledgeable in the talent area. General ability varies with the domain of talent and is important in the early stages; at later stages, specific talents are identified relative to other high-functioning individuals in that domain [1]. The development of talents also needs to be supported by the environment and psychosocial skills so that students are able to perform at their highest levels of expertise [2]. This early identification and development of talents provide students with the opportunities needed for specialization in domains that match their abilities and interests, authentic learning, apprenticeships, mentorships for continued growth, and other support necessary for psychosocial skill development. This approach would be particularly important for underserved populations in gifted education who may not have access to enrichment activities outside of school.

Some models incorporating talent development include Gagné's [3] Developmental Model of Giftedness and Talent (DMGT), where natural abilities are systematically developed into talents and influenced by intrapersonal and environmental factors; Renzulli's Enrichment Triad Model [4], where students are introduced to enriched activities in different domains (Type 1), provided with specific and advanced instructions in domains of interest (Type 2), and ultimately engaged in real problems that contribute to the field (Type 3); talent-search models [5–7], where testing is domain-specific and above level, and students receive in-school and outside-of-school programs that match their strengths. Subotnik and her colleagues [2] proposed a Talent Development Megamodel, incorporating research and previous models that emphasize movement from the ability to eminence in

different talent domains. Their model stresses the identification of potential at the earliest stages and demonstrated achievement at later stages.

These talent identification models are different from more traditional identification models of giftedness that are often used to select students for K-12 gifted programs and services. Traditional models tend to view giftedness as a more static trait that is present in the student and needs to be identified rather than as an emerging talent that needs to be developed. This important difference influences the type of identification model used. In traditional approaches to identification, schools develop services and programs and then identify students who will benefit from these programs. While these approaches vary from state to state because of no federal law mandate, national standards have been developed based on evidence-based practices to address consistency [8]. However, most states allow the local education agency to make final decisions about how they will identify gifted students for campus programs [9,10]. For example, one school district might develop programs to serve students who are performing in the top five percent in core academic areas and use a common intelligence test to identify students once a year, beginning in kindergarten; another district might use a single universal screener in third grade to identify students scoring in the top ten percent who might benefit from weekly enrichment learning experiences; and another might include multiple, varied assessments on an annual basis to include more students from underrepresented backgrounds. Instead of the traditional approach, talent identification models are tailored to individual student talents in a variety of domains and are, therefore, more flexible. Moreover, they must also be ongoing because of the nature of talent development, which is dynamic, developed over time, and has different beginning and end points [2,3,11].

2. Talent Identification Cycle

Johnsen and VanTassel-Baska [12] created an identification cycle that is flexible and might be useful for the identification of talents in different domains (see Figure 1). This cycle begins with the need to provide pre-identification development opportunities for prospective students. Next, the school selects assessments to develop student profiles and the need for programs and services beyond the general education curriculum. Third, students are placed in services and programs that are tailored to their interests, strengths, and needs. Fourth, the ongoing assessment of student performance considers the need for program revisions and/or changes in placement. Finally, the entire identification process is evaluated in terms of results and changes needed to ensure that all students are receiving appropriate programs and services. Following this evaluation, the identification cycle repeats. Research and specific considerations within each step of the cycle for identifying talent will be discussed below.
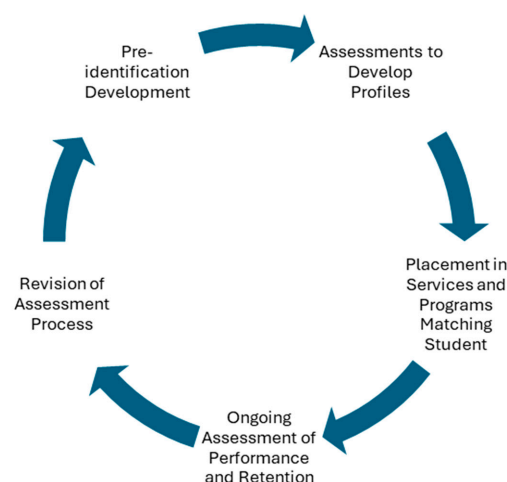

Figure 1. Talent Identification Cycle. *Note:* Adapted from Johnsen, S. K., and VanTassel-Baska (2022). Conclusion to Part I on assessments for identification [12], p. 119.

2.1. Pre-Identification Development

In this part of the identification cycle, talent development opportunities should be available for all students to exhibit their interests and strengths (see Standard 2.1, [8]. These learning experiences assist educators in identifying students who might benefit from more programming in the talent development domain, which is particularly important for underserved populations who might not have had access to activities or out-of-school enrichment that stimulate their interests. Research suggests that early exposure and positive engagement are important factors for developing expertise in any field [2]. As an example, Selby and Young [13] suggested that schools provide a continuum of services that not only relate to a variety of domains but are also integral to the school day. This programming is flexible, includes many different people and activities, is available to all students, responds to individual students' strengths and needs, stimulates interests and actions for talent development, and unifies talent development activities among homes, schools, and communities. Their example program was in the domain of music, where all children were exposed to the music of many cultures in dance, movement, and singing. Along with the teachers, music specialists observed the students who exhibited high levels of potential and skills and referred them for more intensive experiences. In another domain, Heilbronner [14] suggested that educators allow students to informally experience the joy of science at school and at home. In her example, educators used rating scales to examine specific characteristics related to talents in science to identify students who might need more in-depth science experiences. Other researchers have also described ways that educators and other professionals can encourage students in talent development options [15,16]. In these cases, educators become talent scouts to identify students who might participate in activities that enhance their knowledge and skills within specific domains [17,18].

Outside of school, students can engage in a wide variety of enrichment experiences that stimulate interests and develop talents (e.g., community activities, advanced work with a mentor, competitions in the talent area, university-based acceleration and enrichment courses, and supportive social networks). When involved in these learning experiences, students frequently develop important skills in talent domains and future possibilities. For example, 76% of students who participated in the Academic Olympiads said that the competitions helped increase their awareness of educational opportunities and their acceptance of their talents [19]. Moreover, university-based acceleration and enrichment programs, particularly for students from low-income backgrounds, assisted students in increasing their interests in specific domains of study, developing social relationships with like-ability peers, identifying careers, improving academic performance, and increasing overall high school graduation rates and enrollment in colleges (see Project STREAM [20]; Project Promise [21]; and Project EXCITE [16].

Families are also critical in finding and developing talents. Parents/guardians provide emotional and psychological support and are often their children's first teachers, introducing them to talent areas and providing exposure to others through extracurricular activities [11,22,23]. Parents/guardians and extended family members can provide important information to educators about children's interests and talents that might not be apparent in school settings [16]. Parents/guardians can also request assessments from teachers and advocate for services in their children's talent domains.

Assessments Used during Pre-Identification

Different types of assessments might be used to find students with potential talent in different domains during the pre-identification portion of the cycle. These assessments might include dynamic assessments, portfolios, and specific observation instruments.

Dynamic assessments are designed to measure how students respond to specific instructions in a new skill or area [24–26]. For example, a teacher might administer a preassessment, then observe the student's performance while teaching new knowledge or skills, then administer a post-assessment to determine the student's progress. Teachers might also informally observe student engagement in activities that encourage more

complex thinking. This "talent spotting" involves general and gifted educators as well as specialists in the talent domain [27,28]. These types of assessments have been particularly useful in identifying students from underserved populations [29–31].

Teachers might also collect samples of student work as part of the pre-identification process. These work samples include students' and teachers' reflections of products or performances collected over time in various contexts to demonstrate a specific set of characteristics within the domain. Criteria might be developed that relate specifically to the talent domain (e.g., details in the presentation of an idea, creative responses to tasks, work advanced beyond grade level, and an in-depth understanding of an idea). Similar to dynamic assessments, when portfolios are implemented with all learners, students from underserved groups have increased opportunities for being recognized [32,33].

In selecting specific observation instruments, educators need to consider how well the behaviors sample the most important characteristics of students who have talent in the domain and whether or not the behaviors can be observed in the setting in which the rating scale is used [34]. Depending on the instrument, data may be collected in multiple settings (e.g., school, after-school activities, and home) and from multiple sources (e.g., parents/guardians, teachers, and peers) for a complete understanding of the student's talent. These scales are beneficial when rating scales use observable behavioral indicators in various areas over time and/or when those who use them are trained in their application [35]. See Ryser [34] for a listing of standardized, norm-referenced observation scales used in referring students for specific programs.

In all of these cases, educators need to receive professional learning in characteristics that might be exhibited in various talent domains and in implementing different assessments (i.e., dynamic assessments, portfolios, and observation rating scales). Educators also need to learn how to collaborate with specialists, parents/guardians, and other stakeholders who may have knowledge about a student's specific interests or talent areas. Moreover, educators need to be aware of possible implicit biases they might have toward students from diverse backgrounds so that they can ensure that each student has access to opportunities that might reveal their interests and talents.

2.2. Identification Phases

During the pre-identification phase, educators collect primarily qualitative information to refer students who exhibit specific aptitudes for further assessment so that they might access more intensive services and programs in their talent domain. Because of its focus on developing students' talents, talent identification procedures differ from more traditional approaches, where students are frequently identified for established K-12 gifted education programs. In the case of identifying talents, students are matched to services and programs that place them at their current level of developed abilities so that they can build their skills and improve their talent trajectory [36].

In traditional approaches, students are also more often identified in phases—referral or nomination (e.g., multiple sources refer students with potential), screening (e.g., additional information is collected using formal and informal assessments), and selection (e.g., a committee reviews the data and makes decisions for placement). The number and type of phases will vary based on state and district guidelines [35]. In identifying talents, the phases tend to merge with one another since talents have different beginning points and trajectories. In both cases, researchers have recognized the following practices as effective in identifying gifted students. Highlighted within each of these practices are how they relate specifically to identifying talents.

2.2.1. Ongoing Identification

Although designated times during the school year may be allotted for formal testing and referrals for programs and services in gifted education, talent identification needs to begin early (i.e., pre-kindergarten) and be ongoing through high school because of the variations in different talent domains (e.g., their starting points and trajectories and

discovering early potential vs. demonstrated achievement). Recognition is particularly important for fields where talents emerge and need to be developed beginning in preschool or the primary years (e.g., mathematics, music, and gymnastics) and for students who have limited opportunities, such as those from low-income backgrounds or students from diverse backgrounds [2]. In high school, consideration should be given to students who are motivated and committed to the development of their specific talent or ability [1]. Monitoring student performance will need to be established with the goal of identifying students whose talents emerge at all levels of schooling [15].

2.2.2. Universal Screening

While data have been collected on all children during the pre-identification part of the cycle [12], researchers suggest that all students should be considered during the formal screening process as well (i.e., universal screening or universal considerations; [37,38]. If all students are assessed and considered for services, there is also a greater likelihood that students from underrepresented populations will be included.

2.2.3. Multiple Assessments

The purpose of using multiple assessments (e.g., qualitative and quantitative and performance and non-performance methods) is to ensure that the process is valid for identifying all students with potential talents in different domains and who are in different stages in the developmental process [39,40]. No single assessment can sample all of the characteristics in multiple domains (e.g., mathematics, language arts, social studies, science, the arts, leadership, and creativity). For example, a student with a talent in mathematics would need to be identified with different assessments (e.g., above-level achievement tests) than a student with a talent in the performing arts area (e.g., auditions). Instead of using a single assessment, multiple criteria are also helpful in identifying more students from underrepresented groups [41]. For example, students who speak other languages might benefit from nonverbal reasoning tests; those with disabilities may need accommodations such as screen reading technology, distraction-free rooms, or extended time. General reasoning ability tests may be good indicators of potential at the earliest stages of talent development, but by middle school, above-level standardized tests of specific abilities, such as achievement tests, may be needed to determine options such as acceleration [1]. Assessments may also vary in terms of the abilities they sample (e.g., quantitative reasoning vs. verbal reasoning) and the formats of the items (e.g., verbal vs. nonverbal vs. performance; individual vs. group administered) so that a student might perform quite differently on two different assessments that measure the same trait. In addition, different sources, such as parents/guardians, peers, teachers, or counselors, may provide different information about the same student's interests and talents because students may show more of their abilities at home, with friends, or in other settings than at school [12]. Parental involvement is particularly important for identifying talented students who are from diverse backgrounds or under-resourced situations or speak a different language [42]. Multiple criteria also provide more validity to the entire identification process. By using multiple sources and multiple types of assessments that are aligned with the talent domains and by triangulating all of the data, educators, psychologists, counselors, and other professionals can be more confident in the results.

2.2.4. Technically Adequate Assessments

Professionals will want to select a range of qualitative and quantitative assessments that align services and programs to the student's talents and are technically adequate. Qualitative assessments use words to describe student talents, whereas quantitative assessments use numbers. Both are important for describing the student's abilities and comparing their abilities to other students within the same domain and at the same developmental point in their talent trajectory. Some qualitative information may have already been collected during the pre-identification cycle, such as portfolio products and observations during dynamic

assessments. Additional qualitative information might be collected from specialists in the domain. Quantitative assessments might include results from intelligence, above-level achievement tests, and rating scales in specific domains. Having pre-identification information is helpful for selecting different types of quantitative assessments that match student characteristics. For example, if students exhibit talents in science and mathematics areas, educators will want to select an assessment that measures spatial abilities since researchers found a relationship between this type of reasoning and performance in STEM fields [43]. Similarly, if some students are ready for more advanced grade level work, then out-of-level achievement tests need to be used so students with special talents in a specific domain can demonstrate what they have learned since most achievement tests do not have a sufficient ceiling (i.e., items that are above level). The use of intelligence and other ability tests vary for different domains but are important in identifying early potential.

The selection of assessments also needs to consider any special student characteristics. For example, English language learners need to be tested in their native language or with nonverbal assessments. Children with possible disabilities need to be administered ability tests with multiple subtests to discover areas of relative strengths and weaknesses and identify those who are twice exceptional [44]. Limited experiences may also need to be considered when assessing young children from lower socioeconomic backgrounds. Information from pre-identification learning activities may be particularly helpful in these cases for finding students who acquire new knowledge at a faster rate, solve complex problems, and/or develop sophisticated products.

All assessments used in the identification cycle need to be technically adequate and meet the standards outlined by professional organizations in the measurement field [45]. They must have a standardized approach to gathering information, have norms, be reliable or consistent, and be valid for the assessment's purpose. For example, if a group-administered ability test is used, does the assessment have reliability studies that show the test is consistent over time or a validity study that shows that the test can discriminate among those who have the special talent vs. those who do not? Have test developers included studies that show that the test minimizes bias for different subgroups? Have the norms been collected within the past 10 to 12 years? Are the types of scores provided comparable to other quantitative tests? Other areas to consider when selecting instruments are the qualifications of the personnel needed to administer the assessments and practical considerations (e.g., cost, time, and required training). All assessments used in the identification process, including qualitative assessments, need to meet technical standards to reduce errors and ensure that the assessment is actually serving its purpose. (See [46] for more technical information about specific assessments).

2.2.5. Interpretation of Data

After all of the data are collected from multiple assessments, a committee of educators and specialists in the domain should be formed to interpret the data and identify services and programs that will develop each student's talent. These educators need to have training in the characteristics of students with talents and in educational and psychological measurements. Best practices include using all assessment information, developing local norms, comparing standard or index scores across assessments, considering measurement error, and examining a student's best performance.

Use all assessment information. If assessments have been selected based on their technical adequacy, then all information should be considered equally. Moreover, multiple sources of information, such as teachers, peers, families, counselors, and community members, are important in examining potential talents across contexts [47]. While standardized tests such as intelligence and achievement might receive more weight than qualitative assessments, researchers have reported that portfolios and parent information predict performance in gifted programs and relate to more quantitative measures [48,49].

Develop local norms. If the school population is different from the national norming group or national census data (e.g., a greater number of students from lower-income and

diverse backgrounds), then local norms might be used [50–52]. These norms might be developed at a district-wide or local campus level, depending on the level of diversity. When considering talent development, access to opportunities might also be considered. For example, students who have received more enrichment in specific domains need to be compared with one another. It is important to consider the reference group when interpreting information and selecting programs and services.

Compare scores across assessments. Quantitative measures will provide a variety of scores, such as raw scores (i.e., the total number of points scores), percentile ranks (i.e., a ranking of students on a specific test), and standard or index scores (i.e., scores transformed to a common scale). Of all of these different types of scores, only standard or index scores are comparable across tests. These scores represent the performance of a group of students when compared to a norm-reference group, which may be comprised of national, state, or local samples. The comparison group needs to be considered when interpreting test scores. For example, students whose performances are compared to the performances of all students at their local campus will score higher than when compared only to students who are referred for talent development activities. Similarly, age may influence comparisons. For example, kindergarten children with summer birthdays may not perform as well as children with fall birthdays. While scores can be compared in quantitative measures, qualitative information should remain descriptive [53].

Consider errors in measures. Every assessment has errors. Depending upon the reliability and standard deviation, the size of the error will vary across ages, grade levels, and subtests. A student's true score generally lies within a range of scores established by the standard error of measurement (SEM). For example, suppose Maria scores 120 on an intelligence test, and the standard error of measurement (SEM) is five points. The interpreter of the score might say that 68% of the time, Maria will score between 115 and 125 (plus 5 and minus 5 = one SEM); 95% of the time, Maria will score between 110–130 (plus 10 and minus 10 = two SEMs); 99% of the time, Maria will score between 107 and 133 (plus 13 and minus 13–2.6 SEMs). While qualitative assessments may not have a calculated SEM, the interpreter needs to consider that errors are inherent in all methods, include the information in decision-making, and establish cut-off scores.

Consider the student's best performance. All assessment information should be considered when determining services and programs, with the student's best performance indicating potential and abilities in a talent domain [40]. Variability across different types of assessments may indicate access to previous opportunities or perhaps a learning difference or disability. Committee members need to be able to see a student's relative strengths and weaknesses when making recommendations for services and programs. Qualitative and quantitative assessment information, therefore, should not be combined into a single score.

2.3. Placement in Services and Programs

As the student outcome for NAGC Assessment Standard 2.2 [8] states, "Students with gifts and talents are identified for services that match their interests, strengths, and needs". While students should be placed in programs that are matched to their potential abilities and interests, ongoing assessments within the domain are needed to determine students' progress in moving from one level of talent development to the next [2,54]. For example, flexibility, body proportion, and physical memory are indicators of potential dancers [55], whereas intonation, controlling pitch, and timbre are indicators in music [56]. There is great variability in specific abilities and when and how they emerge [2,57]. Consequently, assessments will vary as well—demonstrations or auditions in performance fields; objective above-level tests in academic fields; authentic, discipline-specific products for presentations to audiences.

Assessment of progress within a domain is important in identifying a student's level of expertise and requirements for specific services. These assessments may be conducted by educators, specialists in the domain, and by the student [57]. Services and programming may include engaging students in learning activities they enjoy, acceleration in the student's

potential area of talent, interactions with like-ability peers in solving problems within the domain, advanced placement courses, an International Baccalaureate, online classes, mentoring by specialists who have expertise in the domain, internships and apprenticeships with experts in the field, and networking with experts at competitions and meetings [16]. Psychosocial abilities also need to be assessed and addressed for the student to be successful. These psychosocial skills include motivation, persistence, a growth mindset, emotional regulation, openness to feedback and critique, grit, self-control, and talent promotion [2,58]. As students develop in their talent domains, they assume more responsibility for their talent development, assessing personal strengths and weaknesses [58]. (See assessments for measuring student outcomes in [59].

2.4. Student Performance and Retention

Based on ongoing assessments of progress, educators will need to determine if students are performing at a level "commensurate with abilities in cognitive, social-emotional, and psychosocial areas" (see Student Outcome 2.4, [8] and if further talent development is needed for the student's success or if the student's rate (i.e., acceleration) and depth of learning (i.e., moving to a different level of expertise) are sufficient to benefit from the program [12]. Assessments can identify if services and programming need to change or if the general education curriculum might be more appropriate for developing student's interests, strengths, and needs.

Retention is also an issue, particularly among underrepresented groups who may not feel included in talent development programs [60]. Assessments are important in determining if more culturally relevant teaching practices need to be incorporated, such as engaging in conversations about culture and discussing real-world issues [61–63]. Finding effective mentors in the talent domain with similar backgrounds may also be able to inspire students to perform well [64]. Moreover, collaborating and engaging with the students' families and communities may create better home-school connections to improve emotional support, make learning more relevant, and improve performance and consequent success in the talent domain [42,57,65]. (See assessments for measuring progress in different domains, psychosocial development, and multicultural areas in [59].

2.5. Revision of Identification Process

The entire identification cycle needs to be evaluated in terms of its effectiveness in (a) finding students with potential talents in different domains, (b) placing students in services and programs that match their strengths and interests in specific domains, (c) developing student talents within a domain, and (d) retaining students who benefit from the learning activities. Evidence-based practices for evaluation have been identified in the NAGC Pre-K-Grade 12 Gifted Education Programming Standards [8]. Data sources for the assessment standard include formative and summative assessments; ability and achievement data; assessments related to interests and the talent domain; local student assessments; learner profiles and portfolios; retention in gifted education services, above-grade-level testing, and/or talent search data; demographic data to determine representativeness. In other words, do the services and programs benefit all students needing talent development, particularly those from underserved populations? Educators will want to examine the identification cycle to ensure that each part has been implemented with fidelity. Guilbault and Cotabish [66] provide a self-study checklist that might be used by teachers, program coordinators, and state departments in evaluating student outcomes related to assessments and other standards. Specific questions related to the assessment of talent development might include

- To what degree does the school address the student outcomes related to talent development?
- To what degree have current practices improved each student's talent development?
- Are underserved populations represented in talent development programs and services?
- How high a priority does the school place on talent development?
- Is support for talent development available in the school?

Following an examination of the responses to the questions, action plans are then developed with the following components: the desired student outcome, evidence-based practices, the identified gap, supporting and opposing forces that could affect change, action to close the identified gap, the persons responsible for carrying out the action, and a timeline to bring the action to fruition [66], p. 241.

3. Challenges in Finding Talent

A number of challenges exist for schools in moving away from a more traditional identification approach to a flexible identification cycle that focuses on finding and developing talents.

Challenge 1: Moving away from a single program for identified students to an array of services that match each student's potential within a domain. This approach challenges basic assumptions about gifted students and identification practices that focus primarily on intelligence test scores and academic areas. Eliciting support from educators and stakeholders will be needed to find talent across multiple domains, particularly in non-academic areas where there are no required state assessments and benchmarks. The advantage of providing multiple talent development opportunities is that specialized services can be tailored to each student's profile.

Challenge 2: Creating ongoing assessment opportunities for finding talent. Currently, schools tend to assess students for gifted services annually or only at specific grade levels. In finding talents, a cyclical approach needs to be used where talent development activities are continuous, allowing professionals to observe student performance and make recommendations for assessments, services, and programs. These assessments are used not only to identify students with potential talent within a domain but also to assess progress and make adjustments.

Challenge 3: Finding students from underserved populations. Students from underserved populations will demand special attention from those involved in talent identification and assessment phases. These obstacles may interfere with their inclusion: access to out-of-school enrichment activities that stimulate interests, educators' implicit bias toward students from underserved groups, limited consideration of special student characteristics, the use of tests with inadequate technical qualities, the comparison of results across dissimilar groups of students, parental involvement and lack of advocacy, and lack of culturally relevant teaching practices in talent development programs. A variety of options are available for finding talents among underserved populations: professional learning for all educators, the pre-identification of activities that are available to all students, ongoing assessments, multiple assessments that match each student's interests and strengths, local norms, culturally responsive teaching practices, and collaboration with families.

Challenge 4: Assessing student growth within the domain and in psychosocial areas. Frequently used school assessments often do not have a sufficient ceiling, which limits the identification of students in specific academic domains and acceleration opportunities. This limitation also hinders the examination of growth within a specific academic domain. Above-level and performance assessments need to be used to ensure more accurate measurements. In addition, social–emotional learning and psychosocial skills are rarely assessed, but they are extremely important in developing talents. Formal assessments are available for measuring perceived academic self-efficacy, a growth mindset, social attributions, social support, learning behaviors and motivation, competitive goal orientation, and other social and emotional learning skills [59]. Informal assessments from multiple sources (e.g., students, peers, parents/guardians, teachers, psychologists, and counselors) should also be used to determine growth in important psychosocial, social, and emotional areas.

Challenge 5. Providing professional learning for those involved in the identification process. Teachers and other professionals generally have no previous training in gifted education or in finding talent, so they need to have knowledge about specific characteristics of students with gifts and talents and a range of assessment tools and strategies that contribute to the identification process. With this knowledge, they are able to use it and engage

others (e.g., students, peers, and parent/guardians) in formal and informal assessments, develop differentiated talent development opportunities, become talent spotters, and avoid deficit perspectives and biases. Some educators fully embrace assessments, others accept them reticently, while others still resist or engage in them only reluctantly. It is, therefore, important that educators know that assessments are iterative processes and provide information about learner progress for tailoring learning experiences as well as finding students who need talent development services and programs beyond the general education classroom setting.

Challenge 6: Collaborating with families and the community. A number of factors influence families' involvement with schools—time and work schedules, the language, level of education, beliefs about their students' abilities as static or developmental, and conflicting goals for their students' futures. Similar to educators and other professionals, families need to participate in learning experiences about talent-finding and development that relate to their concerns and fit within their schedules. Families and other community stakeholders provide critical support and are significant sources of information about student talents that might only be observed in different contexts. Strengthening school–community bonds is important in facilitating talent development possibilities outside of school, providing avenues for service learning, mentoring, apprenticeships, and internships, and creating opportunities for authentic, project-based, and problem-based learning experiences. Universities, particularly those engaged in distance learning, dual credit courses, summer enrichment, and Talent Search programs, can be rich sources of information (e.g., assessment results from SAT [College Board, USA], ACT [ACT Corporation, USA], EXPLORE [ACT Corporation, USA] and other identification instruments) and provide needed talent development opportunities.

Challenge 7: Collaborating with universities and researchers in gifted education. Developing and maintaining partnerships with universities and researchers can provide many opportunities for identifying and improving assessment practices in schools. This type of collaboration can assist educators in finding and developing assessments that are technically adequate and aligned with their intended purposes. They can also provide assistance in professional development and collecting data to determine the assessments' effectiveness in both identifying potential and developing talents in different fields. However, while there are many benefits, collaborators need to understand the roles of the partnership—What are the purposes? Who will be involved? How much time and what resources might be needed? How will regular communication be ensured to meet the needs of the students and address challenges? How will data be used in the short term and long term to improve the talent development process? When well planned, these collaborations can bring research into the field of practice that enhances the talent identification process.

Challenge 8: Changing and amending identification policies. While schools must adhere to state rules and regulations in identifying gifted students, they should consider ways of amending their policies to be more inclusive for finding talent in multiple domains. These policies might incorporate the use of multiple assessments, multiple entry points, and varied admissions criteria for different domains and for different developmental stages within the domain. They need to be developed by professionals who have knowledge of students with gifts and talents in multiple domains, approved by the school district, and disseminated (with professional learning and awareness sessions) to all educators, families, and stakeholders.

Challenge 9: Providing human and material resources. Finding talents in multiple domains and expanding program and service options will require more human and material resources. However, there are many low-budget items that schools already provide for students with gifts and talents: ability grouping, accelerated curriculum, AP and IB courses, special interest activities, and online and after-school enrichment options. Partnerships with the community and with higher education institutions can also provide more human and material resources as needed to enhance the identification process and programming. Schools might also consider hiring a talent development coordinator who can oversee the

talent identification process as well as the expansion of partnerships. To ensure the necessary increases in funding, educators must produce evidence that shows how talent-finding and related services are developing knowledge, skills, and understanding for all students, particularly those from underrepresented populations.

4. Conclusions

Finding talents that are malleable and developmental with varying beginning and ending points is not an easy task. Educators need to be prepared to invest time, energy, and resources in implementing effective practices. Effectiveness can be determined by using an identification cycle that is flexible and incorporates evaluations for improving the talent-finding process. Collaboration among educators and specialists in various domains, with parents/guardians, the community, and higher education institutions, is important throughout the process to ensure the identification of students who may not exhibit their talents in school settings, ongoing support and encouragement, and the expansion of services and programs. While many challenges exist for finding talents in multiple domains across all groups of students, the benefit to individual students should not be underestimated. Identifying students with a broader range of talents is more inclusive, encourages students to excel at their highest levels, develops their psychosocial skills, assists them in finding careers of interest, and prepares them for future learning opportunities.

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