Serving Children Who Are Gifted: Perceptions of Undergraduates Planning to Become Teachers

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Seeking information about preconceived notions of the educational needs of children who are gifted, we asked 285 undergraduates in prerequisite classes for teacher education to complete questionnaires. Topics addressed included the need for special services for children who are gifted, perceptions of forms of service delivery in elementary schools, and egalitarian versus elitist issues in gifted education. Preferences among our respondents fell in favor of services carried out in general classroom settings at elementary schools, reflecting egalitarian attitudes. We found misconceptions, compared to empirical evidence, for notions about tutoring practices and academic acceleration. In their response rates to items, undergraduates previously served as gifted differed only occasionally from those not served as gifted. We discuss implications of our findings in terms of the need for proponents of gifted programs to address some misconceptions that appear to be related to school reform and appropriate services for children who are gifted.

Serving children who are gifted continues to be a prominent role for many educational professionals. Regular education teachers, gifted educational specialists, school counselors, school psychologists, and special educators are each occasionally, or even frequently, called upon to solve problems and contribute to the individualized educational needs of these children. Nevertheless, training for teachers and school-based mental health workers that focuses on gifted services may vary considerably, depending on the individual's ultimate goals and state certification guidelines. With the exception of university

programs that specifically offer certification or licensure-level training in gifted education, teacher-education programs and programs for related professions rarely offer more than introductory information in the area of needs and educational practices for children who are gifted. Therefore, the beliefs of future and practicing teachers concerning the educational needs of children who are gifted may be guided by beliefs that are not related to evidence-based practices.

Preconceived notions about the characteristics and educational needs of children who are gifted are indeed addressed in the educational and psychological literature (e.g., Delisle, 1994; Fiedler, Lange, & Winebrenner, 2002; Grant, 2002; Winner, 1996). However, little is known about the current perceptions of individuals in teacher-education programs regarding the educational practices for children who are gifted. One exception is a recent qualitative study that resulted in thematic summation of novice teachers' beliefs about the need to know and address student differences and the teachers' ambiguity and lack of precision in defining and addressing differences (Tomlinson, Tomchin, et al., 2004).

We developed our study to document how the services for children who are intellectually gifted are perceived among undergraduates, most of whom have chosen the teaching profession as their goals. Following Grant's (2002) cues regarding the disparity between the oft-cited needs claims for children who are gifted and the lack of empirical evidence supporting these claims, we selected topics for our survey from literature-based discussions of beliefs and myths about the school-related needs and programs for children who are gifted. We expected to find results that can lead to important implications for teacher-educators and for advocates for gifted services. We will briefly review the literature-based sources that led to our survey under three general topics: (a) the need for special services, (b) forms of service delivery, and (c) egalitarian versus elitist controversies.

The Need for Special Services

We present concerns about the need for special services under two categories: the perception that children who are gifted might "make

it on their own," and the perception of boredom or frustration related primarily to the absence of special services.

Making It on Their Own

A primary issue discussed by many parents and teachers of children who are gifted is the absence of appropriate services. Fiedler et al. (2002) refute the myth that gifted students will succeed without the benefit of special programs, citing meta-analytic results and individual studies that have documented the success of programs in the form of homogeneous ability grouping and accelerated instruction. Studies of cooperative learning groups, both heterogeneous and homogeneous, have also documented some successful gains for high-achieving students although evidence remains sparse in terms of gains for children who are gifted (Neber, Finsterwald, & Urban, 2001).

In essence, the myth that children who are gifted should be able to succeed without extra help has been refuted by prominent authors; however, evidence verifying the need for services is presented primarily via the success of students in special programs. Empirical evidence that children who are gifted can or actually do succeed without the benefit of specialized services is notably missing. Anecdotal evidence chronicling remarkable accomplishments from individuals without the benefit of special services is likely available in biographical or autobiographical literature; however, generalization to all children who are gifted and do not receive special services would be difficult. The question, "Can children who are gifted make it on their own?" remains difficult to answer. We believe public perceptions of this question are worth investigating, particularly when they may affect the frequency and quality of services provided.

Boredom and Frustration

Boredom in the regular classroom and frustration with failed goals are frequent concerns voiced by advocates for gifted services. Boredom with grade-level academics has been addressed in the literature (e.g., Feldhusen & Kroll, 1991; Freeman, 2001) although some

of the evidence is anecdotal and often emanates from sources other than the children themselves. For instance, Freeman found reports of children's boredom from parents of a gifted group, but did not find differences in boredom levels between children identified as gifted and a comparison group. It is possible that parents' anxiety about their children's lack of productivity influence their perspectives.

Feldhusen and Kroll (1991) did offer empirical evidence from children themselves concerning boredom related to the lack of challenge. In their comparison of more than 200 academically talented kindergarten and elementary students and 200 students not identified as academically talented, they found no difference between the groups in reported levels of boredom. However, the academically talented group often failed to maintain initial positive attitudes toward learning without appropriate challenges.

Strop (2002) and Galbraith (1985) have both addressed the issue of frustration among children who are gifted. Strop suggested that children used to easy achievement may develop low frustration tolerances in challenging situations. Galbraith suggested that children who are gifted face overwhelming pressure, from themselves and others, to achieve. Kunkel, Chapa, Patterson, and Walling (1992) have presented empirical evidence that children who are gifted suffer from frustration due to high expectations and the potential failures that ensue. However, Derevensky and Coleman (1989) found that children who are gifted and children who are not gifted have similar fears about failure in school. It seems that although achievement may come easily, children who are gifted do not necessarily cope better when difficult obstacles are in place.

Forms of Service Delivery

In spite of advocacy and, in many cases, empirical support for several forms of special programs for students who are gifted, critics continue to voice concerns about service delivery for these children. In our discussion that follows, we do not imply that the forms of service delivery we discuss are independent of each other. Some overlap might exist, for instance, in ability grouping and pull-out programs. Nor do we imply

that our list of service formats is comprehensive. There are alternative forms of delivery, such as Renzulli's Schoolwide Enrichment Model (see Olenchak & Renzulli, 2004). However, each form we review here has a fairly lengthy history across schools, with substantial literature bases documenting or criticizing it. We discuss four forms of service delivery below: (a) ability grouping, (b) pull-out programs, (c) cooperative learning, and (d) academic acceleration.

Ability Grouping

With recent moves toward inclusive classrooms, ability grouping has been under fire from various quarters. In defense of ability grouping, Fiedler and colleagues (2002) offered a review of meta-analytic research, presenting evidence that homogeneous ability grouping for children who are gifted can result in academic benefits (e.g., Feldhusen, 1989; Feldhusen & Moon, 1992; Kulik & Kulik, 1984), as well as attitudinal benefits (Feldhusen, 1989). VanTassel-Baska (1992) has made a strong appeal for this form of services, suggesting that children who are gifted cannot be served well without some form of ability grouping.

Pull-Out Programs

Somewhat related to ability grouping, pull-out programs involve removing children who are gifted from the regular classroom for small-group instruction a few hours each week. Belcastro (1987) has argued that most pull-out programs are ineffective because they seldom meet the first four of seven principles for adequate programs (i.e., tying curricula to the regular classroom, having a rigorous identification procedure, being in effect continuously during the school day, and providing interaction with peers at the same intellectual level).

In contrast to Belcastro's (1987) criticisms, meta-analytic research conducted by Vaughn, Feldhusen, and Asher (1991) suggests that pull-out programs can result in significant learning for students who are gifted. Additionally, Feldhusen, Sayler, Nielsen, and Kolloff (1990) have shown positive results in terms of self-esteem for 40 children in a pull-out enrichment program focusing on a cre-

ative environment, compared to 20 children who qualified for the program but did not participate. Pull-out programs remain a common format for services, particularly in upper elementary settings; at one time it was estimated that they were employed 95% of the time (Oglesby & Gallagher, 1983).

Cooperative Learning

Those in favor of cooperative learning via heterogeneous ability grouping suggest advantages that apply to classrooms and children in general, as well as children selected for gifted services. Cooperative learning groups have provided a potentially viable answer to school reform issues centered on equity and excellence (Coleman & Gallagher, 1995). Thorkildsen (1994) offered support for cooperative learning situations by documenting preferences among children who are high-achieving or gifted for opportunities to participate in communal approaches to education. Furthermore, Neber et al. (2001) have confirmed empirical support for heterogeneous cooperative learning groups through a recent meta-analysis of 12 studies involving students who were high achieving or gifted. Only four of these studies involved children specifically identified as gifted, with results varying based on the types of interventions. In one of these studies, Kenny (1995) found significant differences in the perceptions of nongifted children toward their cooperative teammates when they evaluated more than 200 highly gifted fourth graders. Children who were gifted and participated in heterogeneous groups were viewed by their peers as friendlier and as better leaders than children who were gifted but participated in homogeneous learning groups. Two studies of heterogeneous learning groups (Kenny, 1995; Smith, Johnson, & Johnson, 1982) demonstrated higher learning performance among gifted and nongifted participants.

Of the eight studies reviewed by Neber et al. (2001) focusing on high achievers, the authors noted significant achievement gains across all students in heterogeneous cooperative learning groups as opposed to individual learning; however, high achievers showed stronger achievement gains in the homogeneous groups. Mixed results are consistent with criticisms of the appropriateness

of heterogeneous groupings for children who are gifted (Shore & Delcourt, 1996).

Academic Acceleration

In its broadest sense, academic acceleration involves a student progressing through the curriculum at a faster, individually calibrated rate of learning (Paulus, 1984). Acceleration can be achieved through subject skipping, double promotion, by taking advanced classes along with regular ones, or by early college admission. Compared to some types of service delivery for the gifted, academic acceleration has garnered a large amount of support via empirical evidence, and is advocated by many prominent researchers in the field (see Colangelo, Assouline, & Gross, 2004).

Educators and administrators often believe that double promotion, or grade-skipping, will lead to academic burnout, gaps in knowledge, deficient social skills, outcast status within peer groups, poor self-concept, and an attitude of arrogance (Swiatek & Benbow, 1991). Southern, Jones, and Fiscus (1989) surveyed more than 500 educational professionals, finding hesitance among their respondents to endorse acceleration (defined as grade-skipping or early school entrance). However, for respondents in the study, personal experience with accelerating a student led to a more positive rating. Southern et al.'s questionnaire contained only negatively stated items (e.g., "Accelerating a gifted child places too high a level of academic demand on the child"; p. 32), which may have introduced a response bias.

Providing documentation to counter perceptions that students who are accelerated face problems, several researchers have offered meta-analytic studies (e.g., Kulik, 2004; Kulik & Kulik, 1984). Results generally support the use of academic acceleration, with students in accelerated programs outperforming age and ability-matched peers, as well as equally gifted older children in the higher grade level. Robinson (2004) reiterates these findings in her review of the effects of academic acceleration on the social and emotional well-being of children who are gifted.

In an effort to remedy the persistent misperceptions concerning gifted programs, VanTassel-Baska (1992) has advocated for accelera-

tion as well as ability grouping. She suggests that such programs be flexible, carefully organized, monitored, and based on individual need. More recently, Feldhusen, Proctor, and Black (2002) have proposed guidelines for acceleration. However, these authors noted that teachers often find acceleration difficult to put into practice on a daily basis because of mandated curricular levels imposed by school policies and other problems associated with using advanced curricular materials.

Egalitarian Versus Elitist Views Toward Gifted Services

Vocal opposition to some forms of service delivery for the intellectually gifted have occurred occasionally, based upon issues related to egalitarian access and treatment (e.g., Sapon-Shevin, 1994; Sternberg, 1996). Defensive rationales for special services for children who are gifted are offered by notable proponents such as Tannenbaum (1998) and others. Fiedler and colleagues (2002), for instance, defend ability grouping by comparing it to parallel practices, such as singling out outstanding athletes or providing support and instruction for musically talented students. They note that such practices are seldom challenged as elitist. An inherent component of the elitist myth, that ability grouping may discriminate against racial and ethnic minority groups, is currently being addressed through reform in assessment and identification practices (Tomlinson, Brighton, et al., 2004).

The use and misuse of heterogeneous groupings to address egalitarian issues are also debated (e.g., Coleman & Gallagher, 1995). For instance, VanTassel-Baska (1992) has noted that gifted students are often placed in the role of teacher's helper in cooperative learning settings, but she suggests that more appropriate goals for children who are gifted are to nurture their unique talents through exposure to complex tasks that challenge and motivate them.

Although significant proponents of egalitarian programs for children who are gifted might readily approve of heterogeneous grouping when appropriate, the perceptions of individuals from the public domain toward this issue are relatively unknown.

Purpose of Our Study

The issues we addressed above do not, by any means, represent an extensive, comprehensive list of the current concerns evident among discussions by parents and professionals regarding school-related services for children who are gifted. Additional controversies often revolve around emotional and social needs for children who are gifted and pressures on the family that result from having a child who is gifted. However, in our experiences, the issues reviewed above represent dominant programmatic concerns regarding service delivery. We could find little literature-based evidence from groups representing the general population or from undergraduates in teacher preparation programs concerning perceptions of school-related needs and services for children who are gifted. Such perceptions can have a not-so-subtle impact on the acceptability of services and should be evaluated in terms of educational imperatives. Based on this premise, we carried out our study. Our intentions were to gather a sample of perceptions regarding issues including perceived need for special services for children who are gifted, perceived appropriateness for several forms of service delivery, and perceptions of egalitarian versus elitist qualities in current programs. Our participants consisted of undergraduates in preteaching service courses, most of whom are planning to enter the teaching profession.

Method

Participants

Two-hundred and eighty-five undergraduates from two courses participated in our study. A sophomore-level class in human development included 210 participants from five sections. A senior-level class in applied educational psychology included 75 participants from three classroom sections. Of the total participants, 225 were female and 60 were male. Two-hundred and sixty-three were White, 10 were African American, 5 were Asian, 3 were Hispanic, and 4 were "other." Participation was voluntary. Students received course

credit for research participation but also could pursue alternative activities to obtain this same credit.

Participants consisted of 8 freshmen, 83 sophomores, 71 juniors, 85 seniors, and 38 graduate students. Major areas of study were education ($n = 114$), humanities (e.g., English, history, psychology; $n = 98$), math or sciences ($n = 30$), the arts ($n = 27$), and other ($n = 14$). Eighty-one percent ($n = 231$) stated their ultimate goal was to be a teacher; the remaining generally chose goals related to their stated majors. Thirty-seven percent ($n = 104$) stated they had been identified and received special services as gifted students; 63% ($n = 178$) stated they had not been identified as gifted (3 participants did not supply this information).

Instrument

The Attitudes and Perceptions of Giftedness Survey is a 50-item questionnaire consisting of four sections of questions. The first section consists of items soliciting demographic information about the respondent. The following sections were prefaced by initial instructions indicating that intellectual giftedness, specifically, was the topic of concern. The three sections included questions about general beliefs and attitudes toward intellectual giftedness, questions about goals deemed appropriate for the education of children who are gifted, and questions specific to the assessment and delivery of educational services for children who are gifted. The questionnaire was administered to undergraduates in a human development course during the fall semester. Upon examination of the responses from this group, we reworded two of the initial items to clarify potentially ambiguous meanings. We administered the revised version to undergraduates in the applied educational psychology course, and we included results from this group only for these two items. All other results are reported for both the human development and educational psychology course groups. Our respondents replied to questions by filling out a scan sheet. Responses were anonymous.

We have limited the scope of the present report to responses for 10 items concerning general school-related needs of children who

are intellectually gifted. Results from questions addressing social-emotional characteristics, developmental characteristics, and family issues when a child is gifted are reported elsewhere (Bain, Choate, & Bliss, 2006). Responses addressing specific goals deemed appropriate for gifted education are also addressed elsewhere, so we will not include them here.[1]

Results

In Table 1, we present responses for each question across all participants and then broken down into course enrollment groups (Human Development [HD] and Educational Psychology [EP]) and groups identified as gifted (GT) and nongifted (NGT). Results of Chi-squared analyses indicated that our responses were significantly different from the expected rates of even distributions across item choices for all items. To discuss our results, we have grouped types of items to match topics in our literature review above, although our questionnaire presented items focusing on program services first, followed by items concerning specific need and egalitarian versus elitist issues. In our discussion of results, we will list each questionnaire statement in quotations and then discuss salient results.

The Need for Special Services

Three statements addressed the issue of perceived needs for services. We rewrote two of these before administering them to the EP group, and we report only EP group results.

   "Children who are truly gifted are likely to excel even if they do not receive special services.
   a.   *agree*;
   b.   *disagree*."

Approximately three fourths of our total respondents (76%) agreed; 24% disagreed. The GT and NGT groups responded at similar rates.

"Children who are gifted rarely experience frustration and disappointment with failed goals.
    a. *agree*;
    b. *disagree.*"

This statement is a revision of the earlier, ambiguously stated version and was administered only to the EP class. Ninety-three percent disagreed; 7% agreed. One hundred percent of the gifted group in the EP class disagreed with this statement.

"Boredom in the regular classroom is a(n) _____ indicator of potential giftedness.
    a. *likely*;
    b. *unlikely.*"

This statement is a revision of the earlier, ambiguously stated version and was administered only to the EP class. Seventy-five percent of the EP group chose likely; 25% chose unlikely.

Forms and Issues of Service Delivery

Restricting our questions to the elementary school level reflected the variations in programs offered at grade levels. Middle school- and high school-level programs are more likely to offer ability grouping and accelerated or Advanced Placement classes. Elementary schools predominantly offer pull-out programs (a form of homogeneous ability grouping) and, probably less often, inclusive programs in the regular classroom or grade acceleration.

"In your opinion, if gifted services focus primarily on academic subjects for children in elementary schools, these services can <u>best</u> be delivered in _____.
    a. *pull-out programs (children pulled out to separate classrooms with a teacher for the gifted) for a few hours every week*;
    b. *self-contained programs, separating children who are gifted from children not identified as gifted*;
    c. *the regular classroom through ability grouping*;

Table 1

Response Rates to Questionnaire Issues by Total Group, Course Enrollment Groups, and Gifted Classification Groups

Issues[a] and Response Options	Total Group (%)	HD Group[b] (%)	EP Group[c] (%)	GT Group (%)	NGT Group (%)
Children will excel with or without special services					
Agree	216 (76%)	161 (77%)	50 (73%)	81 (78%)	133 (75%)
Disagree	69 (24%)	49 (23%)	25 (27%)	23 (22%)	45 (25%)
Achievement comes easily, frustration is rare (HD)[d]					
Agree		62 (30%)			
Disagree		143 (70%)			
Gifted students rarely experience frustration (EP)[d]					
Agree			5 (7%)	0 (0%)	5 (11%)
Disagree			70 (93%)	28 (100%)	42 (89%)
Boredom is a ___ sign of potential giftedness (HD)[e]					
Dominant		70 (34%)			
Questionable		139 (66%)			
Boredom is a ___ sign of potential giftedness (EP)[e]					
Likely			56 (75%)		
Unlikely			18 (25%)		
Academic services in elementary best served by which program					
Pull-out programs	98 (35%)	74 (35%)	24 (32%)	46 (44%)	30 (29%)
Self-contained programs	21 (7%)	20 (10%)	1 (1%)	7 (7%)	8 (8%)
Regular + ability groups	37 (13%)	34 (16%)	3 (4%)	10 (10%)	16 (15%)
Regular + cooperative	72 (25%)	43 (21%)	29 (39%)	24 (23%)	27 (26%)
Regular + individual project	55 (20%)	37 (18%)	18 (24%)	16 (15%)	22 (21%)

Issues[a] and Response Options	Total Group (%)	HD Group[b] (%)	EP Group[c] (%)	GT Group (%)	NGT Group (%)
Enrichment services in elementary best served by which program					
Regular + homogenous	60 (21%)	50 (24%)	10 (13%)	19 (18%)	141 (23%)
Regular + mixed group	148 (52%)	105 (50%)	44 (59%)	47 (45%)	97 (55%)
Pull-out program	77 (27%)	55 (26%)	21 (28%)	35 (34%)	40 (23%)
Type experience needed to develop full potential for gifted students					
Interact with gifted	28 (9%)	20 (10%)	7 (9%)	14 (13%)	12 (7%)
Interact with various levels	257 (91%)	190 (90%)	68 (91%)	90 (87%)	166 (93%)
Effect of academic acceleration (skipping grades)					
No effect	22 (8%)	17 (8%)	5 (7%)	8 (8%)	14 (8%)
Positive effect	28 (10%)	25 (12%)	3 (4%)	7 (6%)	22 (12%)
Negative effect	233 (82%)	168 (80%)	67 (89%)	89 (86%)	142 (79%)
Programs for gifted students are elitist/egalitarian					
Elitist	102 (36%)	80 (39%)	22 (30%)	42 (42%)	60 (34%)
Egalitarian	179 (64%)	127 (61%)	52 (70%)	59 (58%)	117 (66%)
Gifted students provide a good example in the regular classroom					
Agree	215 (76%)	153 (73%)	61 (81%)	78 (75%)	135 (76%)
Disagree	70 (24%)	57 (27%)	14 (19%)	26 (25%)	43 (24%)
Effectiveness of gifted students who are peer tutors					
Less effective than a close child	52 (18%)	40 (20%)	12 (16%)	18 (18%)	33 (19%)
Gifted learn more thorough	90 (32%)	60 (28%)	30 (40%)	43 (41%)	45 (25%)
Gifted sets example	143 (50%)	110 (52%)	33 (44%)	43 (41%)	99 (56%)

[a]Full questions/statements appear in the Results section. [b]HD = Human Development class. [c]EP = Educational Psychology class. [d]This item was revised prior to EP class data collection; results across the HD and EP versions were inconsistent so we did not report results from GT and NGT groups. [e]This item was revised prior to EP class administration; results from GT and NGT groups are reported only for the EP class participants.

  d. *the regular classroom through cooperative learning activities with children at various ability levels*;

  e. *the regular classroom through individualized projects for each child.*"

For this item, 35% of total respondents chose option (a) pull-out programs; 25% chose option (d), the regular classroom through heterogeneous cooperative learning activities; 20% chose (e), the regular classroom through individualized projects; 13% chose (c), the regular classroom through ability grouping; and 7% chose (b), self-contained programs. We note that although more than a third of participants chose the pull-out option, variations on regular classroom activities of various types captured 58% of the respondents' choices. Self-contained programs were the least popular. While little variation in rate of selection by HD and EP class groups was noted for option a, participants in the EP class chose options (d) and (e) at a higher rate (39% and 24%, respectively) than participants in the HD class (21% for option [d] and 18% for option [e]). EP participants chose options b and c rarely (1% and 4 %, respectively) while HD participants chose these options more frequently (10% and 16%, respectively). See Figure 1 for a graphic representation across groups.

  GT and NGT groups varied more in their responses to this item. A predominant proportion (44%) of the gifted group chose option (a), pull-out programs; with 23% choosing option (d) regular education with heterogeneous cooperative groups; 15% choosing option (e), regular education with individualized projects; and 7% and 10% choosing options (b), self-contained, and (c), regular education with ability grouping, respectively. The NGT group did not express as strong of an opinion among choices, with 29% choosing option (a), pull-out programs; 26% choosing option (d), regular education with heterogeneous cooperative groups; and 21% choosing option (e), regular education with individualized projects. The remaining options, (b), self-contained programs, and (c), regular education with ability groups, were chosen by the NGT group at the 8% and 15% rates, respectively (see Figure 1).
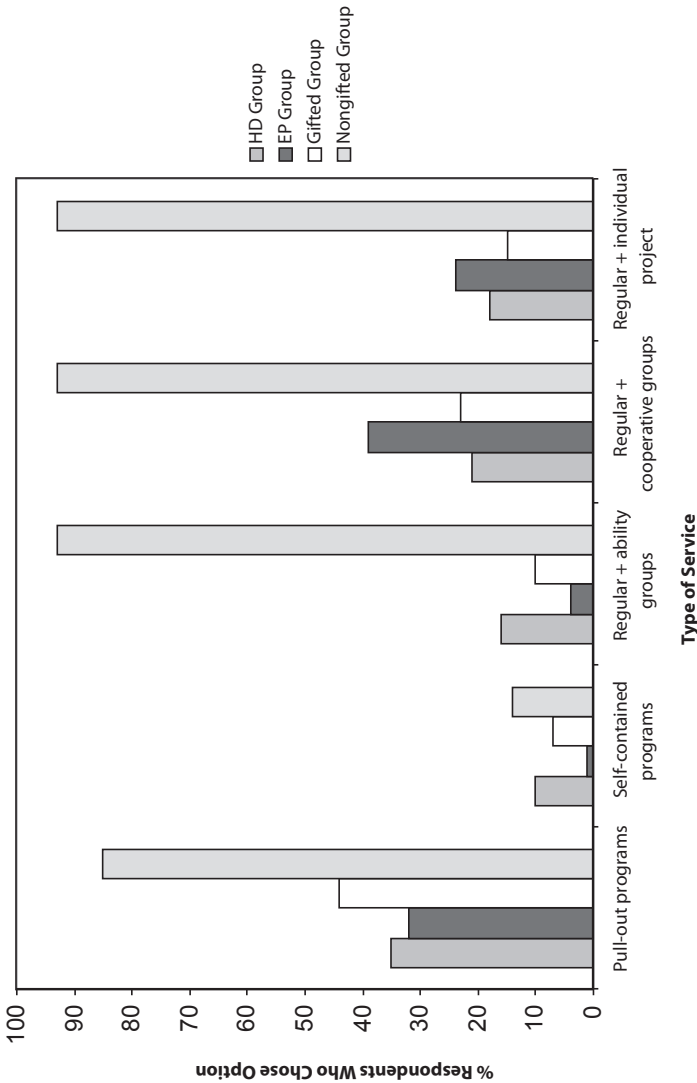
Figure 1. Preference for academic focused service delivery. Questionnaire item was "In your opinion, if gifted services focus primarily on academic subjects for children in elementary schools, these services can best be delivered in pull-out programs (children pulled out to separate classrooms with a teacher for the gifted) for a few hours every week; self-contained programs, separating children who are gifted from children not identified as gifted; the regular classroom through ability grouping; the regular classroom through cooperative learning activities with children at various ability levels; or the regular classroom through individualized projects for each child."

"If gifted services in elementary schools focus primarily on enrichment (activities and projects designed to capture the interest and motivation of children), these services should <u>best</u> be carried out in_____.

  a.   *the regular classroom with homogeneous groups (children of similar ability grouped together)*;
  b.   *the regular classroom through cooperative learning activities (mixed groups of children across ability levels)*;
  c.   *a pull-out program for a few hours every week.*"

For this item, 52%, or the majority of our respondents, chose (b), the regular classroom through heterogeneous cooperative groups; 27% chose (c), a pull-out program; and 21% chose option (a), the regular classroom with homogeneous groups. The HD and EP class groups differed somewhat on rates of selection, with selection of option (b) at the 50% and 59% levels respectively, option (a) at the 24% and 13% levels respectively, and option (c) at the 26% and 28% levels, respectively (see Figure 2).

"Which experience do you believe children who are gifted need the most to develop their fullest potential as persons?

  a.   *most of their interactions should be with other children who are gifted*;
  b.   *most of their interactions should be with other children at varied intellectual levels.*"

The overwhelming choice was for heterogeneous activities, with 91% choosing option (b), interactions with children at varied intellectual levels. We noted little variation in responses for the HD and EP groups and for the GT and NGT groups.

"Providing academic acceleration for children who are gifted by having them skip grades will most likely have _____ on their socialization skills.

  a.   *no effect*;
  b.   *a positive effect*;
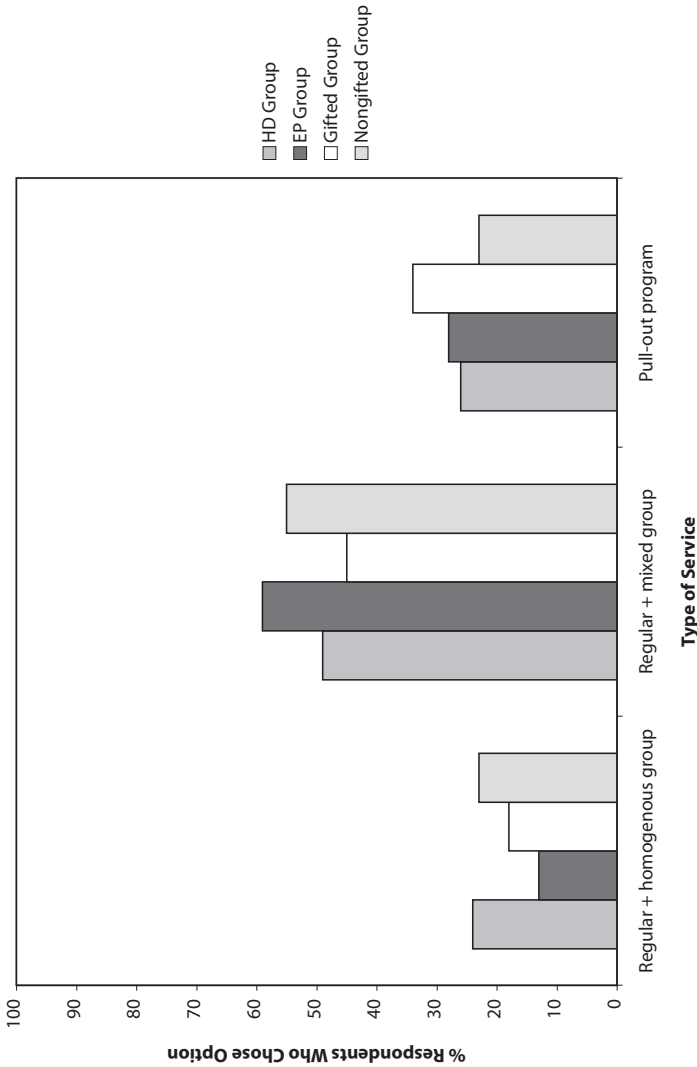 c.   *a negative effect.*"

Figure 2. Preference for enrichment focused service delivery. Questionnaire item was "If gifted services in elementary schools focus primarily on enrichment (activities and projects designed to capture the interest and motivation of children), these services should best be carried out in the regular classroom with homogenous groups (children of similar ability grouped together); the regular classroom through cooperative learning activities (mixed groups of children across ability levels); or a pull-out program for a few hours every week."

Eighty-two percent chose (c), a negative effect; 10% chose (b), a positive effect; and 8% chose option (a), no effect. Again, participants from HD and EP classes and from the GT and NGT groups varied slightly in their response selections.

Egalitarian Versus Elitist Views of Gifted Services

The statements we developed in this section addressed perceptions of the egalitarian quality of gifted services directly and indirectly (through evaluation of benefits to children in regular classroom activities). In addition, some of the items we presented under Forms of Service Delivery have implications concerning this issue, and we will review them later in our discussion of the results.

"Programs provided for children who are gifted in the public schools typically are _____

    a. *egalitarian in terms of selection and services*;

    b. *elitist in terms of selection and services*."

Sixty-four percent of our respondents chose elitist, and 36% chose egalitarian. Participants from HD and EP classes varied somewhat in their responses, with 61% and 70% choosing elitist, respectively. GT and NGT groups again varied somewhat in their response rates, with 58% and 66%, respectively, choosing elitist.

"Placing some gifted students in each regular education classroom is beneficial to the class climate because of the example provided by these students.

    a. *agree*;

    b. *disagree*."

Seventy-six percent of the total group of respondents agreed with this statement; 24% disagreed. Response rates between HD and EP groups varied modestly, with 73% of the HD group agreeing and 81% of the EP participants agreeing. The GT and NGT groups hardly differed in agreement level.
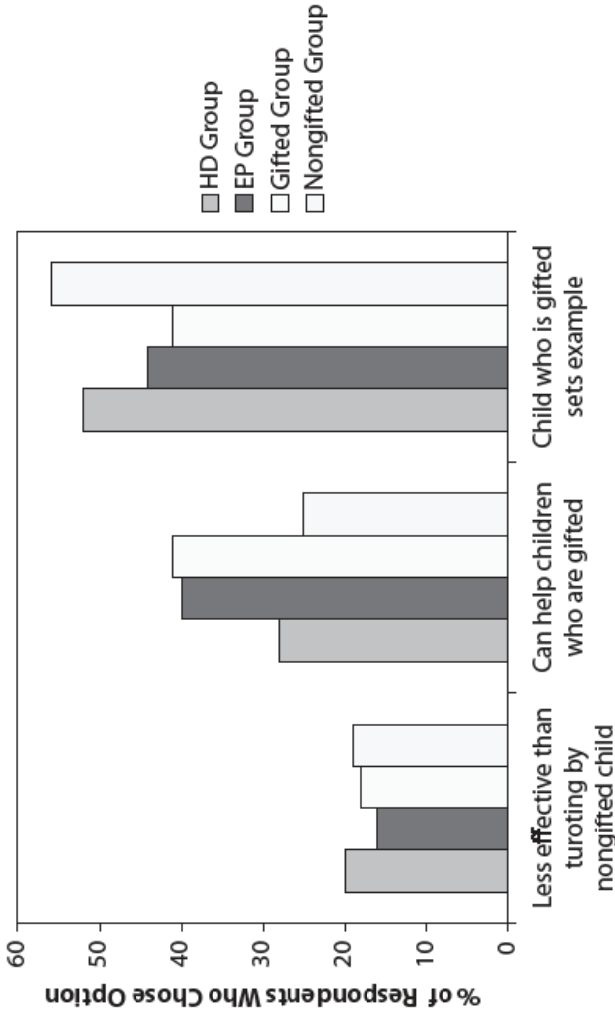
"Using children who are gifted as peer-tutors for children who are behind academically is best associated with which statement?

   a. *Tutoring by a child who is gifted is considered less effective than tutoring by a child who is closer in achievement level to the child who is less advanced;*

   b. *Tutoring children who are less advanced can help the child who is gifted learn content more thoroughly;*

   c. *The child who is gifted sets an example that is often associated with better learning by the child who is less advanced."*

Fifty percent of the total group chose (c); 32% chose (b); and 18% chose option (a). Of HD class participants, 52% chose (c), compared to 44% of EP class participants. HD and EP class participants chose option (b) at the 28% and 40% rates, respectively. The GT group chose responses (b) and (c) at the same level, 41%, and option (a) at the 18% level. The NGT group across classes chose (c) at the 56% level, (b) at the 25% level, and option a at the 19% level (see Figure 3).

Discussion

We set out to evaluate perceptions of undergraduates in preteaching service courses toward school services offered to children who are gifted. In general, we found that preferences among our respondents for placement of children at the elementary school level fell in favor of services carried out in general education settings, and participants in the advanced course (the EP group) tended to favor these services at moderately higher levels than participants in early coursework (the HD group). In addition, our respondents tended to favor interactions between children who are gifted and children with varying levels of intellectual abilities. For instance, we found that our undergraduates generally perceived that students who are gifted should have a positive influence on the climate of the regular classroom. Likewise, preferred services tended to be egalitarian and inclusive in nature, boding well for these future teachers in an era of school reform based on these very issues (Tomlinson, Brighton, et al., 2004). Participants in the senior-level course (the EP group)

Figure 3. Using children who are gifted as tutors in the regular classroom. Questionnaire item was "Using children who are gifted as peer-tutors for children who are behind academically is best associated with which statement? Tutoring by a child who is gifted is considered less effective than tutoring by a child who is closer in achievement level to the child who is less advanced. Tutoring children who are less advanced can help the child who is gifted learn content more thoroughly. The child who is gifted sets an example that is often associated with better learning by the child who is less advanced."

were more likely to choose service programs like cooperative learning within regular classrooms than participants in the sophomore-level course (the HD group). Based on our findings, we encourage instructors of foundation courses in teacher education to continue their integrative focus on concepts that address inclusive practices across the entire spectrum of children's intellectual abilities (e.g., Sapon-Shevin, 1994; Sternberg, 1996).

We did not investigate whether elitism had actually been a factor in the experiential history of our undergraduate respondents, and this may merit consideration in future research. For example, researchers might compare the attitudes of participants and nonparticipants in pull-out gifted programs, compared to participants and observers of programs for the gifted that are initially carried out in the regular classroom (e.g., Renzulli & Reis, 1985).

There are several additional implications that lead from specific perceptions and preferences we found in our study, as well as some group differences worth noting. We discuss these below.

The Need for Special Services

Proponents of services for children who are gifted, particularly advocates of accelerated programs and homogeneous ability grouping, might be alarmed at the response rates from our participants (approximately 76% agreed) concerning the likelihood of children who are truly gifted to excel without special services. If the responses we obtained are at all representative of the general population, proponents of gifted services should take heed. We agree with Grant (2002) who recommended that, rather than base justifications for gifted services on perceived needs (he called these needs claims), proponents should submit proposals for services based on theory, evidence, and on defensible moral values, such as respect for all. Our results offer data-based reinforcement for diligence in addressing appropriate goals for advocacy for children who are gifted.

Furthermore, it does appear that sparse attention is paid to actual empirical data supporting the benefits of special services, specifically the documentation of positive results by program methods that included ability grouping, pull-out programs, and grade acceleration

for children who are gifted. Does our response rate echo a generalized myth that children with intellectual advantages should do well with or without services? We believe our results bear significant implications for both the education of future teachers, and pending confirmation of generalization, for the education of the general public as well.

Placement Preferences for Academic and Enrichment Goals

Our respondents differed in their perceptions of the best placement options for elementary school children who are gifted, depending on whether the goals were academic advancement or enrichment. They chose pull-out programs at the highest rate compared to other options when the goal was academic advancement, but the majority chose regular classroom-based activities with heterogeneous ability groupings when the goal was enrichment. When the goal was academic, the group self-identified as gifted selected pull-out programs as their preference at a considerably higher rate than the NGT group. Because gifted services for elementary-aged children are typically provided in pull-out fashion, we believe that the GT group's stronger preference for pull-out programs reflects some aspect of past experiences, maybe even nostalgia for the selective treatment provided by these programs. We did not ask what types of services our participants had participated in; we recommend that additional questions of this nature be investigated in future studies.

Our respondents' preference for heterogeneous ability groups in regular classroom settings when the goal is enrichment most likely reflects their predominantly egalitarian attitudes. We did not explore placement preferences for other types of goals, and we recommend that future studies explore placement preferences related to goals such as higher order thinking skills or creative problem solving, coupled with qualitative questioning.

Need for Interactions With Heterogeneous Groups

Again, reflecting egalitarian attitudes, and probably concerns about social development, the overwhelming majority of our respondents indicated that children who are gifted need interactions with chil-

dren at varied intellectual levels to reach their fullest potential. This perceived need is contrary to some prominent recommendations in the literature on giftedness (e.g., VanTassel-Baska, 1992). Based upon the consistency of responses to this issue, we suspect that biases toward egalitarian qualities in service delivery, which we associate with a morally defensible stance presented by our undergraduates' instructors and textbooks (e.g., McDevitt & Ormrod, 2002), have influenced their responses. We do not know whether these attitudes would be replicated among representatives of the general public with primary concerns for the gifted, and we recommend future investigations in this matter. Personal experience with parents and teachers of children who are gifted does not predict that these groups would agree with the perceptions we found among undergraduates in pre-teaching service courses. We think it is likely they would express preferences for homogeneous groupings of children with high intellectual ability. Disparities and disagreements between professionals involved in general education and those invested in the education of the gifted can be the foundation of major disruptions and inconsistencies in program offerings.

Peer Tutoring and Grade Acceleration

When making choices about the benefits gleaned from using children who are gifted as peer tutors for those who are less advanced academically, only about one fifth of our respondents recognized that the disparity between achievement levels of the tutor and the tutee might negatively affect the tutoring success. Responses of this nature confirm the existence of some misunderstandings about the nature of effective tutoring (France-Kaatrude & Smith, 1985).

Similarly, an overwhelming majority of our respondents indicated that academic acceleration by skipping grades would have a negative effect on socialization skills. Thus, biases against acceleration confirm Cross' (2002) report and add to previous findings in this area (e.g., Southern et al., 1989).

We recommend that the two areas of specific misconceptions we have just discussed be addressed in teacher training programs, the first area being issues surrounding the effective use of tutors in mod-

eling educational tasks for students at risk of failing and the second being the issue of academic acceleration for the highly gifted.

Concluding Comments

Overall, our results lead to implications for educating undergraduates and graduate students who select teaching in general education or related school-based services as their professional goals. Instruction of these future educators should focus on empirically sound practices for children who are gifted, with some sensitivity to how gifted education should interface with general education (e.g., Shore & Delcourt, 1996).

In recognition of current trends focusing on inclusive practices, reflected by participants in our study, we recommend that university educators encourage our future teachers, school-based mental health professionals, and administrators to think critically about practices such as enrichment activities frequently offered in elementary pull-out programs for children who are gifted. In a critical review, Shore and Delcourt (1996) have classified several activities, including enrichment, encouraging creative abilities, and activities centering on inquiry and discovery, as effective but not uniquely suited to students who are gifted. We believe that the challenge of interfacing between general education and gifted education with emphasis on differentiation is a topic worthy of concentrated study by our future educational professionals (see Tomlinson, 2004).

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End Note

1   Contact the first author for this information.