A Qualitative Comparative Analysis of Gifted Program Models Based on Student Social Interactions

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ABSTRACT

The purpose of this research paper is to provide further insight into the social interactions and relationships of gifted students by addressing a gap in the body of knowledge that does not account for differences in student relationships across differing gifted program models. This study aims to narrow this gap by utilizing a quantitative comparative analysis of elementary gifted and general education students' survey responses from two differing program models: the school-within-a-school model and the pull-out room model. In doing so, this paper discovered that both program models were generally well integrated and had low rates of bullying between gifted and general education students; however, comparatively the pull-out room model had a better integrated group of students, but a higher rate of reported bullying among its students. These findings provide the body of knowledge surrounding gifted education with further insight into the advantages and disadvantages that the use of one program model over the other can have and serves to better the education of both gifted and general education students.

Introduction

Throughout the years, gifted education, also referred to as education programs for highly capable, gifted, high achieving, or advanced students, has become increasingly popular and is now a common aspect in most education programs. Allowing students who typically score at the top of their age groups, in standardized or classroom testing, access to a more advanced curriculum can provide huge advantages to these students. Gifted education programs typically begin in early elementary and can carry on throughout high school.

Despite the widespread popularity of gifted education programs, many programs vary as to how students are identified and the structure of the gifted program. Students' scores on aptitude tests or selection by their teachers, generally determines their placement into a gifted education program. In some programs, students are even identified at different levels of giftedness, some being labeled as highly gifted and placed into even more advanced courses than other gifted courses offered by their school (Neihart, 2007). The program model in gifted programs also varies across school districts, the most common gifted program models being the school-within-a-school model and the pull-out room model. The school-within-a-school model places gifted students in a classroom separate from their non-gifted peers where students receive more advanced instruction (Matthews & Kitchen, 2007). The pull-out room model gifted program places gifted students in an integrated classroom but provides them with routine "pull-out" services where students are removed from their integrated classroom to receive more advanced instruction (Vantassel-Baska, 1987). These discrepancies within gifted education have prompted a wide array of research into the impacts of gifted education on students' learning and socialization in an effort to better gifted education.

Literature Review

Gifted education has been researched and evaluated for decades, its programs and practices have continuously been critiqued and praised to best identify, define, and educate gifted students. Numerous studies have investigated the experiences of gifted students to gain more insight into the potential consequences of gifted programs. One such study evaluated Oakwood Laboratory School's gifted program to determine precisely what makes a gifted program exemplary (Hertzog & Fowler, 1999). Through interviews with teachers, administrators, and parents, Hertzog and Fowler identified an exemplary gifted program as a program, "Where the goal is to maximize a child's full developmental potential" (1999). Hertzog and Fowler's study represents a group of research within the topic of gifted education that has a focus on improving and identifying ways in which a gifted program is effective, and ways in which it is not.

A study conducted by Field and colleagues had a goal similar to Hertzog and Fowler's study. However, this study focused on assessing gifted students' opinions and experiences within the program rather than assessing the program as a whole (Field et al., 1998). Along with assessing the opinions of gifted students, this study also attempted to understand how gifted students coped with the possible negative attributes that came with being labeled as "gifted" (Field et al., 1998). In their conclusion, Field stated that gifted students were not found to experience any negative consequences from being labeled as "gifted" (1998). However, an international study looking into the coping mechanisms of gifted students around the world came to a different conclusion. Cross and colleagues found that not only did gifted students experience negative attributes, such as jealousy from non-gifted peers, in relation to being in a gifted program, but on average gifted students attempted to be humbler as a result of this (2019).

These two studies identified a new topic within the research of gifted education that focuses on the emotional impacts of gifted programs on gifted students. Although these studies touched on the impacts a gifted program can have on its students; none of them analyzed the specific social and emotional impacts a program could have.

Many studies concerned with the social-emotional impacts that a gifted program could have on students placed an emphasis on bullying and the social relationships between students both inside and outside gifted programs. Farmer and Farmer investigated the types of grouping that occurred in a classroom of gifted, general education, and disabled students to get a better idea of the social relationships at play within gifted classrooms (1996). The authors found that being good at schoolwork often determined grouping for girls and athleticism determined grouping for boys (Farmer & Farmer, 1996). Another article focused on the social interactions between gifted and non-gifted students, but focused more on bullying and victimization, rather than social grouping patterns (Peterson & Ray, 2006). Through interviews with eight grade gifted students, this study discovered that although giftedness can lead to great academic achievements, it can also lead to social marginalization and bullying (Peterson & Ray, 2006).

Research on bullying and victimization in gifted education became more developed as studies like Orgurlu and Sariçam's study, which compared elementary and middle school gifted and general education students' experiences with bullying and victimization (2018). This study, like the study by Cross and several others from 2019, found that gifted students commonly experienced negative consequences as a result of being labeled as gifted, such as being subjected to jealousy and being bullied or victimized (Orugurlu & Sariçam, 2018). However, a study by Peters and Bain which compared the bullying and victimization rates between high school gifted and non-gifted students found little to no difference in bullying rates between gifted and non-gifted students (2011). In comparing the findings of Orugurlu and Sariçam to the findings of Peters and Bain, it seems that experiences of bullying and victimization related to gifted education most commonly occur at the lower grade levels. Research concerning the way that gifted education impacts the social and emotional development of gifted children has led to the conclusion that gifted programs do affect the social relationships between gifted and non-gifted students, sometimes in negative ways.

Beyond evaluating gifted programs as a whole, many studies have analyzed the effect that specific models of gifted programs have had on students' education and social relationships. One common program model that has been evaluated is the pull-out model. For example, one study attempted to identify the perfect gifted program model, like Hertzog and Fowler's study, by evaluating and identifying the benefits a pull-out model gifted program can have for gifted and non-gifted students (Juntune, 1999). Through teacher, student, and parent interviews, this study demonstrated how a pull-out model gifted program created a seamless integration of gifted and general education students in both social and school environments (Juntune, 1999).

Despite this glowing review of a pull-out model program, Vantassel-Baska provides a harsh critique of a pull-out room models in her article, claiming that this model of gifted program only further isolates and differentiates gifted students from their non-gifted peers and is not an effective method of teaching elementary gifted students (1987). Vantassel-Baska's review of pull-out model programs leads to some discrepancy on the true effectiveness of the pull-out model.

Despite Vantassel-Baska's conclusions, a study by Miller and Niemi, aimed at assessing the impacts that pull-out models may have on gifted students' learning, reached a different conclusion (1995). Miller and Niemi concluded through analyzing essays written by elementary gifted students, that students were able to identify six areas of importance regarding their education and generally gave positive reviews of their gifted program, disproving Vantassel-Baska's claims that a pull-out model does not effectively integrate elementary students (1995). A study similar to Juntune's study, also set out to identify the best model for gifted education and more specifically, assessed how pull-out models impacted students' social-emotional and academic self-concepts (van der Meulen et al., 2014). This study also contradicted the conclusions drawn by Vantassel-Baska that pull-out models isolated and differentiated gifted students and found that pull-out models had a positive impact on gifted students' social emotional as well as academic self-concepts (van der Meulen et al., 2014). Reviews and studies on the effectiveness of pull-out model gifted programs have been contradictory, making the true effectiveness of how the pull-out model affects gifted students, specifically their social relationships, difficult to determine.

Besides the pull-out room model, another popularized program model for gifted education is the school-within-a-school model. Similar to research focused on pull-out models in gifted education, most studies have attempted to assess the effectiveness of this program model and determine its social impacts on students. A study conducted by Matthews and Kitchen assessed students' and teachers' overall perceptions of a gifted program school-within-a-school model (2007). Through a questionnaire, the authors concluded that teachers and students generally had positive opinions about this gifted program model and found it challenging and rigorous, making this gifted program model an effective way of teaching gifted students (Matthews & Kitchen, 2007). Another study focused more on the social-emotional impacts of ability grouping programs such as the school-within-a-school model. This study concluded that ability grouping was effective for highly gifted students and did not negatively impact their social-emotional learning; however, it could not draw conclusions on how this type of program model impacted moderately gifted students (Neihart, 2007). A study by Kitsantas and others came to a similar conclusion in their study of the social and emotional functioning of elementary and middle school gifted students in a school-within-a-school model gifted program (2017). Kitsantas and colleagues found that overall students' social or emotional functioning was not impacted negatively; however, students did identify areas for improvement within the program to better support students' social and emotional development (2017). These studies have shown that school-within-a-school program models, though flawed, can be advantageous for gifted students' social-emotional well-being and provide an alternative gifted program model comparable to the pull-out model.

Through research concerning the experiences of gifted students, it is undeniable that certain negative attributes, like social isolation, are often associated with being placed into a gifted program, and that different programs, such as pull-out models or school-within-a-school models, impact gifted students' social relationships in different ways. Despite these discoveries, there is no research directly comparing these two program models to gain a better understanding of the impact they may have on the students in these programs. One study compared pull-out room and school-within-a-school models in a classroom of general education students and students with learning disabilities to gain a better understanding of which program model was preferred among students (Klingner et al., 1998). Through extensive student interviews, this study concluded that the pull-out model was the preferred program for both groups of students because of its integration of the two groups (Klingner et al., 1998). However, no study has compared pull-out room and school-within-a-school models within the context of gifted education and its relationship with gifted students' social interactions.

The purpose of this study will be to gain a better understanding of how school-within-a-school and pull-out room models relate to gifted students' social relationships and through comparison, identify the positive and negative

consequences of each program model. This study plans to make this comparison at the elementary level of education, as previous studies have found the most social disparity between gifted and general education students at this level. To accomplish these goals, this study will answer the question: how do the social relationships between elementary-aged gifted and general education students compare across two different gifted program models (school-within-a-school and pull-out room)?

Methods

Study Design

To determine the relationship between gifted program models and students' social interactions a quantitative comparative analysis of students' social interactions was done using a Likert-scale and multiple-choice survey. A comparative analysis was done between these gifted program models to highlight the similarities and differences in students' social interactions within each program model. A survey was used to assess students' social interactions instead of individual student interviews, because the quantitative survey responses made for a clearer comparison between the social relationships in either gifted program. Elementary students were chosen to be surveyed, as these gifted program models, particularly the school-within-a-school models, are used most frequently at the elementary school level and because previous studies, like Orugurlu and Sariçam's study and Peters and Bain's study, have found more social isolation and separation between gifted and non-gifted students at the elementary level.

Setting

In order to compare the correlation between the type of gifted program model and the social relationship between gifted and general education students, students were surveyed from two different school districts, one implementing a school-within-a-school model and another implementing a pull-out room model for gifted programming.

In this study, school district A was used to represent a school-within-a-school model gifted program that typically began in the 3rd grade and ended in the 6th grade. School district A is a large public-school district comprised of mostly White, Hispanic/Latino, and biracial students (53.5% of students in school district A identified as White, 18.5% identified as Hispanic/Latino, and 13.3% identified as biracial). 38.1% of school district A's student body are low-income and 86% of students graduate in four years (Washington Office of Superintendent of Public Instruction [OSPI], 2020b). Within school district A, 5th grade general education students and 5th and 6th grade gifted students were surveyed from school A.

School district B was used to represent a pull-out room gifted program for this study, which involved weekly pull-out services beginning in the 3rd grade and ending in the 5th grade. School district B is a small public-school district comprised of mostly White and Hispanic/Latino students (74.1% of students in school district B identified as White, and 17.8% identified as Hispanic/Latino). Around 31.5% of school district B's student body is low-income and 83% of its students graduate in four years (OSPI, 2020a). Within school district B, 5th grade general education and gifted students were surveyed from a class in school B.

Students from both school districts were in a hybrid model school schedule at the time when this survey was administered. Elementary students from upper grade levels were selected to avoid the potential impacts that Covid-19 may have had on students' social relationships with one another, as the shift to online learning may have altered the social interactions and relationships between gifted and general education students in a way that was not related to differences in gifted program models. Students from upper grade levels were more likely to have experienced any social divisions between gifted and non-gifted students that was related to differences in program models, as they may have been a part of their schools' gifted program prior to the shift to online learning. Despite these precautions, it is possible that Covid-19 still had an influence on the results of this study, because each school district implemented

slightly different hybrid models (in school district A gifted students received their instruction in a hybrid model, but in school district B gifted students received their gifted instruction exclusively online), potentially affecting student interactions. These school districts were chosen due to the personal connections of the researcher, to illustrate a typical school-within-a-school model and pull-out room model, and because these districts had many similar demographic qualities, with the exception of differing forms of gifted instruction.

Measures

A 15-question survey was used to assess the social relationships between gifted and general education students. The survey was conducted through Microsoft Forms, because it was easily accessible to both the researcher and the surveyed students. The survey questions were revised with an elementary school teacher to ensure they were understandable to the average elementary student. The first question of the survey ensured that students understood that their answers would be kept anonymous, that they could opt out of the study at any time, and the purpose of the study. For school district B students, the first question also ensured that students had previously submitted a signed parental consent form (this was not necessary for school district A because this district has a policy of Informed Consent which was overseen by an admin and approved through the district based Internal Review Board). The next four questions covered student background including race and ethnicity, gender, grade level, and program placement. These questions ensured the efficacy of the study as well as provided valuable student demographics.

   Table 1 outlines the following ten questions concerning students' relationships with peers outside of their program. These statements were answered using a Likert-scale, ranging from strongly disagree to strongly agree. Question 1 provided general information on how students felt about peers outside of the program they were a part of. Questions 2-6 concerned the integration of gifted and general education students both inside and outside of school to understand how often students interacted with peers outside of their own program placement. Questions 7-10 were aimed at determining if bullying was occurring between these two groups of students, to examine the quality of social interactions. Gifted and general education students were each given a slightly different set of these ten statements; however, the statements were only altered to discern students' opinions about peers outside of the program of the answering student. Two separate, but identical surveys, were given to the two school districts, in order to determine from which school district each survey response was coming from while maintaining student anonymity.

Table 1. Ten Statement Questionnaire for Gifted or General Education Students

Number	Statement
1	I feel that students inside/outside of the gifted program are different from me.
2	There is a clear separation in my school between gifted and general education students.
3	My school does a good job of encouraging gifted and general education students to work together.
4	I participate in activities with students in/outside of the gifted program during school (ex. Recess activities, projects, etc.).
5	I participate in activities with students in/outside of the gifted program outside of school (ex. Sports, clubs, after school programs, etc.).
6	I've grown apart from a student because they were/I was in the gifted program.
7	I have been teased or made fun of because I wasn't/was a part of the gifted program.
8	I have teased or made fun of someone because they were/weren't in the gifted program.
9	I have seen someone be teased or made fun of because they weren't in the gifted program.
10	I have seen someone be teased or made fun of because they were in the gifted program.

Procedure

Two teachers from each school district, one who taught gifted and one who taught general education, were contacted, and asked if they would be willing to assist with the study. Teachers were chosen due to previous connections with the researcher or by the recommendation of another teacher. After teachers expressed their willingness, school district B teachers were provided parental consent forms to be sent to students' families, giving consent for students to participate in the study (these forms were not necessary for school district A because this school district uses a policy of Informed Consent). This research and methodology were also approved by a district conducted Internal Review Board to ensure the efficacy of this study.

After parental consent was given, teachers were provided a link to the survey and were instructed to give their students class time to complete the survey. In the survey, students were instructed to answer questions honestly and to the best of their ability. Survey results were immediately reported to the researcher through Microsoft Forms. Student responses were then scored based on the degree to which they agreed/disagreed with each of the ten statements. The mean scores to each of the questions were then used to determine the social relationship between gifted and non-gifted students in each program model. Mean scores were used over other statistical data because they most accurately reflected student responses as a whole. The mean scores from each district were then compared to determine the relationship between the type of gifted program model and students' social relationships.

Results

From school A, 40 students responded to the survey and 4 of those students opted out of the study, of those 36 surveyed students, 5.6% identified as Asian, 8.3% identified as Black or African American, 2.7% identified as Pacific Islander, 63.9% identified as White, 13.9% identified as Hispanic or Latino/Latina, 13.9% identified as a race not listed on the survey, and 13.9% preferred not to say. From the surveyed students, 36.1% of the students were female, 58.3% were male, and 5.6% preferred not to say. All the surveyed students from school A were in the 5th or 6th grade and 25 students were a part of their schools' school-within-a-school model gifted program.

From school district B, 5 forms were returned signed by gifted students and 8 were returned by general education students. 14 students responded to the survey, but one student opted out of the survey and did not respond to any questions, all the surveyed students were from the same classroom. One response was omitted from the school B survey because they responded *neutral* to all the questions. Of the 12 surveyed students, 66.7% of students identified as White, 8.3% of students identified as a race not listed, and 33.3% preferred not to say; no student identified as Hispanic or Latino/Latina. 72.7% of the surveyed students were female, 27.3% were male, and 9.1% preferred not to say. All the students surveyed were in the 5th grade and 5 students were a part of their schools' pull-out model gifted program.

Students' responses were reviewed quantitatively by scoring each response, *strongly disagree* was given a score of -2, *disagree* a score of -1, *neutral* a score of 0, *agree* a score of 1, and *strongly agree* a score of 2. The mean, mode, and range of scores for each school district and group of students are provided in Table 2 and Table 3.

Table 2. Student Responses, School A

Question	Mean	Mode	Range
Gifted Students			
1	-0.16	0	-2 to 1
2	-0.44	-1	-2 to 1
3	0.58	1	-2 to 2
4	0.29	0	-2 to 2
5	0.2	1	-2 to 2
6	-0.5	-2	-2 to 2
7	-1.29	-2	-2 to 1
8	-1.8	-2	-2 to -1
9	-1.12	-2	-2 to 2
10	-1.24	-2	-2 to 1
General Education Students			
1	-0.09	-1	-1 to 1
2	-0.36	-1	-2 to 2
3	1.27	2	0 to 2
4	0.36	1	-1 to 2
5	-0.64	-1	-2 to 2
6	-0.82	-2	-2 to 2
7	-1.27	-2	-2 to 2
8	-1.36	-2	-2 to 2
9	-1.45	-2	-2 to 0
10	-0.91	-2	-2 to 2

Table 3. Student Responses, School B

Question	Mean	Mode	Range
Gifted Students			
1	-1	-1	-2 to 0
2	-1.3	-1	-2 to -1
3	0.5	0	0 to 1
4	1.17	1	0 to 2
5	1	1	0 to 2
6	-1	-1	-2 to 1
7	-1	-2	-2 to 2
8	-2	-2	-2
9	-1.5	-1	-2 to -1
10	-0.8	-2	-2 to 2
General Education Students			
1	-0.14	0	-1 to 1
2	-0.71	0	-2 to 1
3	1.29	1	0 to 2
4	0.43	0	0 to 1
5	0.71	1	0 to 2
6	-1.29	-2	-2 to 0
7	-1.29	-2	-2 to 0
8	-1.86	-2	-2 to -1
9	-0.71	0	-2 to 1
10	-0.57	0	-2 to -1

Analysis

Both gifted and general education students in school district A had a mean score of around -0.1 and -0.4 for questions 1 and 2 (which asked students if they viewed themselves as different from their gifted/nongifted peers and if students felt there was a separation between gifted and non-gifted students at their school) respectively, showing that students generally saw themselves as similar to peers outside of their program placement and did not experience any separation between gifted and non-gifted students. General education and gifted students also had a slightly positive mean score for questions 3 and 4 (questions 3 and 4 asked students if their school encouraged gifted and non-gifted students to interact with one another and if gifted and non-gifted students participated in activities with one another during school) ; however, general education students had a slightly negative mean score for question 5 (question 5 asked students if gifted and general education students participated in activities with one another outside of school). This indicates that students felt their school encouraged cooperation between these two groups of students and that these two groups of students also participated in social activities with one another fairly frequently; however, general education students felt they did not interact with gifted students socially outside of the school environment. Students also had a mean score of around -0.6 for question 6 (which asked students if they had lost social connections because of their program placement), showing that most students did not experience a break in social connections because of a difference in program placement. These results suggest that collectively, students from both program groups interact frequently with one another and that their placement into a gifted program does not hinder their social relationships. The survey results from school district A also showed that the social interactions between gifted and non-gifted students are mostly healthy ones. When asked if they had experienced any kind of teasing or bullying as a result of differences in program placement, students from both groups on average had a score of around -1 to -1.5 and the mode score for both groups

was -2. Students' responses to questions 7-10 (which were all questions regarding bullying/teasing between gifted and non-gifted students) suggest that students do not tease or bully each other because of their program placement and have positive social interactions. Based on these results, school district A's general education and gifted students are generally well-integrated and there is a decent amount of social interactions between gifted and non-gifted students.

Gifted students responded very negatively to the first to questions of the survey and general education students also responded negatively, although there was more variation in general education students' responses. This illustrates that for school district B, students also do not experience social divisions between the two groups of students. For questions 3-5 (questions regarding students' participation with peers outside of their program), students also responded positively, ranging from a mean score of around 0.4 to 1.2. These results indicate that school B has successfully integrated their two groups of students socially. Students also had a mean score of around -1.1 for question 6 (a question that asked students if they had lost contact with a peer because of their program placement) in both gifted and general education students, making it clear that gifted program placement did not disrupt any pre-existing relationships. school district B also had survey results that suggest that gifted and non-gifted students had generally healthy social relationships. Students from both groups had very negative mean scores; most mean scores were around -1 or higher, which were all questions regarding bullying/teasing between gifted and non-gifted students. Although this groups' scores were not as negative in response to school district A's scores, their scores still indicate that wide-spread bullying or teasing is not occurring as a result of program placement. Survey results also indicate that school district B also has well-integrated gifted and general education students.

Both school district A and B had a good integration between students, meaning that students seem to interact fairly frequently with peers outside of their own program placement in both school districts, and students on average reported having healthy social interactions with one another. However, in order to understand the differences in students' social relationships between each program model, a comparison of the two school districts must be done. When compared with one another, school district B appears to be more integrated and has higher instances of bullying in gifted and general education students than school district A.

The mean scores for question two of the survey are much more negative for school district B than they are for school district A. For school district A, the mean scores to question 2 (a question asking students if they experienced a separation between gifted and non-gifted students at their school) for gifted and general education students was -0.44 and -0.36 respectively, for school district B the mean scores were -1.3 and -0.71. As previously stated, these negative mean scores indicate that both schools are generally well integrated. However, comparatively, there is more of a noticed separation between these two groups of students in school district A, as students in school district B on average disagreed more with the statement that there was a clear separation between gifted and general education students. The mean scores from questions 4 and 5 also indicate that students from different program models in school district B spend more time together than students in school district A. In response to question 4, which asked students if they participated in activities with peers outside of their own program placement during school, students from school district A had a mean score of 0.29 (for gifted students) and 0.36 (for general education students). In school district B, students responded with a mean score of 1.17 (for gifted students) and 0.43 (for general education students). For question 5 of the survey, which asked students if they had participated in activities with those outside of their program placement outside of school, school district A had a mean score of 0.2 and -0.64 for gifted and general education students respectively and school district B had a mean score of 1 and 0.71 for gifted and general education students respectively. Although the difference in mean scores for question 4 is not very significant between general education students, the differences between mean scores of gifted students for question 4 and the differences between mean scores of both groups of students for question 5 is very noteworthy. These results show that on average students from school district B spend more time with peers outside of their program placement than school district A. Overall, the survey responses of students from both school districts suggest that students from school district B are better integrated than school district A. This makes logical sense because the program model used in school district B by nature causes gifted and general education students to interact with each other more.

Responses to question 9 and 10 (questions that asked students if they had ever seen someone be bullied or teased because of weren't apart a gifted program) show that general education students from school district B experience more bullying than general education students in school district A. General education students from school district A disagreed more heavily on average (-1.45) with question 9 than general education students from school district B (-0.71). Gifted students' responses also supported these claims, as gifted students from school district A also disagreed more heavily with the statement in question 10 that they had seen students be bullied because they weren't a part of their schools gifted program (-1.24), when compared to gifted students' responses from school district B (-0.8). Gifted students' responses to question 7, which asked students if they had been bullied or teased because they were a part of their schools gifted program, also showed that gifted students from school district A also experienced more bullying than students from school district B. Gifted students from school district A had a mean score of -1.29 to question 7, showing that they disagreed more heavily with question 7 than gifted students from school district B who had a mean score of -1. Although these responses are all negative and don't indicate widespread bullying is occurring at either school, the notable difference in mean scores indicates that both gifted and general education students from school district B experienced more bullying as a result of their program placement than students from school district A.

Discussion

Based on this research, there is a relationship between the type of gifted program model and students' social relationships within this group of students. Overall, students in both gifted program models were well integrated and had typically positive social interactions. In neither program model was there evidence to suggest a distinct separation between gifted and general education students, or widespread bullying between gifted and non-gifted students. Despite this, both gifted program models do provide students with different advantages and disadvantages, students in pull-out model programs seem to be more integrated than students in school-within-a-school model programs; however, students in pull-out model programs seem to have higher rates of bullying than they do in school-within-a-school model programs. These results are not unlike previous studies; Klingner and colleagues' study also found the pull-out model to be more effective in integrating students with learning disabilities than the school-within-a-school model (1998), and Orugulu and Sarıçam's study which also identified instances of bullying within the gifted student body in a pull-out model program (2018). Although this study did not identify a cause for these discrepancies, understanding how these program models compare with one another can provide educators with valuable insights on how to best educate gifted students without impacting them in a negative way socially.

Conclusion

This research expands the body of knowledge in the field of elementary education by directly comparing the social relationships present in two gifted program models, contributing to a better understanding of each gifted program model and providing the groundwork for more detailed research into the impacts of these program models. This study only surveyed students from two schools and from two different program models, creating a very limited group of students whose experiences may differ greatly from those of students elsewhere in the country. Future studies could broaden the conclusions drawn in this study by surveying a wider range of students from a variety of schools and program models. This research also had smaller sample sizes, making the results of this study harder to generalize to a wider group of students. Covid-19 partially contributed to the reduction in sample size, particularly with school district B, as the shift to online learning hindered teachers' communications with students and their families, making it harder for permission slips and surveys to be filled out. Of the 50 forms sent out to gifted students' families, five were returned and of the 17 forms sent out to general education students' families, eight were returned. Other studies could also utilize sample sizes with different socioeconomic or ethnic makeups, and potentially generate different

outcomes which will assist in understanding the scope of these results. Broadening the number and variety of students surveyed in future studies will allow the conclusion drawn in this research to be extended to a wider array of school districts and program models.

Future research could also employ mixed or qualitative methodologies to achieve a more detailed understanding of students' social interactions. This study used specific statements to understand students' social relationships, making it impossible for students to report experiences of social division or integration that were not listed in the survey. Since these outside experiences were not considered by this study, this paper's understanding of students' social relationships is somewhat limited. Although a qualitative method could impair a study's ability to clearly compare program models, the use of a qualitative methodology would allow future research to gain a more complex understanding of students' social relationships. With further research, a new understanding of these gifted program models could be found that will better gifted education as a whole and provide new academic opportunities to a future generation of students.

Acknowledgments

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