



## Evaluation of the AVID/TOPS Program's Resources & Costs

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## Introduction

The AVID/TOPS program is a promising education reform that promotes high school completion and college attendance among student groups traditionally underrepresented in higher education. The program combines a national education reform model, Advancement Via Individual Determination (AVID), with the Boys and Girls Club of Dane County's (BGCDC) Teens of Promise (TOPS) program to provide a range of supports and enrichment opportunities for students in the "academic middle." In place since 2009 in the Madison Metropolitan School District's (MMSD) four comprehensive high schools, the program is a product of a unique and successful partnership between the MMSD and the BGCDC. Through this partnership, the school district and community organization share responsibility for the program's implementation with both entities contributing organizational and financial resources critical to the program's success.

A multi-year impact evaluation of the AVID/TOPS program showed significant gains in college readiness and college attendance among students who participated in the program during their high school careers, especially low-income and students of color.<sup>1</sup> However, like many programs designed to improve on-time high school graduation and transitions to college, the AVID/TOPS program has entailed additional investments of time and money on the part of the MMSD and the BGCDC. Gaining a better understanding of the resources required to implement this program is necessary to inform efforts to hone the program's implementation in MMSD schools, as well as to inform future efforts to replicate it elsewhere.

During the 2013-2014 school year, a resource cost study of the AVID/TOPS program was undertaken with two goals in mind:

1. Developing a better understanding of the resources—and corresponding costs—required to implement the AVID/TOPS program.
2. Describing the MMSD-BGCDC partnership, including how the two organizations contribute resources to support the AVID/TOPS program.

This report summarizes the study's findings. In the following sections, we describe the AVID/TOPS program model, including how MMSD and BGCDC work in partnership to implement the program in MMSD's four comprehensive high schools, and the resource requirements to enact this model. In doing so, we show how MMSD and BGCDC share responsibility for and contribute resources to the program. We also present cost estimates for implementing the AVID/TOPS program and compare these costs to the program's impacts.

The remainder of this report is organized as follows. First we describe the study's design, including the questions we set out to answer, and then we present the data and methods used to answer these questions. We then describe the study's findings in three parts - what we learned about the program's design and resources; costs; and cost effectiveness.

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<sup>1</sup> See Goldrick-Rab, S., Kinsley, P. & Hernandez, A. (2016). *AVID/TOPS 2014-2015 District Findings: Final Report*. Madison, WI: Madison Metropolitan School District.

# The Study

## Study Purpose

The purpose of this study was to develop a better understanding of the resources—and corresponding costs—associated with implementing the AVID/TOPS program. Given the partnership between MMSD and BG CDC, it was also important to describe how the organizations collaborate and contribute resources to support the program. In both instances, the priority was to develop a detailed profile that describes how the program operates and characterizes the resources used to implement the program. A second goal was to value these resources to provide estimates for the program’s costs. Specifically, the study addressed three sets of questions:

1. What is the AVID/TOPS program design? How do MMSD and BG CDC work together to implement the program?
2. What resources were used to implement the AVID/TOPS program in MMSD’s high schools? In what ways do schools use resources differently to implement their programs? And, what were MMSD’s and BG CDC’s respective resource contributions to the AVID/TOPS program?
3. What does it cost to implement the AVID/TOPS program? What factors influence the program’s costs? How do the program’s costs compare to its potential benefits?

Below, we describe the study’s design, particularly how we identified the resources used to implement the program and estimate program costs.

## Study Design

### *Describing the Program & Identifying Resources*

We used the “ingredients method” to identify the resources used during the 2013-14 school year to implement the AVID/TOPS program in MMSD’s four comprehensive high schools.<sup>2</sup> The ingredients method entails enumerating and categorizing all of the personnel and non-personnel resources used by a program.<sup>3</sup> Ingredients reflect the actual – not budgeted – level of effort to implement the program. For instance, ingredients included the actual time spent by AVID elective teachers and TOPS coordinators, as well as other Club and school personnel. We also identified the amounts and types of non-personnel resources used, including supplies and materials, program fees, and facilities.

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<sup>2</sup> In our data collection, we focused on identifying resources that were used to implement the AVID/TOPS program and did not enumerate resources for other educational or student support activities in place at MMSD or BG CDC.

<sup>3</sup> See Levin, H. M. & McEwan, P. J. (2001). *Cost-effectiveness analysis: Methods and applications (2<sup>nd</sup> ed.)*. Thousand Oaks, CA: Sage Publications.

To identify the ingredients used to implement the AVID/TOPS program, we collected data from multiple sources including:

1. Documents such as program descriptions, school schedules, personnel rosters, and interagency agreements.
2. MMSD & BG CDC program budgets and expenditure summaries.
3. Site visits to schools and the BG CDC, and interviews with key district, school, and program personnel.

The process resulted in a detailed descriptive profile of the AVID/TOPS program and an inventory of the types and amounts of resources used to deliver the program. We organized the program description and resource inventories according to three components: 1) Program oversight by MMSD & BG CDC; 2) AVID-related activities at school sites; and 3) TOPS-related activities. In addition, we categorized each ingredient according to who provided that ingredient – MMSD, BG CDC, or community members. This permitted us to understand the distinct contributions made by each entity to the AVID/TOPS program’s implementation. The result was a resource “recipe” for the program that can guide further program development and inform efforts to replicate the program elsewhere.

#### *Cost Estimation*

Program costs were estimated by assigning a dollar value to each ingredient.<sup>4</sup> Market prices determined an ingredient’s value. For instance, school personnel time was valued using district-wide average compensation (salary and benefits) for teachers and other instructional, student support, and administrative staff.<sup>5</sup> Similarly, the time spent by volunteers who served as tutors and mentors was valued in terms of what they typically might be paid for that time (e.g., average wages for tutors). We used actual expenditures to value the costs of supplies and materials, program fees, and other non-personnel resources. Facilities costs were valued according to prevailing rates for renting space of similar size and quality in the Madison, Wisconsin metropolitan area. Taken together, the resulting cost estimates represent the actual cost – in local dollars – of a particular program ingredient for the 2013-14 school year. Ingredients’ costs were summed according to the AVID/TOPS program’s components (i.e., program oversight, AVID-related activities; and TOPS-related activities). The sum of the value of the costs for all components is the total cost for the AVID/TOPS program.

#### *Comparing Costs & Program Effects*

In addition to understanding the resources used to implement the AVID/TOPS program and its costs, it is also useful to compare program costs and effects. Such comparisons can be used to characterize a program’s relative productivity across outcomes and participant subgroups. In this study, we compared per pupil program costs to two

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<sup>4</sup> See Chambers, J. G. (1999). *Measuring resources in education: From accounting to the resource cost model approach*. US Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics. Levin, H. M. & McEwan, P. J. (2001). *Cost-effectiveness analysis: Methods and applications (2<sup>nd</sup> ed.)*. Thousand Oaks, CA: Sage Publications.

<sup>5</sup> Information on the prices used to value personnel time is available upon request.

effectiveness estimates taken from an external evaluation of the AVID/TOPS program – on-time high school graduation and college enrollment.<sup>6</sup>

## Study Findings

The discussion of the study’s findings is organized according to the key questions that guided our work: 1) What is the AVID/TOPS program design? 2) What does the program cost? and 3) How do the program’s costs compare to its effects?

### What is the AVID/TOPS Program Design?

In 2008, MMSD and BGCDC collaborated to create the AVID/TOPS program, which combines the national AVID school reform model with the BGCDC’s TOPS program. Although tightly integrated, AVID and TOPS each offers distinct supports and enrichment opportunities for students. In the following sections, we describe each component (AVID and TOPS) separately and how the MMSD-BGCDC work together to deliver the integrated program.

#### AVID

AVID is a national school reform model that prepares students for success in high school, college, and careers. Many AVID students are the first in their families to attend college and come from groups traditionally underrepresented in higher education. Selected students are drawn from the “academic middle” and are viewed as capable of attending college but at risk of falling short of their potential. The national AVID model requires students to enroll in a rigorous college-preparatory curriculum, as well as participate in specialized AVID programming that features:

1. An AVID elective course that teaches organizational and study skills, critical thinking, and questioning.
2. An AVID tutorial that provides students with small group academic support and models for problem solving.

The national AVID program also recommends college visits and guest speakers but offers no formal guidance for this program component (Figure 1).

The AVID national model consists of 11 “essentials”<sup>7</sup> designed to provide both the means and outcomes to engage students, their teachers, and to reach school-wide integration. They include guidance on identifying and selecting students (Essentials 1 & 2), organizing the school around AVID principles (Essentials 3, 4, & 11), supporting teacher practice

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<sup>6</sup> See Goldrick-Rab, Kinsley, & Hernandez (2016) for additional information on the external evaluation and the methods used to estimate program impacts.

<sup>7</sup> See AVID Center. (2016). AVID’s 11 Essentials. Retrieved from <http://www.avid.org/essentials-and-quality-assurance.ashx>

(Essentials 9 & 10), and engaging in classroom learning opportunities (Essentials 5, 6, 7, & 8).

AVID is designed as a college-readiness system that trains teachers to teach the AVID elective course and administrators to implement AVID school-wide. These trainings provide continual professional development to both AVID elective and non-AVID teachers to improve AVID electives and encourage spillover of AVID methods into non-AVID classes, thereby establishing a school-wide AVID culture.

At MMSD, AVID students experience a college-preparatory curriculum alongside their AVID elective course. The elective course supports their increased academic load through a combined learning skills curriculum and tutoring experience. Students participate in AVID-related activities during their AVID elective course, one period each school day. On Mondays and Wednesdays, the curriculum days, students receive instruction using a prescribed AVID curriculum designed to teach them best practices for engaging in their other coursework. During the AVID tutorial class periods on Tuesdays and Thursdays, students work in small groups with a trained tutor to solve homework problems from their other courses. Tutors coach students through problem-solving techniques where students learn how to answer their own questions and rely on peer knowledge. On Friday motivational days, students engage in experiential learning. The class meets with guest speakers, career panels, and school guidance counselors to discuss topics related to college and career preparation. Four times per year students participate in daylong college visits.

**Figure 1. AVID Elective Course Overview**

<b>AVID Coursework</b>	<ul style="list-style-type: none"> <li>• National Curriculum</li> <li>• WICOR- <i>Writing to Learn, Inquiry, Collaboration, Organization, and Reading to Learn</i></li> </ul>
<b>AVID Tutorial</b>	<ul style="list-style-type: none"> <li>• Small group academic support</li> <li>• Models for problem-solving</li> <li>• Tutoring by college-educated adults</li> </ul>
<b>Experiential Learning</b>	<ul style="list-style-type: none"> <li>• Field trips</li> <li>• Speakers</li> </ul>

In addition to student experiences, the MMSD’s AVID program includes intensive student monitoring. Teachers assigned to the AVID program serve as liaisons between AVID students and their non-AVID teachers, following up on missed homework assignments, poor grades, as well as monitoring performance. In turn, AVID teachers serve as a resource for other teachers when they have concerns about AVID/TOPS students. Each school also constitutes a site team, which regularly meets to discuss student progress and identify opportunities for additional student support and interventions to promote achievement across the curriculum.

MMSD’s AVID program also incorporates training and professional development in AVID methods that is available to high school teachers and other personnel district-wide. These trainings occur prior to and throughout the school year. In addition, MMSD pays for teachers and other instructional personnel to attend national AVID training sessions that occur during the summer months.

*TOPS*

The BGDC’s Teens of Promise (TOPS) program expands the AVID program to include mentoring activities, academic support, internships and career exploration opportunities, and college transition support for students (Figure 2). TOPS matches AVID students with mentors from the local community, provides additional tutoring for struggling students, and, for juniors and seniors, summer career programs (Figure 2). BGDC matches students with mentors, and the pairs meet at least once per month throughout students’ high school careers. AVID students also have the opportunity to receive additional tutoring during their lunch hour and after school. Rising juniors are eligible to participate in TOPS’ Career Exploration where they explore careers and visit employers within their field of interest. The TOPS program also offers a limited number of paid, summer internships for rising seniors. Interns work 6-8 weeks over the summer, funded either by the employer or by the BGDC. To celebrate seniors’ successfully completing the AVID/TOPS program and graduating from high school, the TOPS program hosts a senior celebration to acknowledge their efforts. Faculty and staff from MMSD and BGDC attend, along with students’ families.

Additionally, the TOPS program provides ongoing support to students as they transition to college, including navigating the financial aid process, accessing campus resources, and course registration. College continuation counselors also maintain contact with students as they progress through college. They track students’ course-taking by semester, provide guidance to students on how to navigate social norms and expectations, and organize AVID/TOPS alumni activities.

**Figure 2. AVID and TOPS Programmatic Elements**

AVID	TOPS
<ul style="list-style-type: none"> <li>• AVID coursework</li> <li>• Tutorial</li> <li>• Intensive student support &amp; monitoring</li> <li>• Professional development in AVID methods</li> </ul>	<ul style="list-style-type: none"> <li>• Mentoring program</li> <li>• Supplemental tutoring</li> <li>• Summer experience program (internships and career exploration)</li> <li>• College transition and continuation support</li> <li>• Senior celebration</li> </ul>

*AVID/TOPS Program Participation*

Most students enroll in the AVID/TOPS program at the start of their freshman year, and proceed through the program as a grade-level cohort. Interested, eligible middle school students apply to the program in the spring of their eighth grade year to participate in the AVID/TOPS program starting in 9<sup>th</sup> grade. Students write applications and complete

interviews; site teams at each high school select students to participate in the incoming freshman class.

Starting in 2009, each of MMSD's four comprehensive high schools participated in the AVID/TOPS program (Figure 3): East, La Follette, James Madison "Memorial", and West high schools (Figure 3). However, the pervasiveness of the strategies varies across school sites. East High School became a National Demonstration School because they use AVID strategies school-wide, thus exposing students outside of the AVID/TOPS program to the AVID curriculum and teaching methods. In the other three high schools, the AVID program operates as a targeted intervention for selected students.

In total, during the 2013-2014 school year, 689 high students participated in the AVID/TOPS program. East's program had the most participants, with 249 students, and Memorial had the least, with 84 students. Altogether, nearly two-thirds of program participants were from low-income families, and the majority were students of color (Figure 3).

**Figure 3: AVID/TOPS Participation, By School Site (2013-14)**

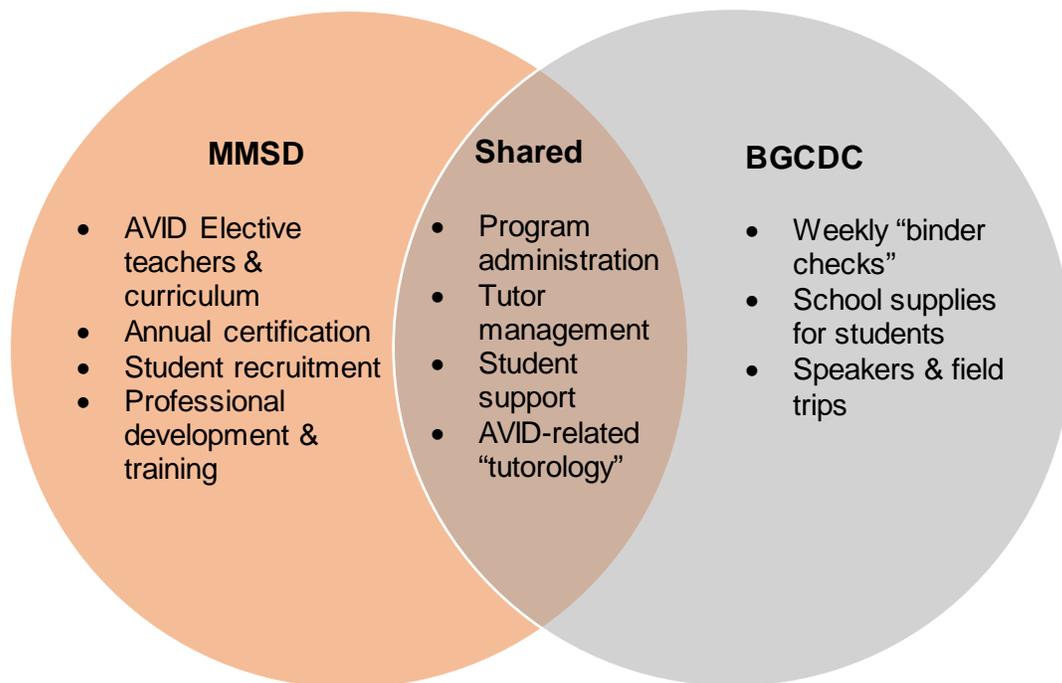
	<b>MMSD (Total)</b>	<b>East</b>	<b>La Follette</b>	<b>Memorial</b>	<b>West</b>
School enrollment	7,358	1,608	1,476	1,832	2,032
AVID enrollment	689	249	210	84	146
Number of AVID Students (by Grade)		Number of AVID Classrooms (by Grade)			
9 <sup>th</sup>	242	3	3	2	2
10 <sup>th</sup>	162	3	2	1	2
11 <sup>th</sup>	143	2	2	1	1
12 <sup>th</sup>	101	2	2	1	1
AVID/TOPS participant demographics					
Male (%)	44%	39%	46%	47%	45%
Race/ethnicity (%)					
Asian American	9%	16%	4%	8%	7%
African American	30%	31%	32%	31%	26%
Hispanic/Latino	30%	52%	28%	18%	46%
Multi-racial	**	29%	10%	7%	6%
White	21%	33%	26%	32%	14%
Low income (%)	67%	72%	66%	64%	71%
Special Learning Needs (%)					
English Language Learner (ELL)	39%	41%	31%	12%	46%
Special Education	7%	8%	18%	8%	8%

### *The MMSD-BGCDC Partnership*

AVID/TOPS is the product of a unique and successful partnership between MMSD and the BGCDC. In this partnership, the school district and community organization share responsibility for the program's implementation with both entities contributing organizational and financial resources critical to the program's success (Figure 4). The two organizations are fully integrated such that the private entity is not simply "adding on" (supplementing) but rather "adding in" (participating) to the program's implementation.

The partnership is anchored in the organizations' shared responsibility for implementing the AVID program's two-pronged approach to student support: the AVID elective course and academic tutoring sessions. Nationally, in most AVID classrooms, an elective teacher is responsible for both the AVID course delivery and overseeing the tutoring sessions. In the AVID/TOPS partnership BGCDC rather than the MMSD finances two in-school coordinators who manage the AVID tutorial, which includes co-leading the tutoring sessions with the classroom teacher and supervising tutor work. TOPS coordinators also oversee the weekly process for checking student work ("binder checks"), an AVID requirement.

**Figure 4. Division of Responsibilities for AVID-only Program between MMSD & BGCDC**



The presence of the TOPS coordinators in each school allows for a natural division of labor in the classroom between the elective teachers and TOPS coordinators, as well as provides additional expertise and gives personnel the time to work with students. AVID elective teachers and TOPS coordinators work closely together to monitor student

progress and support student needs. For instance, AVID elective teachers and TOPS coordinators meet weekly to review students' academic performance and develop a coordinated response, where necessary, for the upcoming week's activities.

The organizations also work together to ensure that both schools and students have the resources needed to implement the AVID program. Specifically, the tutorial days are jointly supported by the school district and BGCDC. BGCDC centrally hires and trains all the tutors necessary for the in-class tutoring sessions in the AVID "Tutorology" method; and MMSD and BGCDC jointly fund a Tutor Manager (employed by BGCDC) who is responsible for these tasks. TOPS coordinators, a position created and funded by BGCDC, manage all the placed tutors at the site level; freeing AVID coordinator time from the task. MMSD pays for schools' annual licensing fee and AVID curricular expenses, as well as provides schools with annual stipends for program-related supplies and materials. At the beginning of the school year, the TOPS program provides all AVID students with the school supplies required by the AVID curriculum.

Separately, each organization assumes responsibility for additional aspects of the AVID program. MMSD oversees site operations at the schools, including the required annual AVID certification process, student recruitment, and AVID-related professional development and training. BGCDC coordinates—and funds—the experiential learning opportunities, including monthly speakers and four college field trips per year for students in grades 9-11, and three such trips for high school seniors.

A shared leadership model has been critical to the partnership's success. Each organization has a point person with time dedicated to the AVID/TOPS program; at the district level, MMSD employs a director for the AVID program and BGCDC has a chief academic officer. The two organizations work closely together on all aspects of implementing the AVID/TOPS program, and are guided by an MOU between the MMSD and BGCDC that outlines individual and shared organizational and financial responsibilities.

As noted above, the TOPS program operates in parallel with the AVID program. Students participating in AVID are also eligible to participate in TOPS program activities, although not all elect to do so. Overseen by BGCDC, the Club is responsible for the TOPS program's organization and funding.

### **What Resources Were Used to Implement the AVID/TOPS Program?**

The AVID/TOPS program required a broad set of resources to support its program activities. Multiple organizations and individuals contributed these resources, including MMSD, BGCDC, and other instructional personnel and community members. Overall, we found that the bulk of resources used to implement the program were in the form of personnel time, with both MMSD and BGCDC funding a broad range of positions within their respective organizations as well as at school sites. The national AVID model requires some of these positions; others are unique to the AVID/TOPS program.<sup>8</sup> Both MMSD and

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<sup>8</sup> See Appendix A for a complete list of the personnel used to implement the program and their corresponding job descriptions

BG CDC also contribute funding for other non-personnel costs, including program supplies and materials, field trips, internship stipends, and AVID-related curriculum and fees.

Below, we provide an overview of the resources used to implement the AVID/TOPS program. We organize this overview according to three key program aspects: 1) AVID/TOPS program oversight; 2) AVID program delivery at school sites; and 3) the TOPS program.<sup>9</sup>

### *AVID/TOPS Program Oversight*

#### Program Administration

Both organizations employ personnel dedicated to program oversight. MMSD employs a fulltime AVID District Director and BG CDC allots 0.7 FTE of the Club's Chief Academic Officer to AVID/TOPS programming (Figure 5). These positions are largely responsible for establishing the program's strategic direction and supervising program's implementation. The organizations also jointly fund a full-time Tutor Manager position. This person recruits, screens, hires, and trains the nearly 60 tutors placed in schools across the district who work with students during the AVID Tutorial.

#### District-Wide Training

MMSD invests considerable resources into AVID-related training and ongoing professional development for instructional staff and tutors, district-wide. The AVID District Director coordinates these efforts, with assistance from one of the District's professional development coordinators (approximately 0.6 FTE). During the 2013-14 school year, the district hosted two 2-day trainings, with about 40 teachers in attendance at each event. MMSD also hosted district-wide professional development opportunities for its AVID tutors (one each semester).

Each year, MMSD also provides support for the district's teachers and other instructional staff to attend the AVID Summer Institute which provides the required basic training and continuing education for AVID teachers. During the summer of 2014, 77 district personnel attended the Institute. MMSD paid for their registration and travel costs. However, the District did not pay staff for their time spent or for attending the Institute. Additionally, BG CDC sent 5 TOPS coordinators to the AVID Summer Institute (2014).

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<sup>9</sup> See Appendix B for additional detail on program resources, by school site.

**Figure 5: AVID Program Oversight – Resource Summary**

<b>AVID Program Oversight</b>	<b>Time</b>
<b><u>Personnel</u></b>	
<b><i>Administration</i></b>	
AVID District Director (MMSD)	1 FTE
BGC Chief Academic Officer (BGC)	0.7 FTE
Tutor Manager (BGC/MMSD)	1 FTE
<b><i>District-wide Training</i></b>	
District professional development coordinator (MMSD)	0.6 FTE
Tutors (BGC) <sup>a</sup>	960 Hours
Teachers (School Year) (MMSD) <sup>b</sup>	160 Days
Substitute teachers (MMSD) <sup>c</sup>	160 Days
Teachers (Summer Vacation) <sup>d</sup>	308 Days
<b>Other Resources</b>	
<b><u>Non-personnel</u></b>	
Facilities (MMSD)	At MMSD central office, one dedicated office for AVID District Director
AVID Summer Institute (MMSD)	MMSD pays registration fees for AVID Summer Institute (\$700/person); and for attendees' travel, food, and lodging (\$700/person).
District-wide Trainings (MMSD)	MMSD hires trainers to come to the district to do trainings before and during the school year (about \$13,000/year).
Meetings & Events (MMSD)	MMSD contracts with outside providers for space to conduct training events (for teachers and tutors). Other event costs include curriculum, supplies/materials, space, and food (about \$22,000 per year).

<sup>/a</sup> Tutors participate in 16 hours of district-wide professional development (led by MMSD) per year (8 hours/semester); 60 tutors participated during the 2014-15 school year.

<sup>/a</sup> Annually, MMSD pays for teachers to attend district-wide trainings. Trainings are open to AVID-elective teachers as well as other secondary teachers who attended AVID training but are not teaching an AVID elective. The goal is to promote teachers' use of AVID strategies more generally within MMSD high schools. Typically, there are two 2-day trainings per year, with about 40 teachers in attendance.

<sup>/c</sup> The district provided substitute teachers to cover non-AVID teachers' schedules when they attended AVID trainings during the school year. Listed here is the total number of substitute teacher days for the 2014-2015 school year.

<sup>/d</sup> During the summer of 2014, Approximately 75 teachers attended the AVID Summer Institute, a 3-day training on AVID instructional methods. Listed here are teacher days for attending the institute, plus one day for training preparation. MMSD does not compensate teachers for their time at the institute. As noted below, the district pays for registration and travel costs.

## *AVID Program Delivery at School Sites*

### School Site Personnel

The AVID programs in place at participating MMSD high schools were staffed with similar positions. MMSD and BGCDC allocate resources to support these positions; however, the budgeted FTE allocations differ across sites, according to program size. Figure 6 provides an overview of the AVID-related personnel employed at each school and summarizes the actual level of effort expended by these staff to implement schools' programs.

Each school employed at least one AVID Coordinator who was responsible for day-to-day program logistics and long-term planning for their schools' AVID-related activities. Coordinators were full-time teachers with a portion of their position dedicated to AVID program administration, giving them a release from some of their teaching duties. The average level of effort expended by the AVID Coordinator(s) during the school year was 0.38-0.53 FTE (Figure 6), with MMSD budgeting for two AVID coordinators per school based on enrollment.<sup>10</sup>

The number of AVID elective courses varied among schools according to the number of participating students, with each school having at least one elective course per grade level. AVID elective courses were typically taught by existing classroom teachers. However, at East and La Follette one of the schools' AVID Coordinators also taught at least one course section and, at East, one guidance counselor taught two sections. In addition to teaching assigned course sections, AVID elective teachers spent time outside of class monitoring student progress. Teachers reported dedicating at least one additional preparation period to AVID student support. Teachers also worked with AVID coordinators and school-site teams to develop interventions for struggling students. In addition, AVID elective teachers participated in college visits, attended periodic program coordination meetings, and assisted with new student recruitment. The actual level of effort expended per AVID elective course section taught varied among schools, from 0.30 at West to 0.43 at La Follette (Figure 6).<sup>11</sup>

TOPS coordinators work at school sites--in partnership with AVID coordinators and elective teachers--to deliver the AVID elective and tutorial curricula. On days when students attend tutoring, TOPS coordinators worked in the classroom with students as well as supervised tutors. On AVID elective course days, they supported the AVID elective teachers in the classroom. At the end of each week, they oversaw the AVID program's weekly "binder checks," where students' academic work for the past week was reviewed. TOPS coordinators were also responsible for organizing students' experiential learning opportunities, including outside speakers and college field trips, and were also members of school-site teams. BGCDC supported at least one TOPS coordinator position at each school site; Memorial had one coordinator and all other schools had two coordinators. The average level of effort per TOPS coordinator for AVID-related activities at school sites was 0.68-0.78 FTE (Figure 6).<sup>12</sup>

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<sup>10</sup> MMSD allocated a 0.6 FTE allocation (9 month contract) per school, split between two people.

<sup>11</sup> MMSD allocated for .2 FTE teacher (9 month contract) per AVID elective course taught.

<sup>12</sup> BGCDC allocated two 1.0 FTE TOPS coordinators (12 month contract) per school. However, their time was split between AVID- and TOPS-related activities.



BGDCDC also funded a half-time TOPS administrative assistant at each school site. Assistants helped TOPS Coordinators with scheduling speakers and coordinating grade level field trips. In addition, the administrative assistant also chaperoned grade level field trips to minimize AVID elective teachers' time away from the classroom and substitute teacher expense.

**Figure 6: AVID Program Delivery – Resource Summary**

	Units	East	La Follette	Memorial	West
		Time <sup>/a</sup>			
<b>Personnel</b>					
School administrator(s) (MMSD) <sup>b</sup>	FTE	0.10	0.03	0.17	0.11
TOPS administrative assistant	FTE	0.50	0.50	0.50	0.50
AVID coordinators (Average effort per coordinator; 2 coordinators per school) (MMSD)	FTE	0.53	0.39	0.44	0.38
TOPS coordinators (Average effort per coordinator; 2 coordinators per school) (BGC)	FTE	0.78	0.68	0.78	0.73
AVID Elective Teacher (Average effort per course section) (MMSD)	FTE	0.38	0.43	0.36	0.30
Tutor hours (BGC)	Hours	3,262	2,448	1,562	1,871
Guidance counselor(s) (MMSD) <sup>c</sup>	FTE	0.61	0.12	0.03	0.07
Outside speakers <sup>d</sup>	#	36	36	36	28
Substitute teacher days (MMSD) <sup>e</sup>	Days	46	27	30	39
School site team (MMSD/BGC) <sup>f</sup>	Hours /Year	47	32	56	29

<b>Non-personnel</b>	<b>Other Resources</b>			
	<b>East</b>	<b>La Follette</b>	<b>Memorial</b>	<b>West</b>
AVID licensing fees and curriculum	Annual license fee for AVID and AVID curriculum and materials (approximately \$3,600/year per school) paid for by MMSD.			
Facilities	2 dedicated classrooms for AVID-related activities; 3 additional classrooms used 60% of time	5 classrooms; 5 days/week; 1 block (90 minutes)	5 classrooms; 5 days/week; 1 period (55 minutes each)	6 classrooms; 5 days/week; 1 period (55 minutes each)
Travel	\$12,000 for field trip-related travel expenses	\$11,900 for field trip-related travel expenses	\$5,500 for field trip-related travel expenses	\$8,800 for field trip-related travel expenses
School supplies for AVID/TOPS students	BGC provides school supplies for all AVID/TOPS students (e.g., binders, pencils, etc.; approximately \$20/student)			
Other	MMSD provides each school with \$750 per year for miscellaneous program supplies and materials			
ACT examination fees	MMSD pays for every MMSD student to take the ACT at least once and will pay for AVID/TOPS students to take it a second time when they elect to do so. (Per pupil ACT fee of \$56.50/test administration.)			

<sup>/a</sup> Represents actual time spent by personnel and may differ from the budgeted time allocation.

<sup>/b</sup> Each school relied on one or more members of its senior leadership team (e.g., school principal, assistant principal, dean of students) to oversee AVID/TOPS implementation in the school. The FTE count reflects the total effort for the individual or individuals responsible for these activities.

<sup>/c</sup> Schools incorporated guidance counselors in their AVID programs to greater and lesser extents, sometimes involving one or more individuals. The FTE count reflects the total effort for the individual or individuals involved in program activities.

<sup>/d</sup> Community members, college representatives, and business leaders were invited to speak to students at least once per month during one AVID elective period. Listed here is the typical number of speakers invited to a school (across all grade levels) during a school year.

<sup>/e</sup> Schools relied on substitute teachers to cover AVID teachers' and coordinators' schedules when they chaperoned AVID field trips or attended AVID training. Listed here is the total number of substitute teacher days for the 2014-15 school year.

<sup>/f</sup> Each school had a site team that included different membership from its staff who met at different intervals and time periods. Listed here is the number of hours each member spent on site team-related activities. A description of each site team's membership is provided in Figure 7.

Schools maintained a 1:4 tutor-student ratio, with typically 3-4 tutors per classroom. To improve efficiency, most schools scheduled AVID tutorials for different grade levels back-to-back so as to allow tutors to work for longer blocks of time across multiple AVID tutorials. In addition to the AVID tutorial, optional on-site tutoring was available to students at East, West, and Memorial during the lunch hour or afterschool. Tutor time was paid for by BGCDC.<sup>13</sup>

Guidance counselors participated in the schools' AVID programs in different ways. At East, the AVID program had a dedicated guidance counselor to support AVID/TOPS students and to co-teach the school's two senior AVID elective course sections. At the other schools guidance counselors interacted with the program on an ad hoc basis, usually as a speaker during one of the AVID elective courses' experiential learning class periods. Guidance counselors also assisted with AVID/TOPS students' class scheduling. Given scheduling conflicts between AVID courses and other course requirements, setting schedules could be challenging. The level of effort for guidance counselors differed across schools with as little as 0.03 FTE to as much as 0.61 FTE.

All schools had an AVID site team. Site team membership varied among schools, generally including a school's AVID elective teachers, AVID coordinator(s), TOPS coordinator(s), school administrator(s), and other student support personnel (e.g., guidance counselors) (Figure 7). Site teams met during employees' lunch hours or after school on a monthly or bi-monthly basis, for 50-90 minutes. The level of effort for a site team member over the course of a school year differed across schools (27-46 hours), depending on how frequently the team met (Figure 6)

School administrators participated in the AVID program in different roles and to varying extents. At East, the school's principal supervised its program, including its staffing and budget but was not a member of its site team. At the other schools, an assistant principal was assigned to oversee the AVID program and served as a site team member. The annual level of effort for school administrators was between 0.03 and 0.11 FTEs.

Schools hired substitute teachers to cover AVID coordinators' and AVID elective teachers' classrooms while they attended required professional development events, went on field trips, and attended to other out-of-class duties. The number of substitute teacher days varied among schools—between 27 and 46 days per school year.

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<sup>13</sup> There were two exceptions where BGCDC did not pay for tutor time. Through an arrangement with MMSD, when schools have more than two AVID sections per grade level, MMSD paid for the tutor hours associated with the additional sections. During the 2013-14 school year both East and La Follette had one grade level with three AVID sections.

**Figure 7: Site Team Membership**

East	La Follette	Memorial	West
AVID coordinators (2)	AVID coordinators (2)	AVID coordinator (1)	AVID coordinators (2)
TOPS coordinators (2)	TOPS coordinators (2)	TOPS coordinator (1)	TOPS coordinators (2)
AVID teachers (6*)	AVID teachers (5)	AVID teachers (5)	AVID teachers (6)
Guidance counselor (1)	Guidance counselor (1)	Assistant principal (1)	Assistant principal (1)
PD coach (1)	Assistant principal (1)	Minority student service coordinator (1)	Minority student service coordinator (1)
Non-AVID teacher representative (1)	Instructional coach (1)	Dean of students (1)	
	Student services (rotating) (1)	Student engagement coordinator (1)	

\* Number of AVID teachers not including counselor and AVID coordinators.

### Non-Personnel Resources

Both MMSD and BGDCD paid for non-personnel resources necessary to support the schools' AVID programs. MMSD paid for approximately \$3,600 per year to pay for the annual AVID site licenses for schools, as well as other required curricula and materials. Schools also received a \$750 stipend from MMSD for other program-related supplies and materials. MMSD paid for every AVID/TOPS student to take the ACT examination at least once.

At the start of each school year, BGDCD purchased school supplies for all AVID/TOPS students (e.g., binders, pencils, etc., valued at approximately \$20/student). BGDCD paid for approximately one field trip per quarter per grade level, spending between \$5,500 and \$12,000 per school. While individual field trip costs varied, the average expense was about \$1,200 per class per field trip.

The AVID program requires classroom space for AVID elective courses and tutorials. In most schools, the elective and tutorial occurred in elective teachers' assigned classrooms. However, at East, two classrooms were dedicated for AVID-related activities.

### *The TOPS Program*

Figure 8 provides an overview of personnel employed by BGDCD to implement the TOPS program component.

TOPS coordinators split their time between supporting AVID implementation at school sites and coordinating the TOPS-related summer programming. One coordinator from each school was assigned to oversee the Career Explorations (for rising juniors) and summer internships (for rising seniors) programs. For TOPS' Career Explorations, program coordinators facilitate student research—over a 6-8 week period during the summer—about a career of their choosing. For the summer internship program, TOPS coordinators manage the program both during the academic year and summer months. They oversee the spring application and employer match process and follow up throughout the summer with employers to check on the students' weekly progress. On average, coordinators spent approximately 0.58 FTE on activities related to the TOPS program's summer activities (Figure 8).



Centrally, BG CDC funds a full time TOPS district director and TOPS program manager. The program manager implements summer programming and manages the 70 mentor-mentee relationships, alongside the TOPS coordinators. The district director primarily supervises the TOPS coordinators' work. BG CDC also employed a full-time college continuation manager and two full-time college continuation counselors to support college-going AVID/TOPS students.

To celebrate seniors' successfully completing the AVID/TOPS program and graduating from high school, the TOPS program hosts a senior celebration to acknowledge their efforts. For spring 2014 graduation, BG CDC spent approximately \$20,000 to host the celebration.

At BG CDC's headquarters, the TOPS program occupies three dedicated offices and one additional open workspace containing six cubicles.

**Figure 8: TOPS Implementation – Resource Summary**

<b>TOPS Program Delivery</b>	<b>Units</b>	<b>Time<sup>/a</sup></b>
<b><u>Personnel</u></b>		
TOPS District Director	FTE	1.00
TOPS Program Manager	FTE	1.00
TOPS Coordinators (Average effort per person) [Summer work]	FTE	0.58
Mentors	Number	70
College Continuation Manager	FTE	1.00
College Continuation Coaches	FTE	1.00
<b><u>Non-personnel</u></b>		
Student stipends for summer experience		Student stipends (\$50/week per 6 weeks; 26 students & (\$100 at completion for 15 students)
Facilities		At BGCDC, three dedicated offices and one additional workspace (with six cubicles)
Program Overhead		BGCDC spent about 7% of total costs/year were for program overhead, including payroll processing; human resources functions; and tech support related to the TOPS program
Other		Miscellaneous expenses associated with mentoring and summer experience programs (\$3,500); Senior celebration expenses (about \$20,000)

<sup>/a</sup> Represents actual time spent by personnel and may differ from the budgeted time allocation.

## What Does the AVID/TOPS Program Cost?

We considered three aspects of program costs: 1) the total cost to implement the AVID/TOPS program; 2) the cost per student for AVID/TOPS participants; and 3) program costs relative to student outcomes.

### *Cost to Implement AVID/TOPS Program*

Taken together, we found that the total cost to implement the AVID/TOPS program was approximately \$3.0 million dollars (Figure 9). The bulk of program costs (59%) were associated with program delivery at school sites, with nearly one-third of costs – about \$933,000 – for resources related to delivering the AVID elective course and another \$287,000 for AVID tutoring. About one-quarter of program costs were for AVID program operations and oversight, much of which was attributable to MMSD’s district-wide training and professional development efforts. About 17% of program costs were for resources used by BG CDC to implement its TOPS program.

**Figure 9: AVID/TOPS Program Costs (2013-2014)<sup>/a</sup>**

	Cost (\$)	% Total Cost
<b>General Program Oversight/Operations</b>		
<b>AVID</b>		
Program administration	185,283	6.22
AVID-related training & professional development	497,516	16.71
Experiential learning opportunities	10,000	0.34
Tutor management	63,967	2.15
<b>Subtotal</b>	<b>756,766</b>	<b>25.41</b>
<b>TOPS</b>		
Program administration	132,946	4.46
TOPS mentoring	79,539	2.67
Summer experience	132,479	4.45
College continuation	101,978	3.42
<b>Subtotal</b>	<b>446,942</b>	<b>15.01</b>
<b>Program Delivery at School Sites</b>		
Program administration	460,275	15.46
AVID elective	1,209,869	40.63
AVID tutoring	10,433	0.35
Site-specific training & professional development	8,172	0.27
Student recruitment	50,167	1.68
Facilities	35,145	1.18
<b>Subtotal</b>	<b>1,774,062</b>	<b>59.58</b>
<b>Total</b>	<b>2,977,770</b>	

<sup>/a</sup> Additional detail on program costs is provided in Appendix C.

The bulk of the program’s costs were shared by MMSD and BGCDC, with the district incurring about 58% of the costs (\$1.7 million) and BGCDC incurring approximately 37% of the program’s costs (\$1.1 million) (Figure 10). About 5% of the program’s costs were attributable to individuals volunteering or donating time. For instance, MMSD instructional staff who attended summer AVID trainings were not compensated for the approximately four days of time they spent preparing for and attending the trainings; MMSD paid for their registration and travel expenses. The AVID/TOPS program also benefited from community volunteers who served as mentors for students participating in the TOPS program and as AVID tutors.

The program’s actual cost differed somewhat from budgeted expenses. Differences between costs and expenditures can occur when there is a discrepancy between the actual and anticipated level of effort required to implement a program. At MMSD, program costs exceeded budgeted expenditures by about \$566,000, and approximately \$63,000 for BGCDC (Figure 10). It is important to note that these differences do not represent a budget deficit, per se, but rather a difference in the value of the resources used to implement the program and anticipated program spending.

**Figure 10: Program Costs & Budgeted Expenses**

	Actual Program Cost		Budgeted Expenses		Difference Actual vs. Budgeted Expense (\$)
	Total (\$)	% Total	Total (\$)	% Total	
<b>Total Cost Distribution</b>	2,977,770		2,202,338		775,432
MMSD	1,736,617	58.30	1,171,088	53.20	565,529
BGCDC	1,094,464	36.80	1,031,250	46.80	63,214
Unpaid MMSD instructional staff time	105,779	3.60			
Community members’ donated time	40,911	1.40			

For AVID/TOPS, the difference between cost and budgeted expenditures was primarily attributable to the actual amount of time spent by key personnel on program-related activities – that is, time spent by personnel exceeded what was reflected in the program’s budgets. At MMSD, AVID elective teachers’ and AVID coordinators’ time exceeded the district’s budgeted FTE allocations (Figure 11). At East, West, and Memorial high schools, MMSD budgeted 0.2 FTE per AVID elective course section. However, on average, the actual level of effort by elective teachers was between 0.30 and 0.38 FTEs per course section. At La Follette, due to the school’s block schedule, teacher time was budgeted at 0.33 per course; however, the average actual FTE effort per teacher was about 0.43 per course. Altogether, across school sites, there was approximately 0.10 FTE shortfall in the time budgeted for each AVID elective course section.

Similarly, at each school, AVID coordinators spent more time on AVID-related activities than their budgeted FTE, ranging between 0.04 and 0.17 additional FTEs at Memorial, La Follette, and West. At East, the actual time spent by its AVID coordinators exceeded the school’s FTE allocation by about 0.45 FTEs. Much of this difference is attributable to the



additional effort associated with the school's designation as a national AVID demonstration site. With this designation comes planning for and hosting as many as seven site visits per year with schools from around the country who are interested in implementing the AVID model.

TOPS coordinators who worked at school sites to support AVID implementation also worked more hours than those accounted for in the BGDC's budget. BGDC budgeted 0.67 FTE per TOPS coordinator for time spent on AVID-related program activities, including tutoring and student monitoring (the other 0.33 is budgeted for summer programming). However, at Memorial and West, on average, actual time spent per TOPS coordinator was about 0.72 FTE, and at East 0.77 FTE.

**Figure 11: Actual vs. Budgeted FTEs for Selected Personnel**

	East	La Follette	Memorial	West	Overall
<b>AVID Coordinator</b>					
Number <sup>/a</sup>	2	2	1	2	7.00
Budgeted FTE	0.6	0.66	0.4	0.6	2.26
Actual FTE	0.53	0.39	0.44	0.38	1.74
FTE Difference (Budgeted vs. Actual)	0.07	0.27	-0.04	0.22	0.52
<b>TOPS Coordinators (AVID)</b>					
Number	2	2	1	2	7.00
Budgeted FTE <sup>/b</sup>	1.34	1.34	0.67	1.34	4.69
Actual FTE	0.78	0.68	0.78	0.73	2.97
FTE Difference (Budgeted vs. Actual)	0.56	0.66	-0.11	0.61	1.72
<b>AVID Elective Teachers</b>					
Number	10	9	5	6	30
Budgeted FTE <sup>/c</sup>	2	2.97	1	1.2	7.17
Total Actual FTE	0.38	0.43	0.36	0.30	1.47
Difference (Budgeted vs. Actual)	1.62	2.54	0.64	0.90	5.70
Actual FTE Effort per Elective Teacher	0.04	0.05	0.07	0.05	0.01

<sup>/a</sup> At East, one coordinator was budgeted at .4FTE and the second at .2 FTE. Two .33 FTE coordinators were budgeted for La Follette. One coordinator was budgeted at .4FTE at Memorial. At West, one coordinator was budgeted at .4FTE and the second at .2FTE.

<sup>/b</sup> BGDCDC budgets .67 FTE per TOPS Coordinator placed at a school site.

<sup>/c</sup> At East, Memorial & West AVID Elective course sections are budgeted at .2FTE per teacher. Given La Follette's block schedule, AVID Elective course sections are budgeted at .33 FTE per teacher.

### Per Pupil Cost

We also considered what the AVID/TOPS program cost on a per pupil basis, a commonly used metric for understanding educational costs. We found that, on average, the AVID/TOPS program cost approximately \$4,400 per student each fiscal year (Figure 12). Per pupil costs, however, differed somewhat across school sites – ranging from between \$4,100 and \$5,100 per pupil.

We also projected forward, estimating per pupil costs for students who participated in the AVID/TOPS program for all four years of high school. We found the four-year cost to be about \$17,000 per pupil. As was the case with annual per pupil costs, four year per pupil costs also differed among sites – between about \$15,400 (East) and \$19,700 per pupil (Memorial).

Two factors contributed to site-based differences in per pupil costs. First, generally, per pupil costs were less at schools with more participating students. For instance, Memorial, with just 84 students participating in the AVID/TOPS program, had the highest per pupil costs, and East, with the most enrolled students (249), had the lowest per pupil costs. In large measure, these differences were due to greater and fewer numbers of students across which fixed program administration costs were distributed—those that do not vary based on student participation—such as annual AVID certification, school site team participation, and AVID & TOPS coordinators’ participation in district-wide meetings and training events.

Student participation across sites, however, did not fully explain per pupil cost differences among sites. Differences in the types and amount of resources schools’ used to implement their programs also played a role. For instance, the actual amount of time spent by AVID elective teachers on a per pupil basis was somewhat higher at La Follette, translating into the slightly higher per pupil cost than what might be expected given the relationship between student participation and per pupil cost across schools.

**Figure 12: Per Pupil Costs, Overall & By School Site**

	Total Cost	# Students	Per Pupil Cost <sup>a</sup>	4 Year Cost Per Student (Actual)	4 Year Cost Per Student (Present Value) <sup>b</sup>
Total	\$2,977,770	689	\$4,442	\$17,766	\$16,993
East	\$1,001,623	249	\$4,023	\$16,090	\$15,390
La Follette	\$945,365	210	\$4,502	\$18,007	\$17,224
Memorial	\$431,543	84	\$5,137	\$20,550	\$19,656
West	\$599,239	146	\$4,104	\$16,418	\$15,703

<sup>a</sup> AVID Oversight and TOPS program costs were proportionally allocated according to each site’s number of students participating in the program.

<sup>b</sup> Assumes no program changes that would impact the amounts and types of resources used for program implementation. Present value was calculated using a 3% discount rate and assumes that a student participates in the program for four consecutive years.

## How Do the AVID/TOPS Program's Costs Compare to Its Effects?

Another way to understand program costs is to compare costs to measures of program impact. Such comparisons are useful for understanding the AVID/TOPS program's productivity in producing outcomes for various student subgroups.

We rely on findings from an external impact evaluation of the AVID/TOPS for estimates of the program's effectiveness at improving on-time high school completion and college enrollment (at any college).<sup>14</sup> This evaluation estimated programmatic impacts by comparing the percentage of students who participated in the AVID/TOPS program for four years during high school (n=478) with a matched comparison group of students who did not participate in the program.

Figure 13, Columns 2-4 summarize the program's effects. Column 2 presents the percentage of AVID/TOPS students who graduated high school or enrolled in any college on time, and Column 3 presents similar percentages for control group students. Column 4 is the percentage difference between the two groups. This difference can also be understood as the number of additional students with either an on-time high school graduation or transition to college (Column 5), given the population of students who participated in the AVID/TOPS program for all four years of high school. We then calculated the cost per each of these additional students using the four-year per student cost (see Figure 12, above). The resulting cost per outcome provides a cost effectiveness metric that can be used to compare the program's relative productivity for different outcomes and student population subgroups (Column 7). Lower costs per outcome imply greater productivity than higher costs per outcome.

The findings imply that the strength of the AVID/TOPS program lies with its ability to improve college-going rates among participating students. On average, the cost per outcome for on-time enrollment in college is lower than for high school graduation. For instance, the average cost per on-time high school graduate is approximately \$195,000, compared to \$85,000 for a student who enrolls in college following high school graduation. The differences in costs per outcome are due primarily to the larger percentage gains in transitions to college—overall and for student subgroups—compared to observed gains in high school completion (i.e., 20% gain in overall college enrollment vs. 9% gain in overall high school completion).

We also find that the program is most cost effective for improving outcomes for student groups who, on average, typically have lower rates for on-time high school graduation and college enrollment. It is for these groups that the AVID/TOPS program has the largest impact. For instance, among all outcomes and student groups, the program is most cost effective for increasing the rate at which Black and male students of color enroll in college (\$148,349 and \$56,864, respectively). Similarly, looking at on-time high school graduation among student subgroups, the program is relatively more cost effective for Latino and male students of color (\$140,754 and \$109,798, respectively). Conversely, for both program outcomes considered here and among all student subgroups, the AVID/TOPS

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<sup>14</sup> See Goldrick-Rab, Kinsley, & Hernandez, (2016) for a description of the evaluation's design and findings.

program is least productive at producing additional high school graduates among White students. This is likely due to the already high rate of on-time high school graduation for White students.

**Figure 13: Comparison of AVID/TOPS Program Costs & Effects**

	Treatment (2013-15 Pooled Cohorts) <sup>a</sup> (1)	Outcome			Yield of Extra Grad/ Enrollment (5)	Cost per participant (6)	Cost Per Additional Grad/ Enrollment <sup>b</sup> (7)
		Treatment (2)	Control (3)	% Gain (4)			
<b><i>Graduated High School On Time</i></b>							
All Students	224	97.4%	88.7%	8.7%	20	\$16,960	\$194,737
White	46	99.7%	97.6%	2.1%	1	\$16,960	\$803,053
Black	53	90.7%	83.9%	6.9%	4	\$16,960	\$246,704
Latino	74	97.7%	85.7%	12.1%	9	\$16,960	\$140,482
Low income	147	94.8%	85.5%	9.3%	14	\$16,960	\$182,179
Low income students of color	130	94.5%	84.5%	9.9%	13	\$16,960	\$170,558
Male & student of color	78	95.0%	79.5%	15.5%	12	\$16,960	\$109,585
<b><i>Enrolled in Any College On Time (2 &amp; 4 Year Degree)</i></b>							
All Students	137	82.6%	62.7%	19.9%	27	\$16,960	\$85,079
White	21	80.6%	61.5%	19.0%	4	\$16,960	\$89,133
Black	35	75.1%	63.6%	11.5%	4	\$16,960	\$148,062
Latino	51	80.6%	60.2%	20.5%	10	\$16,960	\$82,865
Low income	94	79.0%	62.0%	17.0%	16	\$16,960	\$99,592
Low income students of color	85	79.2%	61.1%	18.1%	15	\$16,960	\$93,951
Male & student of color	47	75.3%	45.4%	29.9%	14	\$16,960	\$56,754

<sup>/a</sup> The impact evaluation examined differences between AVID/TOPS and a matched comparison group of students who graduated in spring 2013, 2014, and 2015, and who participated in the program for all four years during high school.

<sup>/b</sup> The cost per outcome is equivalent to the four year cost per student (Column 6), multiplied by the total number of students (Column 1). This product is then divided by the number of additional students (Column 5), to provide the cost per each additional student with an on-time high school graduation and cost per additional student enrolling to college



### *Limitations*

The analyses presented in this report examine the resources and costs associated with implementing the AVID/TOPS program, as implemented in MMSD's four comprehensive high schools. Program costs are estimated as incremental to other educational programs and activities in place in the district and high schools. Additionally, our estimates reflect the assumption that non-AVID/TOPS students (including those in the comparison group for the program's impact evaluation) received no incremental resources related to the AVID/TOPS program. This latter assumption, however, is a potential limitation to the analyses. The AVID/TOPS college-readiness system is intended to generate "spillover" effects within schools, where teachers and students who are not direct participants in the program also may benefit from the program's resources. This can make it challenging to identify the effects of both the program impacts and its per pupil costs. Our decision to assume no, or minimal, spillover effects in our analysis represents our best effort to characterize the package of resources required to implement, and potentially replicate elsewhere, the AVID/TOPS program and the associated costs with doing so.

## Summary

The purpose of this study was twofold – first, to develop a better understanding of the resources and corresponding costs required to implement—and potentially replicate elsewhere—the AVID/TOPS program; and second, to describe the MMSD-BG CDC partnership, including how the two organizations contribute resources to support the AVID/TOPS program. This report provides a detailed profile of the AVID/TOPS program, including a description of the MMSD-BG CDC partnership, and a resource “recipe” that explains the amounts and types of ingredients that went into implementing the program during the 2013-14 fiscal year. The comprehensive site-based resource models not only shed light on the full range of resources, but also on the program’s costs and relative cost-effectiveness in producing outcomes for student subgroups.

Overall, we find that not unlike many other programs designed to improve on-time high school graduation and transitions to college, the AVID/TOPS program depends largely on the time and efforts by well-trained personnel, both at school sites and at the BG CDC. However, additional personnel resources are costly. Through their productive partnership, MMSD and BG CDC were able to share this cost burden to provide the program with the resources it needed, but which they might not have been able to provide in their entirety on their own. As such, the MMSD-BG CDC partnership represents a potential model for how public-private partnerships can enrich and extend school-based reforms, and in ways that further their mutual goals for student success.

Taken together, the study’s resource models, and corresponding cost estimates, are intended to inform decision making at MMSD and BG CDC as the organizations continue to refine and hone the AVID/TOPS program, as well as inform efforts to develop and implement programs similar to the AVID/TOPS model in other locations. In particular, we observed that:

1. The annual total program cost was about \$3.0 million, or about \$4,400 per pupil each year or \$17,000 per pupil over four years. There was some variation in per pupil costs across school sites, primarily due to economies of scale associated with larger and smaller program enrollments.
2. The program’s largest investments were in the personnel time needed to implement the AVID elective courses and tutorials in the selected schools. Nearly 41% of the program’s costs were for activities related to implementing these program components.
3. The program’s actual cost exceeded what was budgeted by MMSD and BG CDC. In the case of MMSD, the difference was attributable to the fact that time spent by key personnel – particularly AVID coordinators and elective teachers – exceeded what was reflected in the program’s budget assumptions. These differences do not represent a budget deficit, per se, but rather a difference between the actual and budgeted level of effort to implement the program.
4. Comparisons between program costs and effectiveness suggest that the program is more and less cost effective for certain program outcomes and student subgroups. AVID/TOPS is most effective for boosting on time high school



graduation rates for Latino and male students of color, and for promoting college attendance among Black students and male students of color. It is least cost effective for improving outcomes for White students.

Overall, not unlike many other school reform efforts intended to improve outcomes for underrepresented youth, the AVID/TOPS program requires additional resources for its implementation. This study's findings reinforce earlier evaluation evidence that suggest that the AVID/TOPS program is a promising intervention, but also characterize the level of effort required to achieve these outcomes.

## Appendix A: AVID/TOPS Personnel & Position Descriptions

<b>MMSD Positions</b>	
AVID District Director*	District-level position that oversees all AVID programming and manages partnership with BGDC.
AVID Coordinators	A school-based, part-time position that oversees school-level AVID implementation. Usually an existing high school teacher. At MMSD, schools are allocated up to 0.6 FTE—dependent upon student enrollment—typically split between two teachers.
Guidance Counselor(s)	Assists with college selection and application process, as well as AVID/TOPS students' course scheduling. Most schools split responsibilities among multiple counselors.
AVID Elective Teachers*	Existing high school teachers responsible for teaching the AVID elective. Typically, each teacher teaches one elective class per year and loops with their students so they have the same cohort of students for 4 years.
Site Team Members	Site team members are school employees who volunteer their time to serve. Site teams guide schools' AVID programs and are involved in student monitoring. Site team membership varies across schools.
Substitute Teachers	Cover classes for AVID coordinators and elective teachers when they attend trainings, meetings, or field trips.
<b>BCGDC Positions</b>	
Chief Academic Officer	Oversees BGCDC's partnership with MMSD for the AVID/TOPS program.
TOPS Program Manager	Oversees all TOPS programming. Supervises school-based TOPS coordinators and TOPS administrative assistants. Conducts trainings with staff, holds weekly meetings, plans, and implements summer programming.
TOPS District Director	A full-time position responsible for training, supervising, and evaluating TOPS coordinators.
Tutor Manager	A full-time position designed to recruit, screen, hire, and train tutors. Position is co-managed by Chief Academic Officer and MMSD District Director.
TOPS Coordinator	Coordinates the AVID Tutorial in selected schools. School-based work entails managing the tutors and tutor AVID tutorial, overseeing Friday binder checks, attending field trips, selecting and contacting speakers, and supporting teachers on non-tutor days. Summer work includes planning and conducting summer training programs.
TOPS Administrative Assistant	Support AVID program implementation in schools. Schedule field trips and speakers. May chaperone field trips.
TOPS College Continuation Coach	Works with AVID/TOPS students transitioning from high school to college and provides support for AVID/TOPS alumni while they are enrolled in college.
AVID Tutors*	Lead students through AVID Tutorial. Assist with weekly binder checks.

\* Represents personnel required by AVID National

## Appendix B: Site-based Descriptions of AVID Program Implementation

	East	La Follette	Memorial	West
<b>Program Operations</b>				
Number of classes offered	10 (3-9 <sup>th</sup> , 3-10 <sup>th</sup> , 2-11 <sup>th</sup> , 2-12 <sup>th</sup> )	9 (39 <sup>th</sup> , 2 10 <sup>th</sup> , 2 11 <sup>th</sup> , 2 12 <sup>th</sup> )	5 (2-9 <sup>th</sup> , 1-10 <sup>th</sup> , 1 11 <sup>th</sup> , 1-12 <sup>th</sup> )	6 (2-9 <sup>th</sup> , 2-10 <sup>th</sup> , 1-11 <sup>th</sup> , 1-12 <sup>th</sup> )
Number of students enrolled	249	210	84	146
<b>Administration &amp; Infrastructure</b>				
AVID administrator	1	1	1	1
AVID coordinator(s) <i>(Note: All coordinators reported spending most of their planning time and many additional out-of-school hours on AVID.)</i>	2 coordinators	2 coordinators	1 coordinator	2 coordinators
Guidance counselor (FTE actual)	0.61	0.12	0.03	0.07
Site team	13 members	13 members	11 members	12 members
Facilities	Two dedicated AVID classrooms plus 2 individual teacher's classrooms. AVID guidance counselor's office is next to the 2 classrooms, as is the TOPS coordinator office.	Individual teachers use their own classroom.	Individual teachers use their own classroom.	Individual teachers use their own classroom.
Parent Advisory Board	Managed by AVID coordinators. Meets monthly.	N/A	N/A	N/A
School-based program meetings	Admin & AVID coordinators: 1 hr/2 weeks  AVID coordinators & Elective teachers: 50 min/week (varied; no common planning time)  AVID coordinators & TOPS coordinators: N/A	Admin & AVID coordinators: N/A  AVID coordinators & Elective teachers: N/A  AVID coordinators & TOPS coordinators: 1.5 hrs/4 times per year formally  1 AVID coordinator sits on school leadership team.	Admin & AVID coordinators: 1x/week  AVID coordinators & Elective teachers: N/A  AVID coordinators & TOPS coordinators: 50 min/weekly	Admin & AVID coordinators: N/A  AVID coordinators & Elective teachers & TOPS coordinators: 50 min/weekly (shared planning)
District-wide meetings	6 half-day and 4 full-day sessions over the course of the year.	6 half-day and 4 full-day sessions over the course of the year.	6 half-day and 4 full-day sessions over the course of the year.	6 half-day and 4 full-day sessions over the course of the year.
National Summer Institute	7 teachers attended.	6 teachers attended.	6 teachers attended.	7 teachers attended.
Annual certification (personnel time)	320 hours	147 hours	190 hours	455 hours
National demonstration site	Hosts 7 school groups per year.	N/A	N/A	N/A
<b>Field Trips</b>	Freshman: 3 college visits and one ropes course Sophomores: 4 college visits Juniors: 3 college visits and 1 overnight Seniors: 2 college visits and 1 senior fun day			
<b>AVID Tutoring</b>				
TOPS coordinators	2	2	1	2
Tutors	19	10	5	11
Additional tutoring time	Afterschool, 2 days/week, 90 min	Lunch, 2 days/week, 50 min	Lunch, 2 days/week, 50 min	Lunch, 2 days/week, 50 min

## Appendix C: AVID/TOPS Program Costs (2013-14)

	Total Cost	MMSD	BGDCD	Unpaid MMSD Staff Time	Community Members' Donated Time
	(\$)	(\$)	(\$)	(\$)	(\$)
<b>AVID General Program Oversight/Operations</b>					
Program Administration	185,283	94,340	90,943	0	0
Training & Professional Development	497,516	375,833	17,619	104,064	0
Field Trips	10,000	0	10,000	0	0
Tutor Management	63,967	21,405	42,562	0	0
<b>Subtotal</b>	756,766	491,577	161,124	104,064	0
<b>TOPS</b>					
Program Administration	132,946	11,284	121,661	0	0
TOPS Mentoring	79,539	0	47,251	0	32,288
Summer Experience	132,479	0	132,479	0	0
College Continuation	101,978	0	101,978	0	0
<b>Subtotal</b>	446,942	11,284	403,370	0	32,288
<b>School Sites</b>					
<b>Memorial</b>					
Program Administration	75,294	65,749	9,545	0	0
AVID Elective/Tutorial	193,193	135,415	54,581	0	3,197
Supplemental Tutoring	1,230	0	984	0	246
Student recruitment	10,772	9,490	1,282	0	0
Facilities	4,303	4,303	0	0	0
<b>Subtotal</b>	284,792	214,956	66,393	0	3,443
<b>East</b>					
Program Administration	158,112	134,021	21,706	1,140	1,245
AVID Elective/Tutorial	367,477	219,135	145,145	0	3,197
Supplemental Tutoring	4,602	0	4,602	0	0
Training & PD	4,561	4,561	0	0	0
Student Recruitment	12,535	11,165	1,371	0	0
Facilities	19,323	19,323	0	0	0
<b>Subtotal</b>	566,611	388,205	172,823	1,140	4,442

	Total Cost	MMSD	BGCDC	Unpaid MMSD Staff Time	Community Members' Donated Time
	(\$)	(\$)	(\$)	(\$)	(\$)
<b>West</b>					
Program Administration	101,987	96,316	5,671	0	0
AVID Elective/Tutorial	214,071	117,203	96,293	574	0
Supplemental Tutoring	4,602	0	4,602	0	0
Student Recruitment	17,779	16,320	1,459	0	0
Training/Professional Development	570	570	0	0	0
Facilities	5,163	5,163	0	0	0
<b>Subtotal</b>	<b>344,172</b>	<b>235,573</b>	<b>108,025</b>	<b>574</b>	<b>0</b>
<b>La Follette</b>					
Program Administration	124,882	112,679	12,204	0	0
AVID Elective/Tutorial	435,128	265,397	168,993	0	738
Student Recruitment	9,080	7,549	1,531	0	0
Training/Professional Development	3,041	3,041	0	0	0
Facilities	6,356	6,356	0	0	0
<b>Subtotal</b>	<b>578,488</b>	<b>395,022</b>	<b>182,728</b>	<b>0</b>	<b>738</b>
<b>Total</b>	<b>2,977,770</b>	<b>1,736,617</b>	<b>1,094,464</b>	<b>105,779</b>	<b>40,911</b>