Gifted Education Structures in Elementary Schools and Their Connections to Program Focus[1]

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Abstract

Gifted education programs are diverse with respect to their structure and foci. This diversity is reflective of the field itself. With this large, multi-state study, we surveyed practices employed in elementary schools (N = 2,293). Differences were observed in the implementation mechanics of reading/English language arts and mathematics curriculum. Interrelationships between program structures emerged (e.g., existence of separate gifted math curriculum and pull-out instruction, (Φ = .16). Schools reported a focus on 21st century skills and enrichment techniques while neglecting acceleration strategies and cultural responsiveness. Lastly, we observed a number of statistically significant relationships between program structures and the foci used in gifted programs. These relationships may reflect underlying beliefs in the field.

Introduction

Gifted education programs in elementary schools take a variety of forms. They cut across many dimensions including: the identification process, the service delivery model (e.g., pull-out programs, cluster grouping in the general education classroom, special schools), and standards and curriculum specifically targeted for identified gifted students. Furthermore, schools and districts implement these diverse forms and formats in different combinations. Diverse practices may also lead to a sense of programmatic incoherence in districts and across the country and may contribute to the lack of support gifted education receives among decision-making stakeholders (Bui, Craig, & Imberman, 2011; Mandelman & Grigorenko, 2013). Making more explicit the practices in gifted education is an important step in achieving greater credibility in our research and advocacy efforts in gifted education. The goal of this study is to provide a snapshot of gifted education programming structures used in elementary schools.

Background

Programming and services for students identified as gifted can be best characterized as "local." That is, nearly all decisions about the various components of the gifted program are made at the school district level, and sometimes even at the individual school-building level. In fact, the website of the National Association for Gifted Children (NAGC) uses the byline "All

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gifted is local" in drawing attention to its report on funding, mandates, and practice. This circumstance can be traced to several factors. The first is the lack of federal policy governing the development of services for students identified as gifted. Unlike the other areas of exceptionality there are neither federal laws such as the Individuals with Disabilities Act (IDEA) of 2004 nor federal policies and guidelines that hold schools accountable for the opportunities provided to exceptional students such as those with learning disabilities. While we might expect that the result would be the development of comprehensive and powerful state-level legislation or policies or even guiding frameworks at the state level, we find that is not the case. In fact, only 41 state level personnel (including District of Columbia) responded to NAGC's national survey seeking data on state level policy. Of these 41 states, only 32 had any form of legal mandate related to gifted and talented education, with only 23 based on state law specific to gifted education. Of the 32 states reporting having mandates related to gifted and talented students, nearly all (28) required both identification and services, while 4 states required identification only (NAGC & CSDPG, 2015). Examination of state policy reveals great specificity around identification practices, but only general guidelines around curriculum and program delivery services beyond varied statements about dosage (the number of hours per week gifted students are provided curriculum which is differentiated from the general education curriculum).

Further, a comprehensive analysis of 16 sites representing high and low resource schools from rural, suburban, and urban areas that examined state-level policy, district-level policy, National Center for Research on Gifted Education (NCRGE) district-level surveys and school-level surveys (Brodersen, 2016) revealed that there was little evidence that state policy has a consistent relationship with actual reported practices.

The second factor impacting the current state of program development is the lack of a widely accepted comprehensive theory and/or an extensive body of impact research to guide program practice. In particular, the field of gifted education lacks a body of randomized control trial (RCT) research on programming practices or curriculum that would meet the What Works Clearinghouse criteria (Plucker & Callahan, Whitehurst, 2003; WWC. 2016). Steenbergen, Makel, and Olszewski-Kubilius (2016) noted in a recent issue of *Review of Educational Research* that they were able to consider only 12 RCT studies on grouping in a sub-analysis (that included *any type of grouping*—within class, whole group, or cross-grade). As a result, the field has been largely dependent on descriptive and sometimes correlational evidence in gifted education and research findings from psychology and general education to guide program decision-making. Hence, there is no clear set of defensible guidelines that can be used by key stakeholders as they develop and/or revise programs—particularly services for gifted students. While at least one of the professional organizations in the field has attempted to formulate such a document (NAGC pre-K- Grade 12 Programming Standards, 2010), the developers of the Standards acknowledge that they are: (a) research based, (b) practice-based, and (c) literature-based (CEC; Johnsen, 2012). Close examination further exposes the fact that in nearly all cases the proffered standards are not supported by randomized control trial studies that would be considered the gold standard for determining, or at least guiding, practice.

The result of the conditions described above is a lack of consistency across programming and practices nationally (Callahan, Moon, & Oh, 2017; National Association for Gifted Children, 2015). The mélange of options offered and the lack of consistency across programming components is characterized in wide-ranging descriptions of identification practices, lack of agreement on program outcomes beyond broadly stated process, lack of agreement on appropriate curricular materials or instructional practice as well as wide-ranging dosage.

Callahan et al. (2013) conducted a study of elementary school programs for gifted students. Their survey included a question about service delivery models. They noted that terminology used to categorize delivery models varied by state directors and district coordinator surveys. For elementary school programs, Callahan et al. (2013) found that 51.9% of the districts used part-time pull-out classes, 18.4% cluster grouping of gifted students in general education classrooms with in-class differentiation, 8% special classes of homogeneously grouped gifted students within a regular school setting, and 5.7% in-class differentiation in general classrooms with no clustering of gifted students. Although the terminology differed, the patterns were similar.

Data from the *2014-2015 State of the States in Gifted Education: Policy and Practice Data* included a question about service delivery models. Of the 41 state coordinators, slightly over 50% responded:

> Twenty-two respondents were able to estimate the most frequently used delivery methods for upper elementary, or grades 4-6. Cluster classrooms (17), resource rooms (15), subject acceleration (12), and self-contained classrooms (11) were the top delivery models. Unlike PreK-K, early elementary, and middle school, regular classrooms were not in the top three at this level. (NAGC & CSDPG, 2015, p. 35)

Our purpose is to provide an overview of gifted education programming structures used in elementary schools in three states. Program structures are "big picture" choices schools make along a continuum of services (Gentry, 2009). These include delivery model choices (e.g., pull-out instruction or student grouping strategies) and curriculum choices (e.g., existence of gifted-specific curricula or autonomy of gifted teacher-specialist to choose curriculum). Importantly, we examine these structures in combination and in relation to the reported focus/goals of the programs to gain insights into how programs are organized and what foci are applied in elementary school gifted education programs. Four specific research questions guided this inquiry:

1. What programming structures commonly associated with gifted education are used in elementary schools?
2. To what extent is the use of these programming structures interrelated?
3. What specific foci and goals do schools use in their programs with respect to specific curriculum, processes, and outcomes?
4. To what extent do these structures relate to the foci and goals of the gifted education program at the school?

Methods

A team of five researchers established a set of potential survey items covering gifted program identification procedures and services offered. We shared the items with the state gifted directors in the three states we were surveying. After revising the items on the basis of their feedback, we conducted cognitive interviews with school leaders who potentially would be completing the survey. Our research team reviewed the information gathered from the cognitive interviews, and we revised the survey. We shared the revised survey with experts in the field of gifted education and made additional changes. Finally, we field tested the survey with over 200 practitioners across the country before final revisions.

We selected three states with mandates for identification of gifted students and services. We initially distributed the survey to all schools in the three states we selected. We asked the person responsible for gifted education in the school to complete the survey online. We followed

up with phone calls to non-respondents. We provided financial incentives to the districts when 80% of the K-5 schools in the district completed the survey.

Title I schools made up 80% of the schools that completed our school surveys. Of the 3,058 Title I schools that we invited to complete surveys (and whose districts did not reject our research request), 59.22% completed the survey. Of the 797 non-Title I schools that were invited to complete surveys (and whose districts did not reject our research request), 56.46% completed the survey. We share the overall final survey response rates by state in Table 1. Differences in school size (M = 543, SD = 276; median = 531) and gifted program size (M = 69, SD = 35; median = 66) were also well represented in the sample.

Table 1
Overall School Survey Response Rates by State

State	Completed Surveys	Percentage
1	443	51.2%
2	981	48.6%
3	869	73.5%
Total	2,293	

In this paper, we examine eight programming structures. Since the use of different structures may reflect underlying beliefs regarding the needs of gifted students, we explored the relationships between the uses of different structures to further examine those underlying beliefs. Because beliefs often drive goals in education, we asked schools about their program goals and curricular foci. We believe connections between program structures and goals/foci further reflect belief-based decision-making. We examined the following eight programming structures:

- *Existence of separate reading/English language arts (ELA) curriculum for gifted students.* We wanted to know if schools expressed taking the step of using a curriculum beyond the general education reading/ELA curriculum to serve gifted students. We further inquired as to the nature of the differentiation from the curriculum in the general education program (e.g., faster pace or more process skills) for further clarity.
- *Existence of separate mathematics curriculum for gifted students.* We wanted to know if schools expressed taking the step of using a curriculum beyond the general education mathematics curriculum to serve gifted students. We further inquired as to the nature of the differentiation from the curriculum in the general education program (e.g., faster pace or more process skills) for further clarity.
- *Autonomy level given to the gifted teacher in curriculum choice*. We examined autonomy in curriculum choice as a measure of the flexibility a teacher has to make decisions responding to gifted students' individual profiles. This holds particular importance in situations with no defined district-level curriculum.
- *Use of pull-out instruction.* Positive responses to this question indicate a belief in the separation of gifted education and general education as a positive act based on a belief that the most effective placement for gifted students is outside of the general education classroom for at least part of the day or week and a belief in the importance of intellectual peer groups.

- *Use of push-in instruction.* Use of the grouping arrangement was considered an indicator of a belief that gifted students should be served within the general education classroom with proper support.
- *Use of cluster grouping.* This indicates using gifted students grouping within classroom (e.g., a group of 6 gifted students are all included in the same grade 3 classroom). Positive responses suggest recognition of research supporting gifted students working with their intellectual peers.
- *Use of homogeneous grouping.* This indicates using special classes that only include gifted students. Like cluster grouping, homogeneous grouping recognizes the power of having intellectual peers.
- *Use of some form of acceleration.* Acceleration can be either subject-based or grade-level based. It suggests openness to more logistically difficult interventions for gifted students and recognition of the research base on the topic.

Results

Research Question 1: *Use of programming structures and curricular modifications in elementary schools*. Table 2 summarizes the results from pull-out, cluster grouping, homogeneous grouping, and push-in questions. Pull-out instruction was the most commonly reported service-delivery model (73%) and push-in instruction was the least reported (33%). Among those reporting each model, the dosage level of pull-out instruction was higher than push-in instruction (2.81 hours per week versus 1.87 hours per week). More schools than expected reported whole-class homogeneous grouping. The level (45%) was nearly the same as that of cluster grouping (53%), which has been an increasingly popular service option. Disappointingly, even among the half of schools reporting cluster grouping, less than half (47%) reported at least "frequently" making use of the groupings for tiered instruction.

Table 2
Usage of Service Delivery Options for Gifted Students

	Percentage	Dosage	Usage by Level (Reading/ELA/Math)
Pull-out instruction	73.2%	2.81 hours / week	K: 19.7% / 18.1% 1st: 32.9% / 29.1% 2nd: 41.6% / 37.1% 3rd: 64.9% / 62.3% 4th: 79.5% / 78.4% 5th: 80.3% / 78.3%
Cluster Grouping	53.4%	8.3% Always tiered 39.0% Frequently 40.6% Sometimes 5.6% Rarely 1.3% Never	K: 20.7% / 17.7% 1st: 32.4% / 28.0% 2nd: 40.1% / 35.6% 3rd: 64.9% / 60.0% 4th: 84.9% / 80.6% 5th: 87.7% / 84.0%
Homogeneous Grouping	45.3%		K: 19.3% / 15.9% 1st: 29.9% / 24.8% 2nd: 37.9% / 32.6%

			3rd: 57.5% / 52.8% 4th: 74.1% / 72.0% 5th: 77.4% / 77.0%
Push-in instruction	33.1%	1.87 hours / week	K: 13.9% / 11.1% 1st: 21.5% / 19.7% 2nd: 25.8% / 24.1% 3rd: 40.8% / 39.8% 4th: 55.3% / 52.5% 5th: 57.6% / 59.7%

Roughly 25% of schools reported a separate curriculum for the gifted. Descriptive statistics for the "separate curriculum" questions and follow-ups are given in Table 3. Slightly more reported a separate curriculum in reading/ELA than mathematics (29% to 24%). While the hours per week of separate curriculum were similar across subjects, other differences emerged. Schools reported more use of the separate curriculum in reading/ELA than mathematics across grade levels. The nature of difference in the unique gifted curriculum also varied across subjects. While mathematics curriculum was more often faster paced or above grade level, reading/ELA curriculum focused on additional training of process skills (e.g., creative and critical thinking).

Table 3
Comparison of Separate Curriculum Use Between Subjects

	Reading/ELA	Mathematics
Existence of separate curriculum	29.3%	24.4%
--hours per week (mean)	2.89	2.74
--when used	K 23.3%	K 23.7%
	1st 34.3%	1st 34.0%
	2nd 48.6%	2nd 45.5%
	3rd 78.2%	3rd 70.2%
	4th 91.6%	4th 87.4%
	5th 91.0%	5th 89.9%
--faster pace	36.7%	48.4%
--more in-depth	73.5%	75.1%
--greater breadth	53.9%	56.7%
--above grade-level	58.8%	64.8%
--process skills	79.9%	75.7%

We also asked schools to "indicate the degree to which various activities or goals were a focus" of their school's gifted program. A slider bar was used with values from 0 to 100 for each of 26 items. With the belief that the relative focus was our real interest, we person-centered the values across a given participant resulting in some values being positive (more focus than average participant responses) and some being negative (less focus). Table 4 shows the values of each item on the adjusted scale. Critical and creativity thinking skills top the list. These have been a stable of gifted education programs for half a century. While culturally responsive curriculum and cultural identify are issues with which the field of gifted education has wrestled

(Siegle et al., 2016), they receive minimal attention. We examine these individual results later with Research Question 3.

Table 4
Program Focus Descriptive Statistics (Person-Centered)

	Min	Max	Mean	*SD*
Critical Thinking Skills	-55.31	85.65	27.08	18.93
Creativity/Creative Thinking	-63.73	88.27	19.44	20.42
Reading/ELA: Grade Level Extension Activities	-66.19	92.31	15.13	23.28
Math: Grade Level Extension Activities	-66.96	92.31	12.50	25.17
Communication Skills	-55.31	75.19	11.93	20.17
Technology Literacy	-78.27	75.62	10.97	21.94
Metacognitive Skills	-79.00	76.35	9.14	20.15
Research Skills	-68.27	75.00	7.96	21.16
Academic Motivation	-59.77	71.23	7.13	20.31
Academic Self-Confidence	-82.69	72.27	4.87	20.85
Student Autonomy	-85.00	71.23	1.38	21.95
Enrichment in non-core content areas	-79.04	96.15	1.09	25.71
Writing Skills	-77.31	95.92	0.80	23.32
Self-directed projects	-80.73	75.96	-0.30	22.91
Leadership Skills	-74.50	76.92	-0.32	21.26
Social-Emotional Needs	-82.69	76.35	-1.51	23.08
Interdisciplinary study of big ideas	-86.73	80.54	-4.01	23.52
Math: Acceleration	-89.58	83.58	-7.63	29.27
Reading/ELA: Acceleration	-95.19	75.73	-8.50	28.97
Opportunities for Underserved Students	-84.81	79.65	-8.60	24.11
College and Career Readiness	-88.46	72.27	-9.97	27.83
Culturally Responsive Curriculum	-82.69	73.85	-12.13	22.26
Academic Contests	-90.92	83.92	-13.35	26.08
Cultivation of Cultural Identity	-90.00	69.12	-19.51	21.71
Service Learning	-88.46	61.50	-20.50	22.67
Opportunities Outside of School Day	-88.46	72.35	-22.94	24.85

Principal components analysis (see Table 5) on the 26 curricular foci suggested eight factors: affect for learning, higher-level thinking, acceleration, core curriculum extensions, cultural responsiveness, independent study indicators, non-school/extracurricular activities, and research process skills. The eight factors explained 60.4% of the variance in responses. We eliminated two of the eight factors from further analysis due to low reliability (alpha < .70). Since the structure variables were dichotomous (schools indicated they did or did not implement a given practice), we conducted *t*-test differences to better understand the activity focus of each program structure. Table 6 offers the Cohen's *d* effect sizes for each statistically significant comparison. We implemented a modified Bonferroni adjustment to compensate for increased Type 1 error due to multiple *t* tests. Generally, the program focus, as reported on the 100-point

slider, was related to the program structure. Pull-out programs focused more on higher-level thinking and affective learning, and less on acceleration and curriculum extension, while separate mathematics curriculum focused on acceleration and curriculum extensions. We did not see any patterns for program focus with cluster grouping. As noted earlier, the limited used of tiered instruction with cluster grouping puzzled us. Perhaps schools are defining cluster grouping differently or cluster grouping students for a variety of different reasons. This is an area that warrants future research.

Table 5
Principal Components Analysis—Varimax Rotation

	1	2	3	4	5	6	7	8
23-Academic Self-Confidence	***.828***	-.037	.076	.058	.019	-.165	.122	-.104
24-Academic Motivation	***.819***	-.018	.069	-.020	.086	-.149	.100	-.059
25-Student Autonomy	***.624***	-.025	.108	.124	-.027	.071	.156	-.022
22-Social-Emotional Needs	***.511***	.021	.030	.248	-.161	-.006	-.007	-.238
4-Creativity/Creative Thinking	-.070	***.771***	.145	.024	.195	.115	.021	.002
5-Critical Thinking Skills	-.064	***.770***	.060	-.231	.203	-.024	.058	-.007
6-Metacognitive Skills	.040	***.602***	.096	.029	.075	-.065	.170	.026
3-Communication Skills	-.044	***.534***	.111	.166	.079	-.194	.149	.392
11-Reading/ELA: Acceleration	-.158	-.192	**-.890**	.008	.069	-.030	.057	-.009
12-Math: Acceleration	-.154	-.155	**-.881**	-.024	.134	.075	.001	-.093
9-Reading/ELA: Grade Level Extension Activities	-.180	-.032	.005	**-.859**	.078	-.094	.079	.064
8-Math: Grade Level Extension Activities	-.164	.036	.035	**-.843**	.144	-.106	-.011	-.135
18-Leadership Skills	-.023	-.191	.309	.385	.345	-.260	.292	-.354
19-Service Learning	-.291	-.275	.186	.362	-.072	-.079	-.182	-.269
20-Culturally Responsive Curriculum	-.087	-.215	.172	.096	***-.772***	-.122	.162	-.102
21-Cultivation of Cultural Identity	-.128	-.245	.128	.204	***-.738***	-.110	.058	-.159
26-Opportunities for Underserved Students	.259	-.156	-.034	-.016	***-.455***	.064	-.123	.094
13-Interdisciplinary study of big ideas	-.071	-.149	.007	.086	.025	***.677***	.230	-.076
14-Self-directed projects	-.003	-.181	.183	.095	.240	***.616***	-.045	.044
10-Enrichment in non-core content areas	-.198	.131	-.010	.016	-.052	***.509***	-.012	-.120
17-College and Career Readiness	-.258	-.300	.124	.077	.072	**-.471**	.265	-.210
15-Academic Contests	-.188	-.121	.052	.015	.057	.005	**-.793**	-.104
16-Opportunities Outside of School Day	-.216	-.259	.013	.096	.036	-.115	**-.720**	-.083
1-Writing Skills	-.152	-.030	-.079	-.027	-.033	-.197	.094	***.715***
2-Research Skills	-.171	.201	.280	.176	.143	.227	.127	***.561***
7-Technology Literacy	-.107	.033	.277	-.130	.317	-.015	-.034	***.408***

Table 6
Effect of Program Structures and School Demographics on Program Focus

	(1) Affect for Learning (α = .71)	(2) Higher Level Thinking (α = .69)	(3) Acceleration (α = .87)	(4) Curriculum Extensions (α = .79)	(5) Culturally Responsive (α = .78)	(6) Independent Study (α = .33)	(7) Non-School Activities (α = .62)	(8) Research Process (α = .34)
Slider Item #	22-25	3-6	11-12	8-9	20-21	10, 13-14	15-16	1-2, 7
Separate Reading/ELA curriculum			+0.13		+0.13			
Separate Mathematics curriculum			+0.13	+0.11				
GT Teacher Autonomy	+0.15						-0.09	
Pull-out Used	+0.29	+0.34	-0.16	-0.12			-0.27	
Push-in Used	+0.09							
Cluster Grouping Used								
Homogeneous Grouping Used	-0.10	+0.09						
Acceleration Used		-0.23	+0.58	-0.14				

Note: All effects are reported as Cohen's *d*-type effect sizes. Only statistically significant relationships are included. Components 6 and 8 were excluded from this analysis based on low levels of reliability.

Research Question 2: ***Relationships among the program structures*****.** Table 7 shows the relationships among the program structure types. Using separate curriculum for reading/ELA was significantly related to using it in mathematics (Φ = .73). Using separate curriculum was also related to using of pull-out instruction—though much less so (reading/ELA Φ = .11; mathematics Φ = .16). Gifted teacher autonomy was greater in pull-out environments (Φ = .13) and was associated with acceleration as a focus (Φ = .06). Gifted teacher autonomy was not related to cluster grouping, push in, or homogeneous grouping. Acceleration was more likely to be present in schools using separate reading/ELA or mathematics curriculum. Acceleration options decrease as the proportion of underserved minority, free and reduced-price lunch, and English learners increases. Pull-out programs were negatively related to the use of homogeneous grouping (Φ = -.05), while push-in instruction was positively related to cluster grouping (Φ = 0.06).

Table 7
Program Structure Inter-Correlations and Correlations to School Demographics

	Read/ ELA	Math	Auto	P.O.	P.I.	C.G.	H.G.	Accel
Separate ELA Curriculum	--	.73**	~.00	.11**	.01	-.01	.02	.06*
Separate Math Curriculum		--	.04	.16**	-.02	-.04	.04	.07*
GT Teacher Autonomy			--	.13**	-.02	-.02	~.00	.06*
Pull-out Classes				--	~.00	-.03	-.05*	.04
Push-in Classes					--	.08**	.06*	.05
Cluster Grouping						-	.22**	.04
Homogeneous Grouping							--	.03
Acceleration								--
Total Students	-.01	.01	-.06*	-.09**	-.02	-.08*	.04	.02
Proportion of students…								
underserved minority	.02	-.02	-.04	.05	~.00	~.00	-.04	-.14**
free and reduced-price lunch	-.02	-.06*	-.07*	.03	-.06*	.03	~.00	-.18**
English learners	-.02	-.09*	-.01	-.07*	-.04	.01	-.03	-.08*

Note: * indicates $p<.05$. ** indicates $p<.001$. Values reported as phi coefficients (Φ) because variables are nominal and dichotomous.

Research Question 3*: The nature of focus on different curriculum and program delivery models***.** The most commonly reported curricular activities were a focus on critical and creative thinking skills (see Table 4). As noted earlier, these are the traditional staple of gifted education services. Given the association of higher order thinking skills with gifted education and the perceived aptitude of gifted students in these areas, this is not surprising. Extension and enrichment activities were the next most reported foci—more so in reading/ELA, which is in line with other findings on the survey regarding the use of separate curriculum. Other skills (e.g., communication, research, technology literacy) and psychosocial supports of academics (e.g.,

motivation, self-confidence) were also among foci most commonly reported. Three of the seven lowest-rated foci were those related to cultural awareness and underserved populations. The other four in this group of activities were related to future planning and activities outside the typical mechanics of school (e.g., academic contests and service learning).

Research Question 4: ***A consolidation of findings.*** While the components that emerged from the Principal Components Analysis showed differences when considering the use/non-use of different program structures, with few exceptions, the observed Cohen's *d* effects were small. The use of separate curriculum was positively related to acceleration (Component 3). This was the case for both reading/ELA and mathematics. While the focus on cultural responsiveness (Component 5) was low, the relationship between separate reading/ELA curriculum and the component suggests a mechanism by which it may make its way into schools. Interestingly, despite a common link to reading/ELA curriculum, use of acceleration and culturally responsive curriculum demonstrated a negative relationship. Gifted teacher autonomy was positively related to a psychosocial or affective focus (Component 1). In addition, the use of pull-out programs and a focus on process skills had the second largest observed effect in the analysis ($d = 0.34$). Given this association, it seems many programs, at least implicitly, support the highly debatable idea of higher-order thinking skills being the purview of gifted students alone— in their own separate classroom. Pull-out programs were also negatively associated with a focus on curriculum extensions ($d = -0.12$), acceleration ($d = -0.16$), and non-school activities ($d = -0.27$). A focus on acceleration activities (Component 3) was negatively linked a focus on higher-level thinking and curriculum extensions—and, of course, the existence of acceleration as a program structure.

Conclusions

Overall all, our data indicate that gifted education program structures tend to align with the program focus for which they were designed. Gifted programs stay true to their roots of creative and critical thinking through pull-out options where gifted specialists have wide latitude in what they teach. The question remains: Are these goals or related activities most appropriate for students identified for their advanced achievement in reading/ELA, mathematics, and/or reasoning skills? The data from our survey cannot unravel the thinking behind why survey respondent set specific values on the 100-point scale for the 26 structures and foci. Perhaps the resulting data can be viewed as a directional hint that continued focus on creative and critical thinking is no longer defensible when mastering 21st Century Skills are expected learning outcomes for all students.

Is the field of gifted education facing a potential crisis in terms of identifying outcomes for gifted students? Policy makers have identified the outcomes of educational opportunities for all students as improvements in reading/ELA and mathematics achievement. Should the goals of gifted programs also include advancement in specific content areas for identified students? Our research study cannot provide the answer for the field of gifted and talented education. However, the research results can promote reflections and conversations about the purposes of providing programs and services for identified gifted students and the extent to which they are connected to the screening, nomination, identification, and placement system.

Limitations

Access to a large data set is always beneficial when probing a set of research questions. The data from elementary schools ($N = 2,293$) provided a snapshot of gifted education

programming structures used in elementary schools. Even with all of these responses, we do not know the extent to which the findings would be similar in other states with identification and programming mandates.

Self-report data always raise questions. Even though we requested that potential survey respondents needed to be familiar with programming details, there was no way to ensure that answers to questions about school-level programming were an accurate portrayal of current practices. With these limitations in mind, we believe that the research findings lead to important answers and set the stage for further exploration.

Significance of Study

This study provides a needed in-depth view of program structures and gifted program foci. The study provides rich context for future studies related to program structures and foci. It moves discussions of "what gifted programs are like" beyond anecdotal evidence to a 2000+ school sample dataset. The lack of focus on culturally responsive activities and interventions like acceleration highlights the need for future work connecting research and effective, meaningful practice. Future work should also disaggregate these data while accounting for school demographics and the diversity of student populations.

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