education sciences

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*Review*

# Where Are We Now with the Implementation of the Talent Development Framework for Gifted Students and Where Do We Go in the Future?

**Paula Olszewski-Kubilius**

School of Education and Social Policy, Northwestern University, 633 Clark Street, Evanston, IL 60208, USA; p-olszewski-kubilius@northwestern.edu

**Abstract:** Talent development as a framework for services for advanced learners has gained traction within schools, but there are challenges that remain. In this paper, we address some of these, including identification systems that are consistent with a domain focus and geared towards the stage of talent development; exceptional abilities that are often ignored by schools but could be identified and cultivated; programming that is continuous, articulated with the school curriculum, with defined outcomes for growth and performance; better understanding and use of data for identification and monitoring of progress; and policies that support acceleration and advanced learning options. The major challenge for schools is the potential to bifurcate services into talent development for underserved learners versus gifted services for high achieving students, rather than providing multiple pathways for learners with different needs that lead to high achievement for all.

**Keywords:** talent development; gifted education; domains of talent



**Citation:** Olszewski-Kubilius, P. Where Are We Now with the Implementation of the Talent Development Framework for Gifted Students and Where Do We Go in the Future? *Educ. Sci.* **2024**, *14*, 932. https://doi.org/10.3390/educsci14090932

Academic Editor: Klaus Zierer

Received: 15 July 2024
Revised: 20 August 2024
Accepted: 20 August 2024
Published: 25 August 2024



## 1. A Bit of History

Talent development as a framework for services for advanced learners has its roots in the writings of many distinguished individuals in gifted education, including Don Treffinger, John Feldhusen, Carolyn Callahan, Joe Renzulli, and others [1,2]. In the late 1980s and the 1990s there was a push by these leaders to focus gifted education more on "recognizing and nurturing students' talents than focusing primarily on identifying and labeling children as "gifted"" (p. 39, Schroth, et al. [1] 2011). These early views on talent development had some commonalities including: a broader conception of intelligence and ability beyond IQ; a recognition of the role of noncognitive traits in high levels of achievement; and a greater focus on developing potential talent into high achievement. Treffinger's Levels Service [2] model brought attention to the need for a range of different types of services rather than a single gifted program to address learners at different stages of readiness for talent development services. Renzulli [3] and Passow [4] recognized the role of early enrichment in ferreting out gifted potential prior to formal assessment—essentially promoting talent identification within gifted programs. Renzulli promoted the contribution of noncognitive traits, such as motivation, to gifted performances. And VanTassel-Baska [5] implemented programs based on domain specific abilities using the talent search model of identification. These were all significant precursors to the talent development framework.

Despite the fact that critical tenets of the talent development framework are not new and were introduced to the field of gifted education almost 40 years ago, the framework is just starting to receive significant attention from educators and implementation by schools and districts. There is an expression, "timing is everything", which applies to the current situation within gifted education. Sometimes a field is not ready to receive ideas that challenge basic assumptions and practices. Additionally, sometimes events propel a field to take stock, examine its core tenets, and ask difficult questions about whether they are still valid or in need of revision.

Why did it take so long for the talent development framework to take root? The following misconceptions voiced by educators and parents about the framework were influential:

1. Talent development (TD) puts a greater focus on talent within domains. Rather than viewing general intelligence, or IQ, as the sole basis for giftedness, TD emphasizes domain-specific abilities, a concept that originated with Gardner's multiple intelligences, such as mathematical, verbal, or spatial reasoning abilities, matched to appropriate programs and services. The TD framework also emphasizes identifying potential for achievement in domains that may not yet be evident in high scores on achievement or ability tests. These features of TD result in a broadening of the students who would qualify for gifted services and fueled concerns that programs would be "watered down" to accommodate these students who were not "truly gifted".
2. The TD framework views giftedness as developmental with changes in criteria for services at different stages of talent development. For example, it puts a greater emphasis on demonstrated achievement as the basis for continued gifted services as students grow and develop. That is, students are expected to take advantage of advanced learning opportunities, demonstrating motivation and performance. This generated concerns that some students could lose the gifted label and that gifted underachievers would not be served in TD programs.
3. The TD framework emphasizes the cultivation of psychosocial skills that support high achievement such as risk taking, openness to feedback, and resiliency, rather than supposed unique psychological aspects of giftedness. This fueled the perception of parents particularly, that the TD framework downplayed social, emotional, and psychological aspects of giftedness.
4. The TD framework sees abilities and psychosocial skills as malleable and a result of the interaction between individuals' interests and abilities and environmental supports, including school-based gifted programs and services. This is in contrast to the historical and entrenched belief that giftedness is an inborn quality or characteristic of a person, a belief that was and still is entrenched within the field.

Another, and possibly the most influential, factor is the gap between research and practice that exists in education generally and within gifted education. Educators are often the last to learn about research that supports new and different practices, particularly around identification, curriculum, and instructional approaches, a situation exacerbated by the general lack of training in gifted education for pre-service or in-service educators [6].

*Why Now?*

Several forces moved the field of gifted education away from the traditional approach to giftedness towards the TD framework. These included the historical and continuing under-representation of low income, second language learners, and culturally and linguistically diverse students in gifted programs [7,8]; the research on excellence and opportunity gaps that demonstrated the group disparities at the highest levels of achievement within the US education system [9,10]; the research on the malleability of abilities, specifically that IQ is not fixed and can increase with opportunities to learn [11]; the research on domain-specific abilities and their role in educational and career paths [12]; and research demonstrating the effectiveness of talent development programs focused on under-represented and emergent learners [13,14].

## 2. The Future of Talent Development

Though the field of gifted education has made significant progress towards embracing the talent development framework for services for advanced learners and the adoption of more equitable practices for identification, there remains significant gaps between research and best practices (see the Ford-ham report, [15]). In the rest of this paper, we will explore the work yet to be done by schools to fully embrace the TD framework.

## 3. Talent Development as an Overarching Framework for Services for Advanced Students

The most significant threat to implementation of the TD framework is the perception that it applies only to learners who have historically been under-represented in gifted programs. It is true that the TD framework, with its emphasis on identifying potential and "growing giftedness" through early intervention and front loading, stresses providing a pathway for more children to turn their potential into high achievement. TD is an overarching framework that includes services, based on research-based best practices, for learners who enter school already advanced and ahead of their age-peers (i.e., learners who demonstrate high achievement and ability on traditional tests), as well as students with high potential that is not obvious yet in high achievement (e.g., children from poverty, English learners) and who need additional learning opportunities to demonstrate their abilities and achieve at levels commensurate with their potential. Multiple and differentiated services are needed for these diverse gifted learners, all of whom are served within a TD framework [16].

Schools attempting to address excellence gaps and under-representation in their gifted programs too often create both a "gifted program" and a "talent development program". Their intentions are well-meaning as they are trying to marry the traditional approach to gifted services with the TD framework. However, the potential threat in such an approach is creating separate but unequal programs. The integration of a traditional gifted framework and the TD framework rests in creating multiple pathways for students to achieve at levels consistent with their talent potential, whether that potential is already obvious in high achievement or latent, given previously limited opportunities to learn [13,14]. Interventions aimed at emergent learners that do not have the goal of moving them to higher levels of achievement so that they qualify for advanced classes and accelerative options will only exacerbate concerns that gifted programming is unequitable. The TD framework is designed to provide an overarching approach to services for all advanced learners within a school or context, employing best practices within the field to achieve inclusiveness and equity.

## 4. Domain-Based Identification and Programming: Work Still to Do

Historically, the typical approach in gifted education has been to rely primarily on measures of general ability, e.g., IQ, for identification for services, believing that general ability is important to success in all fields or domains. Research supports IQ being related to many important variables and individuals with higher general reasoning ability tend to have better life outcomes in terms of income and education [17,18]. IQ is a strong predictor of school achievement, primarily for younger children, with declining predictive validity for adolescents and adults [19]. There is no doubt that general intelligence plays a role in achievement and may be more relevant for some fields than others, for example, elite level journalists [20] or academic psychologists [21]. Additionally, high general ability may enable individuals to engage more effectively in deliberate practice in performance fields [22]. Equally important however, is that research also indicates that IQ is malleable and influenced by educational opportunity, which is particularly relevant when considering the talent potential of young children in poverty [23].

There is also strong evidence for the role of specific types of abilities, such as, verbal, and mathematical reasoning abilities, for success in specific domains. The work of Lubinski, Benbow and colleagues in the Study of Mathematically Precocious Youth [24,25] has shown that an individual's pattern of abilities are highly predictive of their choice of educational and career path. For example, a tilt towards higher mathematical reasoning ability along with higher reasoning relative to verbal reasoning is associated with choice of and success in STEM careers. Alternatively, a tilt towards higher verbal reasoning ability relative to mathematical reasoning is associated with career choices and accomplishments in the humanities and the arts.

The research findings reviewed above have implications for how educators identify talent and undergird approaches to identification within the TD model. Specifically, high general ability is most useful as an indicator of potential for advanced learning capabilities, particularly when children are very young and in early elementary school, before they have had significant exposure to different subjects and patterns of exceptional reasoning abilities and interests emerge and can be discerned. These types of measures may be especially useful for discerning potential among children in poverty, who may have less exposure to domains prior to school entry. Educators can use measures of general cognitive ability, such as the CogAT, to universally screen for high potential, but, as children proceed through elementary school, talent potential is demonstrated in specific areas, such as in mathematics, writing, or science, via advanced achievement in these subjects or evidence of high interest (e.g., reading and independent engagement in the subject outside of school). Educators should rely primarily on subject- or domain-specific measures to identify talent and place children in programs that match their strengths no later than middle school. This does not mean that schools should not serve children who enter school already advanced in math or reading via accelerative options. Thus, looking for general, across the board giftedness or crafting programs that assume students are advanced in their learning across all subjects is not consistent with research or the TD framework, yet this is still the predominant approach within schools.

Schools struggle with crafting identification protocols for giftedness, specifically when to emphasize ability measures versus, or additionally, achievement and/or psychosocial skills, such as evidence of motivation. Many create elaborate matrices that combine achievement and ability indices with teacher recommendations and often result in overly restrictive identification protocols that do not match the programming provided. The perspective within a TD framework regarding identification is what works in a particular school context and with a particular population of students, and at a particular level of talent development.

For example, although schools may struggle to consider nonselective program options as a component of their services for advanced learners, in the early grades, depending on the characteristics of the students and especially for high poverty schools, enrichment opportunities that are nonselective may be provided to all learners to allow ability to emerge and enable students to demonstrate advanced reasoning abilities. Additionally, a school may universally screen all students in the early grades with a general ability measure, using local norms to identify children with high potential and ability who will then receive gifted services [26]. The goal with these options is to identify and nurture potential within talent development services. Several models for this approach include the Young Scholars program [13] and Renzulli Type 1 enrichment activities [27].

As children progress, a greater reliance on achievement in subject areas for placement in gifted services is appropriate, but a variety of measures of achievement can be used to capture more high potential learners. These may include achievement within school subjects as demonstrated by grades and classwork or scores on relevant achievement tests including above-grade level tests, but also assessments such as the quality of subject-specific special projects (e.g., science experiments or other artifacts) or expert reviews of a student's performance on domain-related, authentic tasks. The focus of an identification protocol at this stage is on identifying those students who can benefit from and succeed in advanced learning opportunities within a focused subject area.

Schools may resist identification protocols that change as students proceed through school. Parents struggle with the idea that their child may not continue to receive services or continue to be considered gifted. However, within a talent development framework the kinds of services are calibrated to the stage of talent development and are different for young students whose talents are just emerging than for students who are ready for advanced work in particular areas and demonstrate specific abilities, and for students who demonstrate commitment to and identify with a chosen domain. See Table 1 for a description of possible identification indices by stage of talent development.

**Table 1.** Assessment for Identification of Different Stages of Talent Development.

| Potential | Competency | Expertise |
| --- | --- | --- |
| Observations of response to challenges and enrichment activities | Domain-specific assessments of knowledge and interests | Domain specific assessments (skills, knowledge) |
| | Projects and performance assessments in content areas | |
| Interest inventories<br>General ability and achievement assessment, when appropriate | Opportunities for above-level assessment of advanced learners | Assessment by professionals on authentic tasks |
| | Career interest and strength inventories | |

Another area of research that has not made its way into identification practices for schools is the range of advanced abilities that they are looking for. Schools may be doing a disservice to some students who do not fit the typical profile of high verbal or mathematical reasoning abilities. Research has shown that spatial skills are relevant to success in many fields including chemistry, physics, engineering, mathematics, and occupations such as air traffic controlling, dentistry, sculpture, surgery, and others [28]. Schools do not include assessments of spatial reasoning ability even though research suggests that, based on multiple U.S. population representative samples, there are roughly 2 to 3 million spatially talented students currently in schools who do not necessarily excel also in verbal or mathematical reasoning, and who will not have their talent recognized or addressed [29]. Additionally, and more importantly, because spatial reasoning is less correlated with family income than math and verbal reasoning, selecting for spatial talent will actually pick up a larger number of talented children from low-income backgrounds [30]. There are formal assessments for spatial reasoning ability (but teachers can also notice exceptional spatial reasoning skills through curriculum. They may notice a child who creates complicated structures with blocks or building materials or enjoys looking at or creating maps. These students can be identified and served within a TD framework.

Additionally, the field struggles with identifying talent for other academic areas such as exceptional ability and interest in the social sciences and often do not include advanced programming in these subject areas. Turning to experts in these areas (e.g., historians, psychologists, archeologists, etc.) who can assist with indications of talent and possible identification assessments, which can include simulations or expert reviews of special projects, may be helpful.

## 5. Programming in a Talent Development Framework: Work Still to Do

Programming within a TD framework has the following features [31]:

- The content of the programs is connected to and/or within major domains and subject areas;
- The programming is articulated to the school curriculum, providing enrichment that extends the breadth and depth and/or acceleration that adjusts pace and level:
    - The programming is substantial in dose at all grades [32];
    - The programming includes access to additional learning opportunities beyond the school.
- The programming is continuous, with identified pathways for students with exceptional talent in specific domains to receive services throughout K-12;
- The programming is articulated across schooling levels via options such as early entrance and dual enrollment:
    - The programming consists of multiple programs and sets of services, ones designed for learners whose talents are just emerging and those who are already advanced in particular areas;

- There are clear, measurable goals and outcomes for students, particularly for moving students with potential to levels of achievement that enable them to qualify and succeed in advanced learning opportunities;
- The programming includes best practices for students related to grouping and instructional options such as problem-based learning, etc.

The major challenge regarding programming for many schools trying to implement a TD framework is moving from "a gifted program" to a set of services for all advanced learners. Gifted programming is often fragmented and low in, starting and stopping at different grade levels, with unclear goals and undefined outcomes. A major shift in thinking is required to adopt a TD framework—one that involves the perspective that programming should be connected to, articulated with, and integrated into the fabric of the school—moving away from the mindset that services should not interfere with the school curriculum. The TD framework necessitates that schools work on creating pathways for students to continuously advance in their areas of talent throughout K-12 schooling, moving, for example, from enrichment in the early grades, to accelerative options in subject areas in the later grades, and authentic, domain-related learning opportunities in high school (see Table 2 for characteristics of programming at each stage of talent development and Horn, [13]), for a district-level example of articulated services). These pathways may be different for emergent learners, i.e., students in poverty or English learners, who require early and intensive enrichment to catch up so as to demonstrate their potential in high achievement but should intersect with pathways for other advanced learners in the form of accelerative and advanced programming in middle school, see Figure 1. Integrating services for advanced learners into the structure of the school requires leadership at the school or district level, cooperation between leaders of different levels of schooling, training for teachers who deliver the services, and policies regarding acceleration, placement, and use of outside of school providers who can supplement with high level courses and authentic domain-related opportunities.

**Table 2.** Curriculum and Instruction at Each Stage of Talent Development.

| Potential | Competency | Expertise |
| --- | --- | --- |
| | Content-specific approaches that support "thinking like an expert" and content acquisition | |
| Foundational knowledge and skills in a variety of domains | Application of reasoning models for critical and creative thinking | Advanced, in-depth content of majors and professions |
| Enrichment in a variety of domains | Programming that increases pace and level of content | Exposure to related content or skills needed for high-level achievement in the domain |
| Academic skill development through hands-on, collaborative learning activities | Subject-specific enrichment that uses problem-based and inquiry-based activities | Entry into professional and creative domains through internships, apprenticeships |
| Accelerated placements for learners who demonstrate readiness | Curriculum that uses concepts and themes to organize ideas Academic skill development, focus on metacognitive skills (thinking about one's learning) | Work with experts on authentic tasks |
| | Authentic products that include specific criteria for evaluation/feedback | |

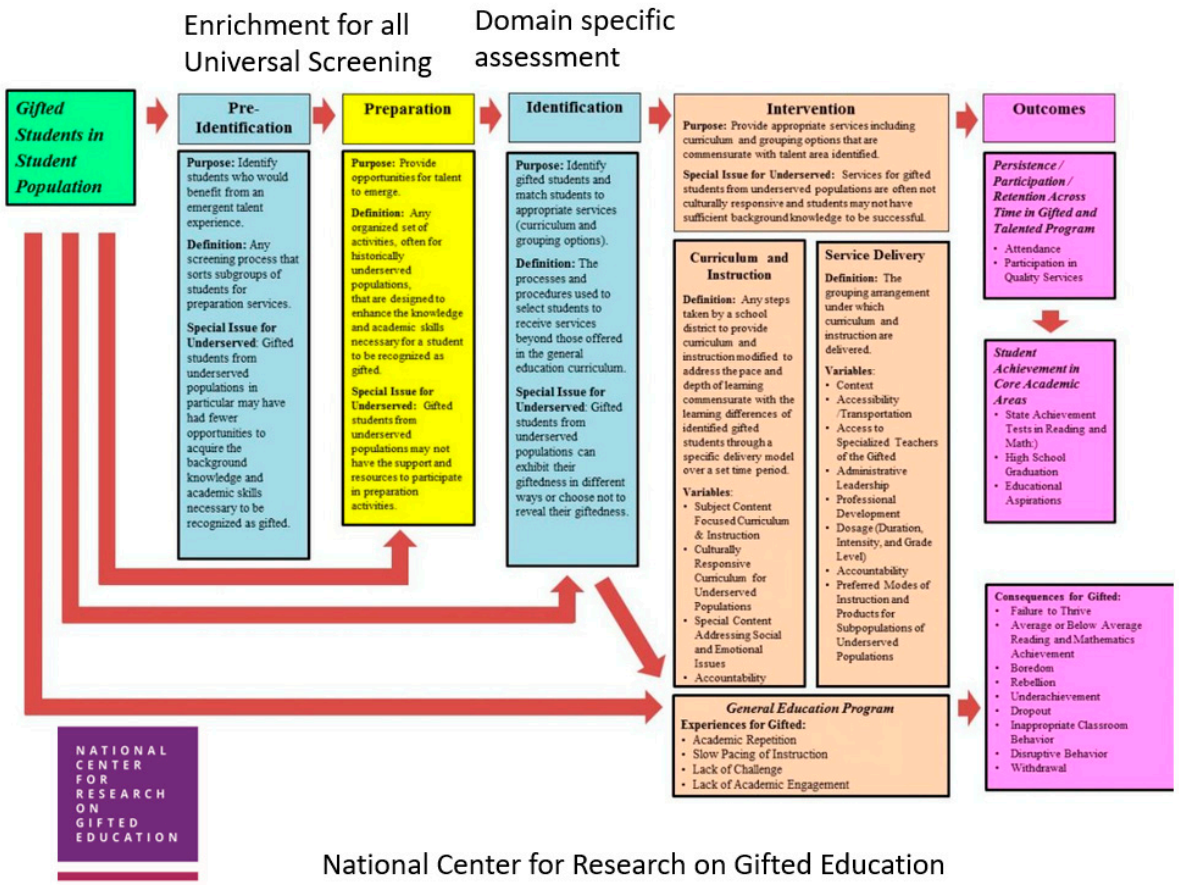


**Figure 1.** Model of Pathways for Gifted Learners.

## 6. Curriculum: Work Still to Do

Much has been written about appropriate curricula for gifted learners and the characteristics of a good curriculum [5]. Specialized curricula for gifted learners exist such as the William and Mary units in language arts and science (https://k12.kendallhunt.com/subject/gifted-and-talented-education (accessed on 1 February 2024), Project M3 (https://k12.kendallhunt.com/program/project-m3-mentoring-mathematical-minds-grades-3-6) and Jacobs Ladder (https://www.routledge.com/topics/jacobs-ladder-reading-comprehension-program), as well as others. These curricula include advanced content, are problem centered, and are challenging for students. Some, such as Jacobs Ladder provide scaffolding for emerging gifted learners. A challenge for schools implementing a TD framework is not the existence or availability of specialized curricula but their use and implementation by educators within schools [5,33,34]. Often, if specialized curricula are used, they are implemented in a pull-out program, particularly at the elementary level, that consists of only several hours a week—a low dose program with little hope of impact. Full time grouping into special classes is more likely to be used at the middle school level, but differentiation within the classroom is still the predominant delivery model at this stage [6]. Given that most teachers receive little training in differentiation for advanced learners [6], serving gifted learners in this way is likely to have little impact. As with any approach to education including the education of advanced learners, the use of specialized curricula will only succeed if implemented with fidelity, at a significant dose, and with measurable outcomes for growth and performance. Rarely do schools define measurable growth outcomes for their gifted services and it is therefore difficult to demonstrate their impact nor even justify their existence. In designing any experience for advanced learners, educators need to include growth and achievement outcomes for every level of talent development. However, these should vary for different stages of talent development [35]. For example, there is more latitude for under-achievement in younger children who are just learning how to

study and acquire self-regulation skills while a greater commitment to practice and study and demonstrated achievement would be expected at high stages of talent development. A reasonable outcome for early enrichment might simply be evidence of interest and engagement, while specific levels of performance would be appropriate for domain-specific, advanced, and accelerated programs.

## 7. Other Challenges in Implementing the TD Framework in Schools

### *7.1. Understanding and Using Data*

Another challenge that undermines the implementation of a TD framework is the use and understanding of assessment data. Many educators receive little training on assessment and struggle to use data from typically used tests such CogAT or MAP to identify students who will need more than the standard curriculum, understand and monitor student growth and progress, or adjust the grouping or content level. If schools want to implement universal screening, use local norms for identification, pre-assess students for placement, and/or identify students who are making rapid growth—all recommended best practices for gifted education [15,26], educators need more training on understanding test scores and assessment data. Teachers need to be involved in the continuous monitoring of student performance if emergent learners are to be identified for services.

### *7.2. Creating and Using Learning Opportunities Beyond the School Day*

Some talents are developed primarily in school, such as science and math, and other talent areas are developed primarily outside of school such as music and dance. However, no talent is fully developed by school programs alone [36]. Research shows that schools can use outside-of-school time to increase learning opportunities for learners in poverty, enabling them to catch up in their achievement [13,37]. In a qualitative study of highly successful individuals in STEM fields, it was found that almost all had pivotal experiences in science or math outside of school, including working in laboratories or participating in specialized summer programs. These experiences can increase dose, bolster motivation, provide a peer group, and help students see a pathway forward to a college major or career. Even if schools cannot provide additional extra-curricular programs, educators who work with advanced learners can assist them with finding and applying to supplemental programs or connecting them to adult professionals who can serve as mentors and provide authentic experiences in a domain. Most of these programs have scholarship opportunities for students from lower income families, who are especially at risk for not knowing about or being able to access these additional opportunities.

### *7.3. Building Psychosocial Skills*

Another area of the TD framework that is often neglected is the incorporation of psychosocial skills that are critical for high achievement and continuation on talent development paths. Educators often assume that gifted students will have good learning habits rather than realizing their role in development them or creating learning contexts that cultivate them. Often, what thwarts achievement at high levels is the lack of sufficiently developed learning skills. Gifted students are knowledgeable about study skills but are unlikely to use them unless the curriculum is challenging enough to need them and teachers help them learn and practice them within their subject areas [38]. For younger students, self-regulation skills are critical to learning in the domain, as well as being able and willing to persist and receive feedback from teachers. As children develop, self-confidence that supports risk-taking and comfort with challenge becomes important [39]. Hope that comes from seeing future pathways and possibilities is critically important for gifted learners from poverty [40].

Educators can cultivate psychosocial skills through incorporation into curricula (see https://www.routledge.com/Affective-Jacobs-Ladder-Reading-Comprehension-Program-Grades-6-8/Stambaugh-VanTassel-Baska/p/book/9781618217561); through a specially designed affective development program [41]; and through the feedback given by teachers

to students that emphasizes growth and improvement, the importance of challenge, struggle, and persistence, and how to view perceived failures and setbacks. The most powerful influences are the messages that teachers give to individual students on a day-to-day basis and the atmosphere they create within their classrooms (e.g., celebrating mistakes).

### 7.4. Policies Within a TD Framework

An important component in implementing a TD framework is the creation of policies at the school and district level that support advanced learners. These include policies regarding early entrance into any level of schooling, dual enrollment, credit for outside-of-school programs and courses, qualifications for whole-grade and subject area acceleration, and policies regarding reviews of placement decisions and for removing a student from gifted services. Schools often resist creating policies under the misguided belief that if they do not exist, they cannot be held to them. When policies are not clear, placement decisions can be subject to manipulation and significant pressure from parents and can affect students negatively. Not only do policies need to be created, but all school staff need to be educated on and supportive of them and they need to be clearly articulated and available to families. Policies should be reviewed annually to insure they are effective as well as equitable, and consistent with new research on best practices.

### 7.5. Reporting on Student Achievement

Many schools have annual "report cards" in which they give statistics on student demographics and performance data. The demographics of students receiving gifted services and student achievement and growth within gifted programming should be included. Research shows that this kind of accountability is significantly related to improvement in equitable identification rates [26]. A benefit of this practice is that it requires articulating measurable student outcomes for programming for advanced learners.

### 7.6. Recommendations for Further Implementation of a TD Framework for Gifted Learners

Educators who are working on implementing a talent development framework for advanced learners can further its development by focusing on the following:

- Implement TD as a framework for services for all advanced learners, including those with emerging talents and students evidencing advanced achievement. View gifted programming as a set of services for learners with different needs and at different stages of talent development. Services can include nonselective enrichment as well as selective accelerative options;
- Craft identification protocols that are responsive to the characteristics of the students in the school and to different stages of talent development. Avoid using overly complex systems that act as barriers to students with potential or mixed profiles of ability and achievement. Use domain-specific assessments matched to domain-specific services. Use best practices for equity including universal screening and local norms;
- Create continuous pathways for students with potential as well as for students demonstrating high achievement. Integrate these pathways by defining measurable learning outcomes for programs, e.g., frontloading, for emergent high achievers so that emergent talent is developed into actualized achievement;
    - Integrate gifted services into the fabric of the school by using curricula that is content-based and articulates with major school subjects;
- Incorporate training for educators on how to cultivate psychosocial skills that support achievement into services and how to view and use assessment data to identify and support talented learners;
- Create policies that clarify and support services for advanced learners.

The talent development framework enables schools to serve a broader range of students with a broader range of talents. It puts the emphasis where it should be—on devel-

oping talents. It is likely that new research will result in refinements and revisions to the framework. Let us hope it does not take the field another 40 years to adopt them.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The author declares no conflict of interest.

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