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Developing Talents Among High-Potential Students From Low-Income Families in an Out-of-School Enrichment Program

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Extensive evidence has demonstrated that marginalized ethnic/cultural groups, English language learners, and individuals from low-income families continue to be underrepresented in gifted programs and talent development programs (Barkan & Bernal, 1991; Ford, 1995, 1998; Matthews & Matthews, 2004; Miller, 2004; Richert, 1987; Robinson, Bradley, & Stanley, 1990; Terman, 1925; Worrell, 2003, 2007; Worrell, Szarko, & Gabelko, 2001). Recent attention has focused particularly on responding to the needs of high-potential students from low-income backgrounds (VanTassel-Baska & Stambaugh, 2007). It is imperative that parents and educators provide academic and social support to high-potential students from low-income families. Out-of-school enrichment programs such as Saturday programs are suggested for high-potential students from low-income families because these experiences can positively influence students' achievement levels, enrollment in advanced courses, and decisions to pursue

Summary

Enrichment programs can provide various social and academic benefits for high-potential learners. However, students from low-income families receive fewer opportunities for academic enrichment than students from higher income backgrounds. This qualitative study examined the experiences and perceptions of high-potential students from low-income families who received financial support in order to attend an out-of-school enrichment program. Interviews and observations revealed four major benefits: positive experiences; new, above-grade-level concepts; interactive learning; and social support. In addition, descriptive results from student evaluations comparing students from low-income families to the rest of the participants indicated that both groups had similar perceptions of their classroom activities, concepts, and teachers. Findings suggested when they are provided with opportunities to participate in classes that interest them, high-potential students from low-income families can successfully perform in an out-of-school enrichment program and experience the same social and academic benefits as other gifted students.

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a college degree (Stambaugh, 2007). Out-of-school enrichment is defined as unique out-of-school educational experiences that engage and challenge students.

In this study, we investigated how high-potential students from low-income families responded in an out-of-school enrichment program. These students were provided with full scholarships and transportation to enable their participation. We conducted qualitative interviews and observations to examine students' enrichment program experiences.

In this study, high-potential students are defined as individuals from low-income families who scored in the 70th percentile or above on a standardized assessment or who were recommended by a teacher, but who have not previously been identified as gifted using traditional means. We refer to them as "high-potential" because the literature suggests that these students often go unrecognized (Wyner, Bridgeland, & Diulio, 2009) and without intervention, fall behind others of similar ability (Plucker, Burroughs, & Song, 2010) due to factors associated with poverty. Thus, we sought to recruit individuals whom we believed had a high potential of successfully performing in advanced classes that appealed to their interest areas. We review the literature on gifted students from low-income families because this literature is directly related to the recognition and development of talents among high-potential, low-income students who are underserved in programs for gifted students.

Theoretical Framework

Challenges of Gifted Students From Low-Income Families

Gifted students from low-income families may face challenges because of financial constraints at home. VanTassel-Baska, Patton, and Prillaman (1991) suggested, "Students who come from low-income families in which the parents' educational level and occupational status are also commensurately low creates a

special constraint" (p. 614). In addition, VanTassel-Baska, Feng, Quek, and Struck (2004) noted that low-income parents may believe that there is a fee for their children to participate in a gifted program or that this participation may develop negative changes in their child.

Teachers may not recognize the potential of gifted students from low-income families. Because gifted students from low-income families may achieve at lower levels than students from higher income families, and because they may need assistance with their learning skills, teachers may not see these students as being gifted or as having potential (VanTassel-Baska et al., 2004). Poverty can mask ability and potential when these children are compared to their more affluent peers for identification (Wyner et al., 2009). As a result, teachers may recognize and initiate the referral for the identification of only high-performing and motivated students (Frasier et al., 1995).

Support for Gifted Students From Low-Income Families

Parents and families have the most influence on children's academic performance, and this is especially true for children from low-income families (Kitano, 2003). Friedman (1994) suggested that low-income parents distance themselves from schools for a number of reasons including experiencing economic stress, feeling uncomfortable talking with school personnel, and viewing some school activities as exclusive. She proposed the Upstream Helping Model to help strengthen and mend school and family relationships. This model includes three steps: (1) determine the family's strengths and needs, (2) use the family's strengths to meet its needs, and (3) assist and teach the family how it can meet the needs of their gifted child.

Olszewski-Kubilius and Grant (1994) suggested that gifted children from low-income families should be provided opportunities to develop social support systems; extracurricular resources such as school clubs, summer enrichment programs, mentors, and

cultural opportunities may assist gifted children from low-income homes to further develop their talents.

Identification of Gifted Students From Low-Income Families

Researchers have attempted to identify students from low-income families for gifted program services using various non-traditional methods. For instance, Swanson (2006) sought to identify such students through Project Breakthrough. The project staff used curricula designed for gifted students and taught students of all ability levels to determine if the achievement levels of all students would improve by using these curricula and to identify more gifted students from low-income families. Students' achievement improved during the 3 years of the project, resulting in more students from low-income families identified for gifted services. Other strategies used to identify students from low-income families for gifted services include the use of performance assessments (VanTassel-Baska, Johnson, & Avery, 2002); teacher rating scales (Hunsaker, Finley, & Frank, 1997; Peters, Gentry, Gates, Peterson, & Mann, 2009); nonverbal assessments (Mills & Tissot, 1995; Naglieri & Ford, 2003); best performance and dynamic assessments (Borland & Wright, 1994; Kirschenbaum, 1998); and portfolio assessments (Wright & Borland, 1993). Multiple measures and multiple pathways are necessary to ensure that students are accurately and appropriately identified for gifted programs (Piirto, 2007; VanTassel-Baska et al., 2002). In addition, Burney and Beilke (2008) suggested a "holistic identification of high-ability students living in poverty" (p. 309), proposing that these students receive early intervention, a continuum of services, and opportunities to develop their talents.

Enrichment Programs for Gifted Students

Enrichment programs for gifted students offer experiences not provided to them in the regular classroom setting. Students can be provided with fast-paced learning, in-depth knowledge of

accelerated content, and the opportunity to work on independent projects (Olszewski-Kubilius, 2003). In addition to their academics, students in enrichment programs have opportunities to make new friends and collaborate with peers who have similar intellectual levels (Olszewski-Kubilius, 2003). Olszewski-Kubilius (1989) suggested that gifted learners receive academic and social benefits from enrichment programs such as social support from teachers, counselors, and intellectual peers; positive attitudes toward learning; acquisition of study skills; independence, if the program is residential; and exposure to college life and attainment of knowledge about various university-level programs.

Participation in enrichment programs can positively affect gifted learners. Hertzog (2003) interviewed 50 college students to discover how their previous experiences in gifted programs affected their lives. The students reported that their gifted programs offered challenging content, various instructional methods, and opportunities to explore their interests, enhancing their self-esteem and preparing them for college. In addition, enrichment programs can positively influence students' attitudes toward certain content areas including math (Swiatek & Benbow, 1991) and science (Stake & Mares, 2001). The Purdue Three-Stage Model (Moon, Kolloff, Robinson, Dixon, & Feldhusen, 2009) has been used in Purdue's enrichment programs as well as in school-based enrichment programs. Moon, Feldhusen, and Dillon (1994) found that the model improved most gifted students' critical thinking and problem-solving skills. Renzulli and Reis (1997) also found benefits to enrichment programming, reporting that the Schoolwide Enrichment Triad Model enhanced instruction and students' self-concepts.

Enrichment Programs, Enrichment Strategies, and Students From Low-Income Families

Gifted learners from low-income families may need additional support in order to participate and succeed in enrichment programs (Ford, 1995, 1998; Olszewski-Kubilius & Grant, 1994). For instance, Project EXCITE (Olszewski-Kubilius, 2006, 2007;

Olszewski-Kubilius, Lee, Ngoi, & Ngoi, 2004) is a math and science enrichment program that provides financial assistance and additional support to students from underrepresented cultural groups and low-income families beginning in third grade. Multiple measures are used to identify giftedness in this population. Opportunities and additional support are available for parents through parent workshops and for students through enrichment courses, assistance, tutoring from high school students, and additional services to further support, encourage, and motivate students. Project EXCITE resulted in an increase in the number of students from underrepresented cultural groups enrolling in advanced middle school math classes as well as an increase in the number of students placed in advanced classes in high school.

The goals of Project STREAM were to identify more students from underrepresented cultural groups and low-income families as gifted through the use of multiple measures, to provide opportunities for enrichment through university classes and campus residency, and to involve students in tours of university campuses at least once each semester. Clasen (2006) completed a follow up on the participants of Project STREAM 13 years after their participation in the enrichment program. Clasen collected quantitative data to investigate participants' high school and higher education achievements, and she gathered qualitative data to examine their career choices and to explore how Project STREAM influenced their academic goals. One of the major findings of the study was the positive relationship between the students' academic achievements and their participation in Project STREAM.

Enrichment methods that incorporate student interest and choice can influence the talent development of students from low-income families. Reis, Gentry, and Maxfield (1998) examined two schools with high levels of poverty to investigate how enrichment clusters can be used to develop talents and to encourage students to pursue their interests. Teachers indicated that providing the students with choice and teaching to their interests, together with using advanced content and hands-on activities, improved

the students' motivation to learn. In a 2-year study, Reis et al. (2005) examined the effectiveness of the Schoolwide Enrichment Reading Model with students from low-income families who had varying achievement levels. Teachers used enrichment strategies, such as allowing students to select books in their interest area and that were above their reading level, which led to improvements in students' achievement levels and increased their interest in reading.

Purpose

The purpose of this qualitative study was to learn about the experiences and perceptions of the kindergarten through fifth-grade students participating in Project HOPE (Having Opportunities Promotes Excellence) during the fall of 2008. We interviewed HOPE Scholars about their Super Saturday experiences and observed them in Super Saturday classes. In addition, we used quantitative methods to assess how similar the students who consented to interviews and observations were to other students who participated in Super Saturday.

Research Questions

The following research questions guided this study:

1. Can an established out-of-school enrichment program, like Super Saturday, successfully involve high-potential students from low-income families in its enrichment classes?
2. How do high-potential students from low-income families describe their experiences of participating in an out-of-school enrichment program? What kinds of experiences did these students have in their Super Saturday class, with their peers, and with their instructors?
3. How do high-potential student participants from low-income families and student participants from non-low-

income families evaluate their participation in Super Saturday?

Methods and Procedures

Participants

Schools. In 2007, 5 school districts were selected that had more than 30% of their students living with low-income families and that were at a commutable distance to a major university. More than one third of the students in the Anderson, Benjamin, and Dennis districts receive free or reduced lunch. Franklin and Lincoln are metropolitan districts that have each experienced an increase in the number of children from low-income families, with increases in the last 10 years of 23% and 18%, respectively. Also within the last 10 years, enrollment of students from underrepresented cultural groups has grown by 200% in these districts Franklin from 11% to 33% and Lincoln from 9% to 31%. More than half of the students enrolled in school at Franklin and Lincoln receive free or reduced lunch (see Table 1 for demographics of districts).

Students. We recruited HOPE Scholars to participate in the program using the following process. First, we asked contact persons to invite students scoring at or above the 70th percentile on extant measures of achievement or ability; this is especially important because the gap continues to widen between the number of students from low-income families and non-low-income families scoring at the highest levels on national achievement tests (Plucker et al., 2010). In doing so, we used scores to include students because too often test scores are used to exclude students from opportunities in gifted education from which they might benefit (Worrell, 2007). These exclusionary practices have resulted in underrepresentation and in a gate-keeping mentality. Further, Wyner et al. (2009) indicated that a score by a student from a low-income family at or above the 75th percentile is com-

Table 1

Demographics of Targeted Districts and Estimated Number of High-Potential, Low-Income K–5 Students for Each District From 2007–2008 School Year Data

	Anderson	Benjamin	Dennis	Franklin	Lincoln
Location	Rural	Rural	Rural	Metro	Metro
Enrollment K–12	956	1,948	1,649	3,320	7,469
Free/reduced lunch eligible	34%	35%	33%	58%	50%
Est. number of K–5 students for programs	15	31	25	89	172
Caucasian	98%	91%	93%	69%	67%
African American	0%	1%	0%	0%	0%
Hispanic	1%	5%	6%	29%	17%
Asian	1%	0%	0%	0%	1%
Multiracial	1%	2%	1%	2%	5%
Native American	0%	0%	0%	0%	0%

Note. **Pseudonyms are used for district names.**

parable to a score at or above the 95th percentile by a student who is *not* from a low-income family. In this manner, we recruited participants from low-income families whom we believed had high potential for success in our program for gifted students. Contact persons then communicated with parents through letters, phone calls, and parent meetings to help parents understand how Super Saturday could benefit their children both academically and socially. Next, teachers completed the HOPE Teacher Rating Scale (Peters et al., 2009) for each nominee. This instrument was piloted during this first year of Project HOPE, and students whose HOPE Scale scores were at or above 50/65 points were also invited into the program. Since this pilot use of the HOPE Scale, it has been subjected to validation study and revisions (Peters, 2009), but at this time we simply used it as another pathway and another source of information. We also accepted nominations from parents who inquired and from school counselors. The idea was to cast a wide net, encourage participation, and make adjustments as needed to help students who chose to participate in the program.

HOPE Scholars. Each student identified by the above-described methods was invited to participate in the program, with Spanish translations provided to families as needed. Since its inception in spring 2008, approximately half of the students invited to participate each session have elected to enroll in Super Saturday, and we refer to these students as HOPE Scholars. This method of invitation and enrollment has yielded approximately 100 HOPE Scholars for each program session, and it yielded a total of 113 HOPE Scholars during fall 2008.

HOPE Scholar Study Sample. Prior to the study, each HOPE Scholar was given consent and assent forms. Thirty-seven out of 113 HOPE Scholars who attended Super Saturday in fall 2008 returned both the assent and consent forms, despite multiple attempts to secure more consenting students. The final sample for the qualitative portion of study consisted of 33 of these 37 students who were either observed and/or interviewed by Project HOPE staff. Four students who consented were not interviewed or observed due to scheduling problems or absences. Eighteen of the 33 students were both observed and interviewed. In addition, we examined the fall 2008 students' course evaluation data for all participating HOPE Scholars (n = 113) and non-HOPE Super Saturday participants (n = 283). On the last day of Super Saturday, all students completed an evaluation of their course, except those who were absent on the final day. Because only 33 HOPE Scholars consented to participate in both the qualitative study interviews and observations, we used evaluations to examine whether our consenting participants differed from HOPE Scholars program participants who did not consent to the study or from other program participants on the constructs measured by the end-of-program evaluation.

Consenting HOPE Scholar Participants. Consenting HOPE Scholar participants included the HOPE Scholars who returned the consent and assent forms, and these students were interviewed and/or observed. These students also completed course evaluations on the last Saturday of Super Saturday. The consent-

ing HOPE Scholars consisted of 33 high-potential students from low-income families in grades 1–6. Twenty-one percent were in grades 1 and 2; 76% in grades 3 and 4; and 3% in grades 5 and 6. Female students comprised 73% of the sample. Seventy-three percent were Caucasian, 15% Hispanic, and 12% Multiracial. In addition, the students participated in classes in various content areas: 21% in science, 18% in math/logic, 24% in engineering, 18% in humanities, and 18% in technology.

Nonconsenting HOPE Scholar Participants. Nonconsenting HOPE Scholar participants included the HOPE Scholars who attended Super Saturday in the fall of 2008, but who did not return both the assent and consent forms. These students were not interviewed or observed. However, we received prior IRB approval to use their evaluation data in order to examine their satisfaction with their Super Saturday course as part of our routine program evaluation. The nonconsenting HOPE Scholars consisted of 76 students. Five percent were in kindergarten; 23% in grades 1 and 2; 40% in grades 3 and 4; and 32% in grades 5 and 6. Female students comprised 49% of the sample. Sixty-three percent were Caucasian, 14% Hispanic, 11% African American, and 10% Multiracial. Two percent did not indicate a response for race on their registration form.

Non-HOPE Super Saturday Participants. Non-HOPE Super Saturday participants were not from low-income families and they did not receive full financial assistance to attend Super Saturday. In order for non-HOPE Super Saturday participants to participate in Super Saturday, we recommended that they meet at least three of the following criteria: the ability to handle above-level content, a high interest in the course, achievement scores at or above the 90th percentile, teacher recommendation, IQ of 120 or above, and participation in a gifted program at their school. The non-HOPE Super Saturday participants group consisted of 283 students in grades pre-K–8. Eight percent were in pre-K and kindergarten; 18% in grades 1 and 2; 29% in grades 3 and 4; 37% in grades 5 and 6; and 8% in grades 7 and

8. These students were not interviewed or observed, and only their evaluations of their Super Saturday course were examined. Some non-HOPE Super Saturday participants were absent on the final day. Female students comprised 44% of the sample. Sixty-six percent were Caucasian, 8% Asian or Pacific Islander, 4% African American, 4% Hispanic, 4% Multiracial, 4% Other, and 1% Native American. Nine percent did not indicate a response to race on their registration form.

Intervention. Developed by John Feldhusen in the late 1970s, Super Saturday is an enrichment program designed for gifted and talented students in grades pre-K through 8 (Feldhusen & Wyman, 1980) offered by the Gifted Education Resource Institute (GERI). Classes containing 18 or fewer students are offered from 9 a.m. until noon for 6 Saturdays during the fall semester and again for 6 Saturdays during the spring semester. Students enroll in courses that interest them, and teachers teach all content at levels two or more grades above the students' actual grade level. Courses are offered in the science, technology, engineering, and math disciplines and in arts and humanities. High-quality instructors teach Super Saturday courses, and they include certified teachers, graduate students, or doctoral students who attend a training session prior to teaching in the program to learn effective, research-based practices for working with talented youth. With the advent of Project HOPE, we also included information during the training to help instructors understand the academic and social needs of high-potential students from low-income families.

Funded by the Jack Kent Cooke Foundation, Project HOPE offers full tuition, materials, and transportation to Super Saturday for high-potential students from low-income families in grades K–5 who attend five participating school districts within commuting distance of Purdue University (Gentry, 2008). Students involved in out-of-school enrichment programs benefit from exposure to a stimulating learning environment and from the opportunity to share ideas and socialize with high-ability peers who share their love of learning (Barnett, Albert, & Brody, 2005). Students from diverse backgrounds benefit from participation

in out-of-school academic programs by improving their thinking skills, gaining maturity and independence, and expanding their ideas about options for the future (Brody & Mills, 2005). In addition, the five participating school districts receive professional development that includes effective teaching strategies and promising practices that will help teachers recognize and meet the needs of high-potential students from low-income families.

As part of the study, the HOPE Scholars participated in the Super Saturday program for 3 hours on 6 consecutive Saturdays, so the students experienced 18 hours of above-grade-level content in their areas of interest. In addition, Super Saturday instructors completed a 3-hour training prior to teaching in the program. This training session included topics such as recognizing gifted characteristics, understanding high-potential students from low-income families, using differentiation techniques, using the Purdue Three-Stage Model (Moon et al., 2009), and providing an appropriate environment for high-potential learners. New teachers participated in curriculum counseling, in which the teachers met individually with a graduate student certified in gifted education to review their lesson plans, to provide feedback to teachers, and to discuss any additional questions the teachers may have had about preparing for Super Saturday. All teachers submitted their lesson plans and syllabi at least one month before the session began, and they were reviewed by the coordinator to ensure that teachers included above-level content, differentiation, and student-centered activities within their lessons. In the teacher training and in curriculum counseling sessions, teachers were encouraged to provide extra scaffolding to any students who needed additional support to be successful in the course and to seek help from project staff if there were difficulties in teaching the HOPE Scholars.

Design

We used qualitative inquiry with a quantitative comparison as the basis for this study. We used a grounded theory approach (Strauss & Corbin, 1990); data gathered from interviews and

observations facilitated the examination of the experiences of HOPE Scholars who attended the fall 2008 Super Saturday program. This approach allows researchers to develop theory from their data analysis rather than using a particular theory to explain their data. A team of researchers was involved in all aspects of the study and assisted with analysis, discussion, coding, and constant comparison (Patton, 2002). Additionally, due to the relatively low consent rate, to investigate whether the consenting HOPE Scholars differed from nonconsenting HOPE Scholars or from other Super Saturday participants, descriptive data from all student program evaluations were compared. These comparisons allowed us to determine whether our sample of consenting HOPE Scholars was similar to the nonconsenting HOPE Scholars, as well as to understand whether HOPE Scholars, in general, differed from the other program participants.

Interviews

Project HOPE staff members used a semi-structured interview protocol with 26 HOPE Scholars from nine different classes (i.e., Art Around the World, Electrical Engineering, Vet Med, Chess, Writing, Origami Geometry, Young Engineers, Mini Med, Web Design) either on the fourth or fifth day of Super Saturday. The purpose of the semi-structured interview was to allow the students to reflect, discuss, and elaborate on their Super Saturday experiences without leading by the interviewers. Interviews were recorded and transcribed, and interviewers followed the interview protocol. By conducting interviews near the end of Super Saturday, students were able to reflect on their experiences after attending classes for at least 4 weeks. Of the 33 consenting HOPE Scholars, 26 students were interviewed, 25 students were observed, and 18 of these students were both interviewed and observed. The following items comprised the semi-structured interview protocol:

1. Tell me about your Super Saturday experience.
2. What did you learn?
3. What did you like best?

4. What did you like least?
5. Would you want to come to Super Saturday again? Why or why not?

Observations

Project HOPE staff members observed the HOPE Scholars and completed field notes by using an observation protocol, which focused on whether students engaged in the class activities, interacted with the instructor, engaged with their peers, and whether such interactions were positive or negative. We used the observation protocol in order to gain additional understanding of how the students interacted in classroom activities, with their peers, and with their instructors. We expected that the observations would provide us further insight into the students' experiences and would support and expand on the data gathered from the student interviews. Observers spent a minimum of 30 minutes observing each child in the class and often observed several students in a class during a 3-hour class period. In total, 25 students were observed in nine different classes (i.e., Art Around the World, Electrical Engineering, Vet Med, Chess, Writing, Origami Geometry, Young Engineers, Mini Med, Web Design) by one of five Project HOPE staff members. The staff members were familiar with the students because they worked each week during the fall 2008 Super Saturday and interacted with the HOPE Scholars when requesting and gathering their assent and consent forms, but those were the only prior interactions the staff had before they conducted the interviews and observations.

Data Analysis

A research team of two faculty members, three graduate students, and two undergraduate researchers provided multiple perspectives during the coding process and engaged in constant comparison. We analyzed the interview transcriptions and observation field notes by using open, axial, and selective coding (Strauss & Corbin, 1990). First, open coding helped us determine general

categories for the data. Initial open codes included categories such as *fun*, *learned new concepts*, *choices in learning*, *challenging*, and *made friends*. We grouped these open codes conceptually into different axial categories such as *hands-on activities*, *relevant experiences*, *engagement*, and *positive interactions*. We then organized the categories to determine how they related to each other, which resulted in four final themes defined by their codes and the narrative data.

Comparative Descriptive Evaluation Data Analysis

Using program evaluation data, we investigated whether differences existed among consenting HOPE Scholars, nonconsenting HOPE Scholars, and general Super Saturday participants. Specifically, a mean for the eight items on the Primary Grade Evaluation Form (GERI, 2008) and subscale means on the My Class Activities (MCA) instrument (Gentry & Gable, 2001) were compared across the three groups. The Primary Grade Evaluation included eight items to which grade K–2 students responded using a 5-point response format accompanied by smiling to sad faces (i.e., ) to help students interpret the items. This instrument is used in program evaluation but has not been tested for psychometric veracity. Sample items include: *I want to learn more about the things taught in this class*; *I worked hard in this class*; and *I like what I learned in this class*.

My Class Activities is a 31-item student survey that measures third- through eighth-grade students' perceptions of interest, challenge, choice, and enjoyment and also uses a 5-point response scale (5 = *always*; 4 = *often*; 3 = *sometimes*; 2 = *seldom*; 1 = *never*). This instrument was normed on a sample of elementary and middle school students and factor analyses were completed as part of the construct validation process. The goodness of fit indices for the elementary and middle school sample were .95 and .88 and the root mean square error of approximation (RMSEA) for these samples were .04 and .09. Alpha internal consistency estimates for the elementary and middle school sample ranged from 0.68 to 0.91 and from 0.75 to 0.92.

To see if the HOPE participants viewed their courses differently from non-HOPE Super Saturday participants and to see if consenting HOPE Scholar participants evaluated their experiences differently from nonconsenting HOPE Scholars, mean scores on both instruments were calculated and examined among the different groups. A total mean score for the eight items from the Primary Grade Evaluation Form was computed. HOPE Scholar participants (n = 24) were compared to non-HOPE Super Saturday participants (n = 55) and then consenting HOPE Scholars (n = 7) were compared to nonconsenting HOPE Scholars (n = 17) using t tests. MANOVA was then completed using the four MCA subscales to compare HOPE Scholars who consented (n = 18), those who did not consent (n = 34), and non-HOPE Super Saturday participants (n = 135). Because statistical power decreases when cell sizes are very unequal (Tabachnick & Fidell, 2006), participants were randomly selected from the two larger groups (i.e., non-HOPE Super Saturday participants and non-consenting HOPE Scholars) to create cell sizes equal to that of the smallest group (i.e., consenting HOPE Scholars). These groups then consisted of 18 participants for the MANOVA analysis. The dependent variables were interest, challenge, choice, and enjoyment, and the independent variable was HOPE status (i.e., consenting HOPE Scholars, non-consenting HOPE Scholars, and non-HOPE Super Saturday participants).

Results

Qualitative Findings

Analysis of the HOPE Scholars' interview transcriptions and student observation logs revealed four major themes. Theme 1 (students had positive experiences) was experienced by most of the HOPE Scholars, with 22 out of the 26 participants who were interviewed expressing comments that occurred under this theme. Theme 2 (students learned new, above-grade-level concepts) was experienced by 25 out of the 26 participants, with 16

students commenting about this theme two or more times during their interviews. Theme 3 (students participated in interactive learning) was described by 21 out of the 26 participants, and 9 mentioned it more than once during their interview. Theme 4 (students experienced social support) occurred least frequently in the interviews, with 6 of 26 participants commenting about their social experiences. However, out of the 25 student observations, observers noted that 23 students positively interacted with the instructor and/or were engaged with their peers.

For all themes, total number of student comments ranged from 1 to 13 ($M = 7.5$, $SD = 3.19$). One student expressed only one theme, 5 students expressed two themes, 13 students expressed three themes, and 7 students expressed four themes.

Theme 1: Students Had Positive Experiences. Students had positive experiences in the Super Saturday program. They described engaging in fun, enjoyable learning experiences; experiencing choices; not wanting to leave; and wanting to return. It was evident that the HOPE Scholars had positive experiences throughout the Super Saturday sessions. One could walk on the bus each Saturday morning and see the students bubbling with excitement. As the students boarded the bus at noon each Saturday, they laughed and visited with one another as they shared their accounts of what they experienced that day in class. On the last day of Super Saturday, parents filled the hallways as they anxiously waited to view their child's presentation that their child had been eagerly working on in and outside of class. These informal observations were corroborated by the data we collected.

Most of the 26 participants interviewed had a variety of positive experiences to share with the interviewers, and the observations of students also indicated that the HOPE Scholars enjoyed the classroom activities. AR described a positive experience in Art Around the World, "sometimes we visit places in our imaginations, and I like it" (personal interview, November 8, 2008). CR3, who was enrolled in Web Design, said, "Well, my experience here at Super Saturday is that I've had really good fun" (personal interview, November 8, 2008). CR1, a student in Vet Med,

when asked why she wanted to return to Super Saturday, replied, "Well, it's really fun and you get to do different things and when you're sitting at home bored then you get up on Saturday morning . . . and you won't be bored!" (personal interview, November 8, 2008). KF in Vet Med described why she would return to the Super Saturday program, "I think it's a fun experience learning about things you really want to learn" (personal interview, November 8, 2008). CM shared the reasons she would come back to Super Saturday, "It's fun taking classes on Saturday . . . some of your friends go to it . . . and you get to pick a class" (personal interview, November 8, 2008).

Theme 2: Students Learned New, Above-Grade-Level Concepts. Students who attend the Super Saturday program engaged in learning new concepts that are often not taught in a regular classroom because these concepts are two or more grade levels above their actual grade level. Students normally are not exposed to this level or type of content in their elementary school classes and because of limited resources and a focus on reading and mathematics at the elementary level (Eisner, 2005). Further, due to the limited financial resources of their families, HOPE Scholars may not have exposure to this kind of content at home. Although these concepts were above their grade level, the HOPE Scholars demonstrated, through observations, interviews, and student evaluations, that they could successfully perform in a fast-paced, above-level enrichment classroom. For instance, the HOPE staff observed students participating in various advanced content activities such as creating personal web pages using FrontPage in Web Design, testing different objects to determine if they were conductors of electricity in Electrical Engineering, and dissecting and discussing the different functions of the heart in Vet Med.

Twenty-five of the 26 participants interviewed described the advanced content that they learned in Super Saturday. CM described what she learned in Electrical Engineering, "Like, about electrons and electricity and stuff. Like electric things and computers and stuff like that" (personal interview, November 8, 2008). TR in Art Around the World, a class for grades 1 and 2,

told us about her learning, "we've learned about Egypt and China and Australia" (personal interview, November 8, 2008). AR described various places in Art Around the World and explained, "I learned lots of things . . . it was Mexico that they used yarn to do painting" (personal interview, November 8, 2008). In Vet Med, CR1 shared, "We learned about different animals and if you were a vet, how you would take care of them . . . how you would do surgery" (personal interview, November 8, 2008).

Theme 3: Students Participated in Interactive Learning. Students engaged in hands-on activities and real-life experiences. Interactive learning is strongly encouraged in the Super Saturday program and most of the participants said that they were engaged in activities that could be categorized as hands-on activities or tasks that were similar to real-life experiences. Student observations also indicated that 24 out of the 25 students observed were engaged in interactive activities such as using new strategies to play chess, working on FrontPage in order to create web designs, dissecting specimens, and taking apart disk drives.

HOPE Scholars described examples of how they experienced interactive learning at Super Saturday. CR3, enrolled in Web Design for grades 3 and 4, stated, "I learned how to do hyperlinks . . . and how to add pages on websites" (personal interview, November 8, 2008). She also added, "we got to put our website on the Internet." EG, enrolled in Vet Med for grades 3 and 4, also described the interactive learning that occurred in her class, "We dissected a pig's heart . . . a sheep's brain" (personal interview, November 8, 2008). VB was also enrolled in Vet Med and stated, "You get to open their stomach and learn about their inside" (personal interview, November 8, 2008). When IM1 was asked what he liked best at Super Saturday he said, "Probably taking floppy disks apart and stuff" (personal interview, November 8, 2008). AT shared what she liked best about Super Saturday, "I like how . . . we make our own websites. . . . It's kind of like a way of expressing yourself to me. Like you can make it on any topic you like so I like that" (personal interview, November 8, 2008).

Theme 4: Students Experienced Social Support. Students described making new friends, meeting nice people, and interacting positively with peers and instructional staff. One of the benefits of special enrichment programs is having social support from teachers and peers of like ability. Our field notes indicated that 17 of the 25 students observed interacted with their peers and/or teachers by asking them for help, participating in class discussion, assisting others, and collaborating during class time. Four of the 26 interviewees reported that making friends and encouraging others was a highlight in their Super Saturday experience. CR3 in Web Design believed that the best thing about her Super Saturday experience was, "probably meeting new friends" (personal interview, November 8, 2008). CR1 in Vet Med described a social experience by saying, "there was this group and they didn't want to do it but I encouraged them to do it" (personal interview, November 8, 2008). JS in Origami Geometry wanted to return to Super Saturday because, "there's a lot of nice people" (November 8, 2008). Although this theme was not prevalent throughout the interview transcriptions, much evidence of socialization and social support existed in the observation logs. Our field notes showed that 23 out of 25 students observed interacted with their instructor and/or peers, and 20 had positive peer interactions. Field notes for the 6 remaining participants did not include whether or not these students had positive interactions.

Negative Comments. Interview Question 4 asked students what they liked least about the program. Fourteen of the 26 HOPE Scholars gave no answer. The remaining 12 offered comments that did not fall under the four major themes. However, these comments were not necessarily negative. For instance, KF described his least favorite aspect about his Vet Med class, "That we don't dissect something every day" (personal interview, November 8, 2008). AR described her least favorite from Art Around the World, "There's something I don't like about getting messy" (personal interview, November 8, 2008). AT from Web Design stated, "Some things you just have to try different things and if they don't work, it kind of gets me frustrated" (personal interview, November 8, 2008).

Comparative Descriptive Findings

The students who attended the last day of Super Saturday completed an evaluation of their class using either the Primary Grade Evaluation or MCA. The Primary Grade Evaluation included items that asked the students questions about various aspects of their class, such as interest level of concepts and activities, and asked them to rate their teachers. The means and standard deviations of the student responses to the aggregated eight items were calculated for four groups: HOPE participants (n = 24, M = 4.63, SD = .46), non-HOPE Super Saturday participants (n = 55, M = 4.56, SD = .58), consenting HOPE Scholars (n = 7, M = 4.68, SD = .23), and nonconsenting HOPE Scholars (n = 17, M = 4.61, SD = .53). In order to test statistical significance, we conducted t tests to compare HOPE Scholar participants vs. non-HOPE Super Saturday participants (t =.50, df = 77, p = .62, d = 0.13) and to compare consenting HOPE Scholars vs. nonconsenting HOPE Scholars (t =.33, df = 22, p = .75, d = 0.17). None of the groups were statistically different from each other, suggesting that the groups had similar evaluations of the program.

My Class Activities consists of 31 items that measure interest, challenge, choice, and enjoyment. The mean and standard deviation for each factor were calculated for three groups: consenting HOPE Scholar participants, nonconsenting HOPE Scholar participants, and non-HOPE Super Saturday participants. This was done to see if consenting HOPE Scholar participants differed from others in how they viewed their Super Saturday experiences. (See Table 2 for the means and standard deviations for MCA). In order to determine whether the means of the three groups were significantly different, a MANOVA was completed using the combined subscales on the MCA, resulting in a statistically nonsignificant finding with a medium effect size (*Wilks'* λ = 0.864, df = 53, p = .51, η^2 = 0.07). This finding indicates that HOPE Scholars, whether or not they consented to be interviewed and observed, did not differ statistically from other Super Saturday participants in their views of program interest, challenge, choice, and enjoyment. This finding provides evidence that the students

Table 2

Means and Standard Deviations of My Classroom Activities

	n = 18 Non-HOPE Super Saturday participants		*n* = 18 Consenting HOPE Scholar participants		*n* = 18 Nonconsenting HOPE Scholar participants	
	Mean	*SD*	Mean	*SD*	Mean	*SD*
Interest	4.51	.50	4.41	.47	4.31	.63
Challenge	3.75	.53	3.51	.81	3.38	.84
Choice	3.48	.89	3.56	.11	2.95	.11
Enjoyment	4.66	.37	4.56	.59	4.36	.64

we interviewed and observed were similar to the other participants (i.e., nonconsenting HOPE Scholar participants and non-HOPE Super Saturday participants) in how they viewed their experiences in Super Saturday. The high means across all groups on these subscales also indicate that on average all students viewed their experiences favorably. Thus, we believe that the 33 consenting HOPE Scholars provide a good representation of all HOPE Scholars who participated in fall 2008, as the constructs measured are similar to the qualitative themes.

Discussion

Our results support previous findings that describe academic benefits for high-potential students from low-income families when they are exposed to areas of high interest, high-level content, and hands-on activities through enrichment (Reis et al., 1998, 2005). Our findings also demonstrate how high-potential students from low-income families can develop social support from their teachers and classmates (Olszewski-Kubilius & Grant, 1994). For instance, the students had similar positive perceptions of their Super Saturday experience, as evidenced by the four major themes that emerged from the data. The HOPE Scholars

most frequently commented about advanced concepts that were learned (96%), positive experiences (85%), interactive learning (81%), and social support (31%). Field notes from observations supported these themes, but social support was much more evident throughout the observation field notes, which indicated that 92% of the HOPE Scholars received social support from either their instructor or peers. In addition, 46% of the participants described what they liked least about the program; however, these comments did not result in any consistent themes. Based on these data, it appeared that most students had valuable, positive experiences in the program, with few negative experiences.

Talent among high-potential students from low-income families often goes unrecognized and untapped without support and encouragement from educators. These students often do not participate in gifted programs, especially out-of-school programs designed for gifted students. Our findings indicate that these students can benefit from these enrichment experiences when transportation is provided, a wide net is cast to ensure inclusiveness, contact persons provide regular communication, and when small class sizes offer educational opportunities students may not experience in their schools.

Our Project HOPE staff used multiple identification measures (Piirto, 2007; VanTassel-Baska et al., 2002) to identify high-potential students from low-income families as HOPE Scholars in the Super Saturday program. Students among this population with achievement scores at the 70th percentile and higher were considered, and teachers completed a teacher rating scale that was designed to aid the identification of high-potential students from low-income families.

Our Project HOPE staff used various strategies to meet the needs of our HOPE Scholars. For instance, our Super Saturday program provided training to our teachers (Begorary & Slovinsky, 1997), so they could learn more about the characteristics of high-potential students from low-income families and teaching strategies that would be most beneficial to this underrepresented population. In addition, our staff provided various methods of support in order to increase support and communication for our

low-income families and in order for our HOPE Scholars to remain in our programs (Ford, 1995, 1998; Olszewski-Kubilius et al., 1994). For instance, class brochures are printed in English and Spanish because we have a portion of our HOPE Scholars who speak Spanish as their first language. HOPE Scholars are financially supported by receiving free transportation to our program each Saturday, full tuition is waived, and supplies for out-of-class projects are provided if there is a lack of supplies at home. In addition, Super Saturday teachers regularly communicated with parents through newsletters and parents were invited on campus each week to visit our Parent Lounge, which provided them with current trends in gifted education.

Furthermore, high-potential students from low-income families can gain many of the social and academic benefits (Olszewski-Kubilius, 1989) that other gifted students who participate in enrichment programs receive. For instance, our interviews indicate that these HOPE Scholars made new friends throughout the program, and our observations showed us that these students also worked collaboratively with their intellectual peers (Olszewski-Kubilius, 2003). Field notes and interview comments indicate that students were supported socially by their teachers and peers. During the interviews, most of the 26 participants described positive experiences about their Super Saturday class, which indicate that their experiences either gave them positive attitudes about learning or supported their positive attitudes about learning. These HOPE Scholars, whether they consented to be interviewed or observed or not, did not differ from other students with regard to their evaluation of their program experiences. All students rated their experiences high on the evaluation instruments.

Our findings indicate that high-potential students from low-income families were successful and positively perceived their experiences in an out-of school enrichment program when provided opportunities to enroll in courses of high interest, participate in hands-on activities, and be exposed to advanced content. In addition, these high-potential students from low-income families perceive an out-of-school enrichment program similarly to students who are not from low-income families. We can conclude

that their positive experiences and interactions indicate that they enjoyed and felt comfortable in an out-of-school enrichment program. The results of the Primary Grade Evaluation and MCA indicate that HOPE Scholars and non-HOPE Super Saturday participants perceived the Super Saturday classroom activities, concepts, and teachers similarly. We can conclude that, if given the opportunity and financial support to be able to participate in a Saturday program designed for gifted youth and to be able to enroll in classes in areas of high interest, high-potential students from low-income families can experience positive interactions, enjoy participating, and learn new and challenging information in this context, as well as fit in with other more affluent participants.

Limitations

The findings of this qualitative study are limited because these are results from one out-of-school enrichment program. This program had certain criteria that the students had to meet in order to participate in this program. Other programs may not have the same criteria. However, after examining the practice that occurred during the first year of this project, observations, interviews, and observation data indicated that our high-potential students from low-income families were positively influenced by our program. In addition, enrichment programs can vary widely in their curriculum, instructors, and student population. Because of this variability among programs, we cannot generalize these findings to other enrichment programs that provide opportunities for high-potential students from low-income families.

Another limitation to this study is the sample. Not only is the sample size small, but it was not ethnically diverse. A large percentage of all three groups were Caucasian, and African Americans were a small percentage of the non-HOPE Super Saturday participants group only. Thus, although we recognize that African American students are underrepresented in gifted and talent development programs across the country, we acknowledge that our sample did not contain these students; rather, our

sample contained students who reflected the demographics of our sample schools, and who were all from low-income families.

Future Studies

A suggestion for future research is to examine the achievement scores and identification of high-potential students from low-income families who attend enrichment programs. One could examine if students' school achievement scores improve, and if more high-potential students from low-income families receive gifted services from their school over time. Researchers could also complete follow-up studies with the HOPE participants to investigate how Super Saturday influenced their academic lives. Do the teachers from the students' home schools recognize any differences in their students since their participation in an out-of-school enrichment program? What are the Super Saturday teachers' perceptions of the HOPE Scholars? Other underrepresented groups, such as African American students, could also be examined to see how they would respond to the Super Saturday program.

Implications

An important implication for this study is that educators should use multiple measures (Piirto, 2007; VanTassel-Baska et al., 2002) that include casting a wide net for high-potential students from low-income families to qualify for enrichment programs. Using a Saturday program as early intervention (Burney & Beilke, 2008) for students among this population can aid in the development of their talents. Students may or may not need additional support if they are participating in enrichment that is in areas of high interest.

Conclusion

High-potential students from low-income families were provided scholarships to attend an out-of-school enrichment program. A qualitative study with a quantitative comparison examined how the students responded to participating in Super Saturday. Based on students' interview responses and observation field notes, these students had positive experiences, learned advanced concepts, participated in interactive learning, and experienced social support from teachers and peers.

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