EXAMINING AVID OUTCOMES IN OREGON

by

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A DISSERTATION

Presented to the Educational Methodology, Policy, and Leadership Department
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Education

June 2019

DISSERTATION APPROVAL PAGE

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Title: Examining AVID Outcomes in Oregon

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Degree awarded June 2019.

DISSERTATION ABSTRACT

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June 2019

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With Oregon's struggling graduation rates, individual school districts have initiated the AVID program in an attempt to increase the number of students who receive a diploma and are college and career ready. Given that the existing research on AVID has shown mixed results for underrepresented groups, my study sought to explore the relationship between demographic and background characteristics and student perceptions of whether the program was helpful. Additionally, I explored whether there was any predictive relationship between these demographic and background characteristics and student perceptions of whether AVID helped, and of college-going intentions and beliefs.

A correlational design and multiple regression analyses were used with a sample of 5,284 AVID participants throughout the state. Overall, the findings showed that approximately 80% of study participants reported that the AVID program helped them to become better students, the largest associations in this area coming from students with higher levels of AVID experience. The findings also revealed that there were a smaller number of male participants in the program during the 2016-17 school year and that male participants and those who identified with underrepresented groups were less likely to

report college going beliefs and intentions in comparison to their counterparts. Study limitations and implications are provided.

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ACKNOWLEDGMENTS

I wish to express sincere appreciation to Professors Smith and Stevens for their support and guidance during the course of my studies. In addition, special thanks are due to Dr. Tracy Bousselot whose familiarity with the AVID program and the data set was helpful during the early phase of this undertaking. I also want to thank members of my cohort for their invaluable input and support.

To Mom, Dad, and Sean, thank you for all the love and support during this journey. To Olivia and Sophia, you can do hard things. As Eleanor Roosevelt said, “you must do the thing that you think you cannot do.”; however, do not forget to make time for self-care, and singing and dancing (of course)! To the rest of my family, thank you for making me feel so loved and supported. To everyone else, I did it!

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CHAPTER I: INTRODUCTION

> Innovative education programs have the potential to intervene in the academic lives of students and influence in positive ways students' perceptions of opportunity and ultimately achievement.
> Lea Hubbard and Judith Ottoson (1997: 43)

Although the nation's graduation rates are at an all-time high, far too many students of color (e.g., Black, Hispanic, and Native American/Alaska Native) are disproportionately underrepresented in the high school graduate population (U.S. Dept. of Ed, 2019). This disparity is seen in the adjusted cohort graduation rates (ACGRs), which the National Center for Educational Statistics (NCES) began tracking in 2011 (National Center for Education Statistics, 2018). The ACGRs track first-time 9th graders who graduate on time (National Center for Educational Statistics, 2018). State agencies calculate ACGRs by identifying cohorts of 9th graders who enter schools and then adjust for any students who transfer into or out of the cohort over a four-year period. In 2015-16, the ACGR for America's public high school students of color ranged from 72%-79% compared to 88-91% for White and Asian students, respectively; the ACGR for all public high school students during this same period was 84% (National Center for Educational Statistics, 2018).

At least a dozen states struggle to meet these nationwide averages, reporting ACGR rates below 80%; furthermore, all 50 states and the District of Columbia show that disparities between White and minority group performance still exist (National Center for Educational Statistics, 2018). In Oregon, for example, the ACGRs range from 66% for Black students to 77% for White students, an 11 percentage point difference in

performance. Almost two-thirds of the states reported disparities in ACGRs at least as great as Oregon (National Center for Educational Statistics, 2018).

States on the list of low ACGR performers have prioritized improving career and college readiness, including graduation rates. For example, the state of Oregon passed Senate Bill 182 for Educator Advancement and Measure 98 to "focus [the state's] improvement efforts to prioritize the kids who face the most barriers" (Brown, 2018, p. 5). Measure 98 allows the Oregon Department of Education to disperse $170 million per biennium among districts and charter schools that serve students in grades 9 to 12. Part of this funding is intended to support dropout prevention, career and technical education, and college-level education opportunities (Brown, 2018).

Tracking

Unfortunately, there is not a one-size-fits-all solution for the disparities in academic performance across student groups; however, *tracking*, a practice that places students in ability groups for the purposes of teaching and learning, has been blamed for the unequal distribution of learning outcomes in American schools (Mehan, Villanueva, Hubbard, & Lintz, 1999; Wheelock, 1992).

Tracking has been practiced for almost a century. "At the elementary school level, the divisions sound harmless enough; kids are divided into the Bluebirds and Redbirds. But in secondary schools, the stratification becomes more obvious as students assume their places in the tracking system" (National Education Association, n.d.). The practice dates back to the industrial revolution. Due to the occupational structure at that time, there was a need for students to be sorted into two tracks: a rigorous, college-bound track or a remedial track preparing students for vocational or technical fields (Mehan et al.,

1999; Wheelock, 1992). Within this structure, some student groups (e.g., Black, Latino, Native American, and low income) were disproportionately placed in educational pathways that were less rigorous. Even with the enactment of laws that ended the legal racial segregation of schools, many students found that their choices continued to be limited. These methods are particularly concerning because "once students are placed in low-ability groups [or in the lower-track], they seldom are promoted to higher groups" (Mehan et al., 1999; Wheelock, 1992).

Current research shows that students of color are still underrepresented in advanced placement (AP) courses (Ndura, Robinson, & Ochs, 2003; Kanno & Kangas, 2014) and as long as tracking exists, "[it] does not result in the equal and equitable distribution of effective schooling among all students. [Instead, tracking] allocates the most valuable school experiences, including challenging and meaningful curricula…to students who already have the greatest academic, economic, and social advantages" (Wheelock, 1992, p. 6).

College Preparatory and Untracking Programs

In an effort to close this Opportunity Gap, untracking programs and college preparatory programs have gained momentum in school districts across the United States (Mehan et al., 1999; Perna & Swail, 2001). This momentum is not surprising given that recent research has "focused on the importance of high school curriculum in college success" (Watt, Huerta, & Lozano, 2007, p. 188; Woods, Park, Hu, & Jones, 2018). Research findings support exposing African American and Latino students to rigorous, college preparatory classes as it has been shown to increase college enrollment patterns for these populations (Adelman, 1999); however,

college preparatory (or advanced placement) coursework is just one ingredient in the untracking recipe. In order for students to be successful in these rigorous "college prep" courses, other supports are needed (Cone, 1992).

This is where untracking programs come into play because they extend beyond rigorous coursework and the regrouping of students to include systems to support the new grouping arrangements and college entrance requirements (Pugh & Tschannen-Moran, 2016; Wheelock, 1992). Essentially, these programs work to steer our secondary educational institutions toward a new tracking systems that are more rigorous. However, untracking is not just about providing college-level preparatory exposure. These programs call for schools to offer "college prep" coursework and support mechanisms (e.g., tutoring, peer mentors, community supports, parent involvement).

Schools and districts have over 1,000 program choices when it comes to school reform efforts related to college readiness (Gullatt & Jan, 2003). These include federal programs (i.e., GEAR UP, TalentSearch, and Upward Bound), state-level programs (such as Iowa's Course to College program and California's Student Opportunity and Access Program), and non-profit organization programs like Advancement Via Individual Determination (AVID) and the conglomerate of programs offered through the I Have a Dream organization (Perna & Swail, 2001). Not all of these programs have formally identified themselves as *untracking* programs; however, many have components that align with typical untracking programs like AVID. Standard program components include support in the area of achievement, social development, and career and college awareness (Swail, 2000).

My study focuses on AVID, which was established in the 1980s. While there is a need to further evaluate and compare the 1,000 plus program options that are available, this is beyond the scope of my study. However, in the paragraphs that follow, I have included recent literature on another program, called the Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). This program was selected as a comparison within the scope of this literature review because it is most often compared to the AVID program and/or both programs often appear together in the literature (Bausmith & France, 2012; Huerta, Watt, & Butcher, 2013; Lozano, Watt, & Huerta, 2009; Morgan, Sinatra, & Eschenauer, 2015; Knaggs, Sondergeld, & Schardt, 2015; Pugh & Tschannen, 2016; Standing, Judkins, Keller, & Shimshak, 2008; Yampolskaya, Massey, & Greenbaum, 2006; Watt et al., 2007; Wooldridge, 2018). This comparison of programs is likely due to similarities across programs (e.g., support in the area of achievement, test preparations, social development, and career and college awareness) (Knaggs et al., 2015). "The most salient difference is that GEAR UP targets a cohort of students rather than [handpicking] individual students" and is funded by the federal government (Swail, 2000, p. 89). For participation, however, both programs have sought to address the disparities in academic outcomes at the pre-collegiate level with similar success.

The GEAR UP program was created in 1998 by the federal government as part of the reauthorization of the Higher Education Act of 1965 (U.S. Department of Education, 2003). With the enactment of this program, school districts, colleges, and state agencies were able to receive grant funds for programs designed to help increase access to post-secondary education and improve graduation rates, especially for low-income students (U.S. Department of Education, 2003).

Beginning at the middle school level, GEAR UP serves grade level cohorts for a period of 6 to 7 years (Swail, 2000; Ward, 2006). Only schools with poverty rates over 50%, as determined by the federal free and reduced lunch program, qualify for grant funding. Program funding is also contingent upon the building of collaborative relationships between school districts and community resources, parents, and post-secondary institutions to ensure that pre-collegiate programs and curriculum provide participants with the best chance of college entrance and success (Swail, 2000; Ward, 2006). Although the program components and collaborative efforts may look different depending on the district or state, the overarching goals of the program should be the same (e.g. to increase graduation rates, to develop opportunity pathways, and to increase college access, especially for traditionally underserved groups) (Knight-Manuel et al., 2016).

Existing research on the GEAR UP program generally falls into two general areas: (a) achievement, including course credits or other measures of college readiness, and (b) influence on college expectations, attendance, and retention (Bowman, Kim, Ingleby, Ford, & Sibaouih, 2018). Closer examination of study findings revealed mixed outcomes for achievement in schools where GEARUP was implemented (Bausmith & France, 2012; Cabrera et al., 2006; Kim, 2010; Standing, Judkins, Keller, & Shimshak, 2008; Yampolskaya, Massey, & Greenbaum, 2006). For example, the Cabrera et al. (2006) study, which was conducted in California to evaluate middle school outcomes over a three-year period, found one-year gains in reading and math scores on the Stanford-9 tests for students in the GEAR UP program; however, in the same study, researchers reported that the two-year relation of program with reading performance were not

statistically significant. In a study of 173 GEAR UP schools with matched cohort data, Bausmith and France (2012) found no statistically significant difference between scholastic aptitude score increases on repeated measures across years. The Yampolskaya et al. (2006) study, which evaluated three high school aged student groups (i.e., no participation, low participation, and high participation) in Florida, reported a positive interaction between grade point average (GPA) and participants in their high participation group. In contrast, the Standing et al. (2008) study of two middle student groups (e.g., students from GEAR UP schools and students from non-participant schools) found no evidence of an association between participation in GEAR UP and grades; however, Bausmith and France (2012) and Standing et al. (2008) found that GEAR UP participants were more likely to enroll in AP courses. Additionally, the Morgan, Sinatra, and Eschenauer (2015) study, which evaluated 294 students from New York public schools beginning at 9th grade and continuing over a four-year period, reported a positive association between types of support services and student outcomes (e.g., association between academic support and total credits earned and high school graduation rates).

The results of existing research on college expectations, attendance, and retention were also mixed (Bowman et al., 2018; Yampolskaya et al., 2006; Morgan et al., 2015; Knaggs, Songergeld, & Schardt, 2015; Standing et al., 2008). In a study of over 17,000 (N = 17,605) high school graduates in Iowa, Bowman et al. (2018) reported that participation in GEAR UP resulted in higher college enrollment rates but that participation had no effect on persistence in college. The Knaggs et al. (2015) study of about 400 high school graduates from Ohio found similar results over four years when contrasted with a comparison group. Their findings indicated that participation in the

program was associated with higher college attendance and participation (Knaggs et al., 2015). However, this study also reported that there was no difference for racial minorities in the area of college attendance and persistence (Knaggs, 2015). Morgan et al. (2015) found positive associations between the provision of academic and community support and college enrollment and twelfth graders reported that GEAR UP helped them to prepare for college and beyond. This finding is supported by Standing et al. (2008), who reported that by 8th grade, parents and students who participated in the GEAR UP program were more likely to report knowledge of college opportunities and benefits in comparison to the control group. GEAR UP parents were also found to be more involved in their student's educational experience and reported higher expectations for long-term educational attainment than the control group parents.

Although the research on GEAR UP is limited, there has been some additional research that is noteworthy. Researchers have explored the relationship between GEAR UP participation and program retention and the effects on self-efficacy. For example, Knaggs et al. (2015) found that GEAR UP students reported improved academic self-confidence (e.g., self-efficacy) and personal growth. In addition, several studies have reported higher female participation and retention associated with program participation (Knaggs et al., 2015; Morgan et al., 2015; Yampolskaya et al., 2006). For example, the Morgan et al. (2015) study reported that 475 freshmen were invited to participate in the study, but only 186 program completers, of which approximately 63% were female, were included in the sample.

AVID

AVID is considered a "bottom-up, practitioner developed program" (Hubbard & Ottoson, 1997, p. 41) and was created from a concern that too many students of color were being placed in less demanding classes following the desegregation of schools. Like GEAR UP, AVID works to support the detracking of students by placing them in "[rigorous courses that are meant to] meet college entrance requirements and support them in both cognitive and affective domains" (Pugh & Tschannen, 2016, p. 142). When first developed, the AVID program focused on building collaborations between high schools and colleges and creating a set of writing standards for high school English courses (http://www.avid.org). However, over the past 30 years, AVID has gone through several iterations.

Currently, the program serves approximately 6,400 schools in 47 states across the United States and in Canada and Australia (http://www.avid.org). Some two million students, in Grades 4 to 12, have been exposed to the program. Typically, the program targets *average* students who have the potential to perform at a higher level. By providing a challenging curriculum, "the program's philosophy is that students will rise to the expectations placed before them by teachers who challenge them" (Brooks, 2018).

At the elementary level, students are supported in developing academic habits that will help them be successful throughout their educational career. "Children learn about organization, [note taking skills], study skills, communication, and self-advocacy" (http://www.avid.org). At the secondary level, these focus areas are developed further. Additionally, students with English language and literacy needs are supported through a supplemental program, AVID Excel. This biliteracy program works to "ensure [that]

heritage language courses support full biliteracy, increase academic rigor, and provide a path to Advanced Placement language classes for ELL students" (http://www.avid.org).

The high school level program was designed to support and untrack underserved populations by offering participants accelerated learning opportunities, including AP coursework, to increase the likeliness of college attendance. In order to support student success with accelerated programming, AVID calls for teachers and tutors to be trained and for schools to implement an active, interdisciplinary site team to improve the fidelity of implementation. The goal is to "help students develop social and cultural capital that helps to build educational capital in the form of college knowledge" (Brooks, 2018) and includes a set of program elements to support implementation efforts. For example, once high school students enter the program, they are placed in at least one AP course and in an AVID elective class to support them with their accelerated coursework. Similar to other tracking programs including GEAR UP, parents are encouraged to be involved in their child's support network in order to increase the likeliness of student success and college enrollment. Teacher and student participation must be voluntary, and instruction must focus on writing, collaboration, and inquiry.

Typical of these types of intervention programs, the goal is to even the playing field by ensuring students and families have the knowledge capital to compete with those who may already have these resources. However, given the inequities in school and district resources, it is likely that the program differs across school sites and that these differences may impact program efficacy and outcomes. To help determine the extent to which AVID has met its program goals, a brief literature review is provided in the upcoming section.

AVID Evaluation

The goal of the AVID program is to prepare, "*all* students for college, careers, and life" (http://www.avid.org); however, it remains unclear whether programs like AVID and GEAR UP can compensate for years of educational inequities (Brooks, 2018).

In order to explore program efficacy and provide more clarity around whether AVID effectively addresses some of these educational inequities, literature related to program outcomes was compiled and organized into three general areas to match the overarching outcome themes from the literature pool, including: (a) social connections, (b) achievement, including self-efficacy, and (c) influence on long-term educational goals.

Social connections. Recent research on AVID has shown that the program helps students to form positive school relationships (e.g., teachers and/or peers), which can have an impact on student retention and academic success (Parker, Eliot, & Tart, 2013; Llamas, López, & Quirk, 2014; Watt, Huerta, & Martinez, 2017; Watt et al., 2007). In 2013, Parker et al. reported that "students who experience favorable social capital…are more likely to graduate from high school" (p. 155). Watt et al.'s (2017) study on gender disparity within the AVID program supported these findings: AVID coordinators reported that "boys who were retained felt a sense of family with their similar peers" (p. 385). However, this study also reported overarching concerns with regard to male retention within the program; researchers speculated that this was partly due to a lack of male role models (e.g., male AVID teachers) within the program (Watt et al., 2017).

Achievement. Similar to GEAR UP, existing research on AVID has reported mixed results for participation and its association with academic preparedness, better grades,

and overall achievement, including improved test scores (Black, Little, McCoach, Purcell, & Siegle, 2008; Llamas et al., 2014; Parker et al., 2013; Watt, Powell, Mendiola, & Cossio, 2006). Watt et al.'s (2006) study found that AVID schools outperformed non-AVID sites on the Texas state accountability ratings. However, two other studies did not find a statistically significant difference between program participants and control groups (McLure & Child, 1998; Watt et al., 2007). For example, McLure and Child (1998) reported that students who participated in Upward Bound, a program similar to AVID, had higher ACT composite scores than students who were in the intervention group. Furthermore, when looking at outcomes of underrepresented groups, Pugh and Tschannen-Moran (2016) found that years in AVID was statistically significant and positively associated with GPA for the African American participants but not for the Latino students.

Recent research has explored the association between AVID participation and self-efficacy, especially as it is related to academic skills. Research on self-efficacy is of particular importance because one potential entry point to intervention is self-efficacy, which is defined as beliefs about personal abilities to succeed, shaped by social observations, experience, and suggestions. These beliefs are not measured purely by actual ability; one can be "highly skilled in a particular task but still lack self-efficacy, which results from a poor evaluation of one's own capability regardless of observable skill" (Rocchino, Dever, Telesford, & Fletcher, 2017, pp. 906–907). Recent studies have found an association between AVID and academic skills and self-efficacy. Llamas et al. (2014) reported moderate to large positive differences between the AVID sample and the comparison schools using Cohen's *d*; AVID students reported higher levels of internal

assets (*d = 0.52*), self-efficacy (*d = 0.47*), problem solving (*d = 0.29*), self-awareness (*d = 0.37*), and empathy (*d = 2.01*). Additionally, students in this study reported that they had gained academic skills such as "notetaking, speaking in front of the class, [and] doing presentations" (Llamas et al., 2014, p. 204). Pugh and Tschannen-Moran (2016) found that for African American students, years in the AVID program was positively associated with self-efficacy ($R^2 = .13$, $p < .001$; p. 151). However, an analysis of Latino students in the same study found no statistical significance between years in the program and self-efficacy.

Long-term educational goals. Participation in AVID has also shown mixed relations with attitudes toward long-term educational goals. Findings from the Parker, Eliot and Tarts (2013) study indicated that students perceived that the program helped them to do better academically and improved their attitudes and outlook toward long-term goals. For example, participants in this study reported that, prior to AVID, they did not care about their academic progress (p. 163). Watt et al. (2008) also found students "felt that AVID kept them focused on their future endeavors" (p. 31). However, in a 2017 study, Watt et al. found mixed results in this area, especially when comparing girls to boys; they reported that girls were more likely to persist toward long-term goals.

Gaps and Concerns Related to Programs and Existing Literature

The impact of AVID participation on graduation rates and college attendance and retention rates is relatively unexamined. Also, many studies mentioned in this paper used less powerful methods, including descriptive statistics, correlational methods, qualitative analysis, and/or comparison groups that were not well matched (i.e., Black et. al, 2008; Huerta et al., 2013; Llamas et al., 2014; Lozano et al., 2009; McLure et al.,1999; Parker

et al., 2013; Pugh & Tschannen-Moran, 2016). In addition, given the limited number of studies that have been done on both programs (i.e., GEAR UP and AVID), and the mixed results that have been found in various outcome areas, more research is needed on these programs. The purpose of this study is to add to the existing literature on detracking and college preparatory programs by examining the outcomes of AVID participation in Oregon. Given that the existing research has shown mixed results for underrepresented groups, especially in the areas of self-efficacy, retention, and long-term goals, I evaluated the relationship between demographic and background characteristics and student perceptions of whether the program was helpful. Additionally, I explored whether there was any predictive relationship between these demographic and background characteristics and student perceptions of whether AVID helped, and of college-going intentions and beliefs. Specifically, my study addresses the following research questions:

1. What are the demographic and background characteristics of students who participated in the AVID program during the 2017 school year?
2. Do student reports of whether the AVID program helped them to become better students (e.g., academic self-efficacy) vary by student demographic and background characteristics?
3. Do student demographic and background characteristics and student reports of whether AVID was helpful predict students' report of whether they intend to go to college?
4. Do student demographic and background characteristics, their level of AVID experience, college experience of family members, and student reports of whether AVID was helpful predict college-going beliefs?

CHAPTER II: METHOD

Participants

Data for the present study were drawn from middle schools and high schools (N = 92) that received grant funding from the Nike Corporation and the James F. and Marion L. Miller Foundation (Nike, 2015) to implement the AVID program for a three-year period beginning in 2015–16. "The initial implementation of AVID across program schools spanned a range of start years from 2005–2016, with most schools in the evaluation (50.5%) beginning implementation in 2015–16" (T. Bousselot, personal communication, November 5, 2018). Participant schools were either implementing AVID schoolwide or through an AVID elective. Schools receiving funding agreed to allow AVID students and AVID educators to be surveyed twice each study year, once in the fall and once in the spring. Only student-level data from the spring of 2016-17 was made available for examination in this study.

The data set included survey responses from 5,284 student participants in Grades 6 to 12 attending 92 schools throughout Oregon. Years of experience with AVID ranged from one to five years. Additional demographic information is provided in the results section below.

Procedures

A team of researchers **(**Bousselot, Jacovidis, Todd, & Chadwick, 2017) distributed AVID surveys to individual school sites to administer online or in paper and pencil format depending on school preference. Bousselot (2018) noted that most schools chose the online format (T. Bousselot, personal communication, November 5, 2018). A Spanish version of the survey was made available to schools when requested. Schools

were provided with a script to read aloud to students prior to administration. Appendix A includes a copy of the survey and the script.

Surveys were designed to be completed in a 20–25-minute period; however, Bousselot (2018) stated that there was no guarantee that schools followed the time expectation (T. Bousselot, personal communication, November 5, 2018). Further, once surveys were distributed to schools, there was no way for the research team to ensure that surveys were administered in a standard form across the sites. Schools returned completed paper and pencil surveys to the Inflexion team for processing. Completed surveys were scanned and data entry was completed by Inflexion staff. Final data sets from both online and paper and pencil versions were merged for analysis (T. Bousselot, personal communication, November 5, 2018).

Measures and Instruments

AVID student survey. The 23-item AVID student survey was created by Bousselot et al. (2017) and was designed to collect information about AVID participants' perceptions of program outcomes. Appendix A includes a copy of the survey. The first seven questions of the survey asked students to report basic demographic information including age, grade, gender, race, number of years in AVID, and family history of attending college. All of the remaining questions focused on collecting students' perceptions of and reports of self-organization, collaboration, academic skills, advanced coursework, and college-going beliefs and intentions.

The responses to a limited number of survey questions were used to answer my four research questions. My first research question was answered using data collected from questions 1–7 of the AVID survey, all of which were demographic or background

characteristic questions. The second research question was answered by using survey question 21. This question asked students, “Do you feel like the AVID class has helped you to become a better student?”. Research questions 3 and 4 were answered by evaluating AVID survey questions 19 and 20, which asked students, “Which of the following best describes your intentions about continuing your education after high school?” and “If I go to college, I believe…,” respectively. Only positive college-going beliefs were evaluated from item 19. There is no validity or reliability information available on this survey instrument, which I will discuss in more detail in the limitations section.

CHAPTER III: RESULTS

Analyses were conducted using the IBM SPSS Statistics for Mac OS X, version 25 (IBM, 2017). To answer the first research question, descriptive frequencies were computed for all predictor variables (i.e., age, grade level, sex/gender, race/ethnic group identification [Hispanic, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian, White], AVID experience level, family members who attended college [mother/female guardian attended college, father/male guardian attended college, grandparent attended college, sibling attended college], and perception of AVID Help). Table 1 shows the *N*-size, percent responding, valid frequency and percent after excluding missing cases, and frequency and percentage of missing values and those who chose not to respond for each variable.

Table 1. Demographics, Background Characteristics, and Missing Data.

Demographic	*n*	*%*	*Valid*	*%*	*M/NR*	*%*
Sex/gender identification			5188	98.2	96	1.8
Female	3031	57.4				
Male	2105	39.8				
Trans	52	1.0				
Racial/ethnic identification						
Hispanic or Latino			5125	97.0	159	3.0
Yes	2549	48.2				
No	2576	48.8				
American Indian or Alaska Native			5284	100.0		
Not Selected	4886	92.5				
Selected	398	7.5				
Asian			5284	100.0		
Not Selected	4861	92.0				
Selected	423	8.0				

Table 1. (continued).

Demographic	*n*	*%*	*Valid*	*%*	*M/NR*	*%*
Black or African American			5284	100.0		
Not Selected	4833	91.5				
Selected	451	8.5				
Native Hawaiian or other Pacific Islander			5284	100.0		
Not Selected	5080	96.1				
Selected	204	3.9				
White			5284	100.0		
Not Selected	2634	49.8				
Selected	2650	50.2				
Grade level			4675	88.5	609	11.5
6	84	1.6				
7	734	13.9				
8	17	0.3				
9	1330	25.2				
10	1383	26.2				
11	727	13.8				
12	400	7.6				
Age			5237	99.1	47	0.9
11	31	0.6				
12	261	4.9				
13	694	13.1				
14	794	15.0				
15	1311	24.8				
16	1174	22.2				
17	688	13.0				
18	272	5.1				
19	12	0.2				
AVID experience level			5204	98.5	80	1.5
First year	2262	42.8				
Second year	1533	29.0				
Third year	686	13.0				
Fourth year	440	8.3				
Fifth year	283	5.4				

Table 1. (continued).

Demographic	*n*	*%*	*Valid*	*%*	*M/NR*	*%*
Family members who attended college						
Mother(s)/female guardian(s) attended			5146	97.4	138	2.6
Yes	1937	36.7				
No	2747	52.0				
Don't know	409	7.7				
Not applicable	53	1.0				
Father(s)/male guardian(s) attended			5113	96.8	171	3.2
Yes	1488	28.2				
No	3012	57.0				
Don't know	528	10.0				
Not applicable	85	1.6				
Grandparent(s) attended			5128	97.0	156	3.0
Yes	998	18.9				
No	2623	49.6				
Don't know	1437	27.2				
Not applicable	70	1.3				
Sibling(s) attended			5100	96.5	184	3.5
Yes	1490	28.2				
No	2711	51.3				
Don't know	245	4.6				
Not applicable	654	12.4				
Perception of AVID Help			4757	90.0	527	10.0
Yes	4138	78.3				
No	619	11.7				
Total	4757	90.0				

Note. M/NR = Missing/Chose not to respond.

Fifty-seven percent of the sample was female, 48% identified as being Hispanic or Latino, 7.5% identified as American Indian or Alaska Native, 8% identified as Asian, 8% identified as Black or African American, 3.9% identified as Native Hawaiian or Pacific Islander, and about 50% identified as being White. A majority of the sample was in Grade 9 (25.2%) or 10 (26.2%), although the grade levels spanned from 6th through

12th grade with an average age of 15 years (M = 15.06, SD = 1.570). An examination of family college history revealed that 52% of the sample reported that their mother or female guardian had not attended college, 57% reported that their father or male guardian had not attended college, 49.6% reported that their grandparent had not attended college, and 51.3% reported that their sibling(s) had not attended college. The mean length of time reported as an AVID participant was 2.03 years (SD =1.568*),* with 42.8% of the sample reporting that they had one year in AVID, 29% of the sample reporting they had two years, and the remaining sample reporting that they had three or more years of experience with the AVID program.

Participants were also asked whether the AVID program helped them to become a better student. About 78% of the sample indicated a perception that AVID helped them to become a better student.

As can be seen in Table 1, the percentage of missing values on the predictive study variables ranged from 0.9% to 11.5%; ten of the predictive variables had missing data values and five variables did not. The two outcome variables (i.e., college-going intentions and college-going beliefs) also had missing variables ranging from 11.5% to 15.8%, respectively. Missing value analysis was conducted on the variables with missing values and the data were found to not be missing completely at random according to Little's MCAR test: χ^2 (2398) = 7184.87, $p < .001$. Data were analyzed to determine whether there were any clear patterns of missingness associated with particular variables. An initial sensitivity analysis showed that nonrandom missingness was associated with the questions asking about the college experiences of family members. However, use of more sophisticated selection or pattern mixture models for further exploration of

missingness was beyond the scope of this study. Multiple imputation analysis was conducted with 10 imputations, which is a robust procedure even when data are not MCAR (Enders, 2010). Tables comparing the means and standard deviations of study variables using the original data with the missing values ("All values") with the data after EM imputation are shown in Appendix B. Consequently, all results discussed from this point on are based on the imputed data set.

To answer the second research question, I computed bivariate correlations among all 15 predictor variables (i.e., age, grade level, sex/gender, race/ethnic group identification [Hispanic, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian, White], AVID experience level, family members who attended college [mother/female guardian attended college, father/male guardian attended college, grandparent attended college, sibling attended college], and perception of AVID help) that were originally considered. Table 2 shows the correlations, means, and standard deviations between participant perceptions of AVID help with participant demographic and background characteristics for variables that were *statistically significant*. Twelve of the 15 variables listed here in order of the magnitude of the correlation showed small but statistically significant ($p < .005$) relations with the AVID help variable. From largest to smallest, the correlations with AVID help ranged from 0.098 to -.030. AVID help was related to AVID experience ($r = .098$), identification as Hispanic or Latino ($r = 0.063$), college intentions ($r = 0.057$), grandparent who attended college ($r = -.056$), father or male guardian attended college ($r = -.049$), mother or female guardian who attended college ($r = -.045$), identification as White ($r = -.045$), college

beliefs (r = .039), grade level (r = .037), age (r = -.035), identification as Native Hawaiian or other Pacific Islander (r = .033), and sex/gender identification (r = -.030).

Table 2. Bivariate Correlations for Statistically Significant Variables Related to Perception of AVID Help (N = 5284).

.Variable	Correlation with AVID Help	Mean	Standard Deviation
College intentions	.057**	0.770	0.419
College beliefs	.039**	11.610	4.409
Sex/gender	-.030*	0.405	0.491
Hispanic or Latino	.063**	0.500	0.500
Native Hawaiian or other Pacific Islander	.033*	0.040	0.193
White	-.045**	0.500	0.500
Grade level	.037**	9.340	1.483
Age	.035**	15.061	1.568
AVID experience level	.098**	2.030	1.174
Mother(s)/female guardian(s) attended college	-.045**	0.414	0.493
Father(s)/male guardian(s) attended college	-.049**	0.348	0.476
Grandparent(s) attended college	-.056**	0.333	0.471

* $p <$ 0.05 level (2-tailed).
** $p <$ 0.01 level (2-tailed).

Multiple Regression Analysis

Two initial multiple regression models were used to examine the relationships between a set of predictor variables and a) college intentions, and b) college beliefs. The first step in each analysis was an examination of statistical model assumptions (i.e., normality, independence of residuals, homogeneity of variance, and linearity). For both models, no severe departures from model assumptions were detected.

The first multiple regression analysis was used to examine the relationship between college intentions and several predictor variables, as hypothesized in the third research question. Initially, the full set of predictor variables (i.e., age, grade level, sex/gender, race/ethnic group identification [Hispanic or Latino, American Indian or

Alaska Native, Asian, Black, Native Hawaiian, White], AVID experience level, family members who attended college [mother/female guardian attended college, father/male guardian attended college, grandparent attended college, sibling attended college], and perception of AVID Help) were analyzed. The complete results of this analysis are presented in Appendix C. Overall, the model was statistically significant, $F(14, 5269) = 16.359$, $MSE = 0.168$, $R^2 = 0.042$, $p < .001$. Upon examination of the results for individual predictors, however, it was determined that eight of the predictors were not statistically significant. For simplicity of presentation, I next applied a reduced multiple regression model (see Table 3).

The reduced multiple regression model was composed of seven variables (i.e., grade, sex, American Indian/ Alaska Native, Asian, Black/African American, Native Hawaiian/other Pacific Islander, and perception of AVID help). For each predictor variable, Table 3 shows the unstandardized partial regression coefficients (*b*), standard errors (*SE*), standardized partial regression coefficients (β), *t*-test values, *p*-values, and the zero-order and partial correlations.

Table 3. Regression Model Results for the Reduced Model Predicting College Intentions.

						Correlations	
Variable	*b*	*SE*	β	*t*	*p*	Zero-order	Partial
Intercept	0.402	0.039		10.201	<.001		
Grade level	0.038	0.004	0.135	9.976	<.001	0.140	0.136
Sex	-0.085	0.012	-0.100	-7.362	<.001	-0.103	-0.101
American Indian/Alaska Native	-0.069	0.022	-0.044	-3.220	0.001	-0.056	-0.044
Asian	0.063	0.021	0.041	2.999	0.003	0.038	0.041
Black/African American	-0.047	0.020	-0.032	-2.328	0.020	-0.037	-0.032
Native Hawaiian/Pacific Islander	-0.070	0.030	-0.032	-2.367	0.018	-0.028	-0.033
AVID help	0.064	0.018	0.049	3.650	<.001	0.057	0.050

Note. *SE* = standard error

Overall, this reduced model was statistically significant, F (7, 5276) = 29.773, MSE = 0.169, $p < .001$, $R^2 = .037$. Inspection of the standardized partial regression coefficients showed that the predictor with the largest relation with college intentions was grade level, $\beta = 0.135$, $t = 9.976$, $SE = 0.004$, $p < .001$. As can be seen in Table 3, in decreasing order of magnitude, the standardized partial regression coefficients for the remaining statistically significant predictors were sex/gender, perception of AVID help, and racial/ethnic group identification as follows: Native American/Alaska Native, Asian, Black/African American, and Native Hawaiian/other Pacific Islander.

The second multiple regression analysis was used to examine the relationship between college beliefs and several predictor variables as hypothesized in the fourth research question. Initially, the full set of predictor variables (e.g., age, grade level, sex/gender, race/ethnic group identification [Hispanic or Latino, American Indian or Alaska Native, Asian, Black, Native Hawaiian, White], AVID experience level, family members who attended college [mother/female guardian attended college, father/male guardian attended college, grandparent attended college, sibling attended college], and perception of AVID Help) were analyzed. The complete results of this analysis are presented in Appendix D. Overall, the model was statistically significant, F(14, 5269) = 5.495, MSE = 19.214, $R^2 = 0.014$, $p < .001$. Upon examination of the results for individual predictors, however, it was determined that ten of the predictors were not statistically significant. For simplicity of presentation, I next applied a reduced multiple regression model (see Table 4).

The reduced multiple regression model was composed of five predictor variables (e.g., grade level, sex/gender, American Indian/Alaska Native, Black/African American,

and perception of AVID help). For each predictor variable, Table 4 shows the unstandardized partial regression coefficients (*b*), standard errors (*SE*), standardized partial regression coefficients (β), *t*-test values, *p*-values, and the zero-order and partial correlations.

The reduced model as a whole was statistically significant, F (5, 5278) = 13.011, MSE = 19.224, $p < .001$, $R^2 = .012$. For each predictor variable, inspection of the standardized partial regression coefficients showed that the largest predictor was grade level, $\beta = 0.069$, $t = 5.035$, $SE = 0.041$, $p < .001$. In order of magnitude, the standardized partial regression coefficients for the remaining statistically significant predictors were identification as Black/African American, perception of AVID help, sex/gender, and American Indian/Alaska Native.

Table 4. Regression Model Results for the Reduced Model for Predicting Positive College Beliefs.

						Correlations	
Variable	*b*	*SE*	β	*t*	*p*	Zero-order	Partial
Intercept	9.499	0.420		22.626	<.001		
Grade level	0.205	0.041	0.069	5.035	<.001	0.071	0.069
Sex/gender	-0.281	0.123	-0.031	-2.280	0.023	-0.034	-0.031
American Indian/Alaska Native	-0.465	0.230	-0.028	-2.025	0.043	-0.036	-0.028
Black/African American	-0.957	0.216	-0.061	-4.421	<.001	-0.063	-0.061
AVID help	0.475	0.188	0.035	2.528	0.011	0.039	0.035

Note. *SE* = standard error

CHAPTER IV: DISCUSSION

This study examined the extent to which the demographic and background characteristics of students and participation in the AVID program during the 2016–17 school year related to (a) the participants' perceptions of whether AVID participation helped them to become better students, (b) how likely they were to report an intention of going to college, and (c) their positive college-going beliefs.

An evaluation of demographic and background characteristics found that females outnumbered males by about 20 percentage points. As discussed earlier, the Watt et al. (2017) study also reported gender disparities within AVID participation. Looking at three years of historical data, their results showed even greater gender disparities than my study, with girls outnumbering boys by 64% at baseline and as much as 124% by the end of the three-year evaluation period. Exploring the reasons for these gender differences was beyond the scope of my study; however, Watt et al. (2017) speculated whether the lack of male AVID teachers as role models may have contributed to some of these differences.

In addition, the findings within my study may shed light on these findings or help future researchers determine areas that require further exploration. For example, data from the present study indicated that many of the AVID participants were in their first couple of years of experience with the program ($M = 2.030$). Part of the reason for the disparity between males and females and the study having students with less AVID experience could have been related to whether participants (i.e., students or schools) were new to the AVID program or whether there were fewer male students recruited to the program.

Within this study, there were also very few participants who identified as being Black/African American, American Indian/Alaska Native, Asian, and/or Hawaiian/Native Pacific Islander. This finding is not surprising given the demographic make-up of Oregon schools. According to the 2016–17 Oregon Statewide Report Card (OSRC), the demographic composition of K–12 schools was 62.900% White, 22.640% Hispanic/Latino, 5.907% Multi-Racial, 3.984% Asian, 2.358% Black/African American, 1.413% American Indian, and less than 1% Pacific Islander (www.oregon.gov). Based on the results of the present study, participant schools had higher rates of students who identified as being a person of color (i.e., Black/African American, Hispanic/Latino, American Indian, and Pacific Islander) in comparison to those reported in the 2016–17 OSRC (www.Oregon.gov). Even so, the number of participants who identified as being Black/African American, Hispanic/Latino, American Indian, and Pacific Islander was still relatively low (see Table 1); therefore, there are limitations around interpreting the results for certain racial/ethnic groups due to the small number of participants.

In addition, a majority of study participants reported that their family members (mother/female guardian, father/male guardian, grandparent, or sibling) had *not attended* college. None of the research presented in this paper explored this dimension of AVID participation. However, Byun, Meece, and Agger (2017) evaluated the relationship between parental education and student college enrollment and found "with respect to family characteristics, parental education was significantly related to the odds of college attendance patterns" (p. 830). They found that students who had a parent who had attended a four-year university were more likely to attend a four-year university themselves (Byun et al., 2017). Because of the nature of this study, exploring the

relationship between parental/family college education history and college enrollment patterns for AVID participants could not be determined; however, it is an area that should be evaluated in future research studies.

Perhaps the most the remarkable results from the present study were the student reports of AVID helping. Almost 80% of the participants in this study reported perceptions that AVID helped them to become better students. These findings align with the existing research on the AVID and GEAR UP programs. For example, participants from the Parker et al. (2013) and Knagg et al. (2015) studies reported that these intervention programs helped them to do better academically and improved their attitudes and outlook toward educational goals. In addition, the Knagg et al. (2015) study found that students who participated in GEAR UP were more likely to "express greater motivation, particularly intrinsic motivation, to succeed academically and be involved in other activities" (p. 20). Hubbard and Ottoson (1997) stated that student perceptions, such as those found in this study, have the potential to influence academic outcomes as well as perceived opportunities; however, exploring how student perceptions related to student outcomes, such as achievement, was outside the bounds of this study.

An evaluation of the relationship between demographic and background characteristics and perceptions of whether AVID helped participants to become better students revealed that males were less likely to report perceptions of AVID helping. Additionally, participants who reported that a family member (e.g., mother/female guardian, father/male guardian, or grandparent) had not attended college were less likely to report a perception of AVID helping. Positive associations with perceptions of AVID help were shown for the following variables: identification with being Hispanic/Latino

and/or Native Hawaiian/Pacific Islander, grade level, age, AVID experience level, college intentions, and college beliefs. Although statistically significant, all of these correlations were very small, ranging from .098 to -.056. As highlighted earlier, several studies (Knaggs et al., 2015; Llamas et al., 2014; Parker et al., 2013) found similar results for the relationship between student self-efficacy and participation in AVID and/or GEAR UP. Further, the Pugh and Tschannen-Moran (2016) study found that the number of years in AVID was positively associated with self-efficacy for African American students *but not* for Latinos. And although my study did explore the relationship between the years in AVID and the perceptions of AVID Help, evaluating the relationship between these variables and various ethnic/cultural groups was beyond the scope of this study. That being said, my analysis found no statistically significant relationship between Black/African American participants and perceptions of AVID helping while those who identified as being Hispanic/Latino were found to have statistically significant yet a very small association with AVID helping (r = .063).

As shown in Table 3, all predictor variables contributed to the reduced regression model for college intentions. Those who identified as being male, Black/African American, being American Indian/Alaska Native, and/or Native Hawaiian/Pacific Islander reported negative regression weights, indicating that after accounting for the other predictor variables in the model, participants who identified with one of these four groups were expected to have lower rates of college intentions when compared to Whites. Participants who identified as Asian and those who perceived AVID as helping reported a small positive weight with college intentions, indicating that after accounting for the other predictor variables, those who identified as Asian or those who perceived AVID as

helping were expected to have higher college intentions in comparison to Whites and those who reported that AVID did not help them to become better students respectively.

Additionally, all predictor variables contributed to the reduced regression model for college beliefs. Those who identified as being male, Black/African American, and American Indian/Alaska Native reported negative regression weights, indicating that after accounting for the other predictor variables in the model, those participants who identified with one of these three variables were expected to have lower college intentions. Participants who reported being in higher grade levels and those who perceived AVID as helping reported a small positive weight with college beliefs, indicating that after accounting for the other predictor variables, those who were in higher grade levels and those who perceived AVID as helping were expected to have higher college intentions.

Both regression models show similar results in that college beliefs and college intentions appear to be positively related to grade level and perceptions of AVID helping for some subgroups of participants. These results align with the existing research shared throughout the paper (Parker et al., 2013; Watt et al., 2008). For example, the Watt et al. (2008) and Parker et al. (2013) studies reported that participants perceived that AVID helped them to stay focused on their long-term goals. Furthermore, similar to my findings, Watt et al. (2007) reported that boys were less likely to have long-term educational goals.

It was also noted that identification as being Hispanic or Latino was not statistically significant within the initial two regression models that were analyzed and deleted from both models (see Appendices C and D for full regression models). Lozano

et al.'s (2009) findings were similar, with no significant difference between Hispanic participants and a control group in educational aspirations. Also, both of my regression models found students of color were less likely to report college-going intentions and college-going beliefs. This finding warrants further investigation into whether the AVID program is serving its purpose in preparing all students, especially underserved populations, for college and beyond.

Limitations

Although the findings stated in this study show support for the AVID program, researchers should interpret them cautiously as several limitations were noted. In the paragraphs that follow, limitations including concerns regarding the (a) correlational and cross-sectional design, (b) selection of the program by schools, (c) selection of students and the demographics of participants, (d) questionnaire design (e.g., reliability and validity), (e) reporting bias, and (g) limited empirical research that was available are discussed.

This was a correlational study (i.e., schools were not randomly selected for AVID participation). Therefore, study results cannot be used to draw strong conclusions about the relation between participation in AVID and specific outcomes like college-going beliefs or intentions. There may be other confounding variables that impacted the outcomes of the study as well. The schools that chose to participate in the grant may have differed in some way from non-participant schools. For example, participant schools may have had different systems and supports in place (e.g., leadership, resources, and staff experience levels) that made AVID implementation easier and more appealing to them and/or had an impact on outcomes. Further, no procedures were used to control for

differences in implementation across school sites nor was there any monitoring of fidelity of program implementation. There were likely variations in implementation including how funding was allocated, what professional development was provided, what student and staff engagement levels existed, and implicit bias in the classroom, all of which could have impacted the relations observed in the study and the generalizability of these findings to other school sites.

Because this study was conducted in Oregon, where the demographic composition of schools differs from other parts of the country, it would be difficult to make inferences about the AVID program's effectiveness on a larger scale. For instance, there were a relatively small number of participants who identified as Black/African American, Hispanic/Latino, American Indian, and Pacific Islander. Even within Oregon schools, students were recruited to the AVID program based on criterion such as the potential to perform and having a baseline GPA equivalent to a *C* average. Therefore, there are concerns over school staff selecting students who had a different profile, such as higher motivation or maturation levels, or other exposures that could have had an impact on the results. Additionally, not all program participants were surveyed due to absences, so some data was not available to analyze. This study could have been strengthened by having a control group for comparison. Non-participants could have been easily surveyed at the same school sites and/or at different school sites using the AVID survey. For these reasons, there are concerns regarding the external validity of these results, making it challenging to make inferences with regard to larger groups of students or to program outcomes.

Furthermore, the AVID survey instrument was not validated. There is no information available regarding the validity or reliability of the survey used in this study (Bousselot et al., 2017). Face validity does appear to be present as the questions appear to measure what they were intended to measure. However, the results should be interpreted with caution. Some of the small correlations that were observed could have been due to survey design issues or to inconsistencies in how the survey was administered rather than due to AVID participation. There are also concerns around the reliability of some of the survey variables and whether they truly capture the intended measures.

In addition, students reported their own background characteristics and perspectives. Some students may have taken into consideration what is socially acceptable to researchers, educators, or their peers when responding. Further, differences in how and where the survey was administered across school sites could have impacted participants' responses. For example, if a highly respected and experienced AVID teacher with high expectations administered the survey, the responses could differ from participants who took the survey in a classroom where it was proctored by a newer or less respected educator. No information was available to allow for this type of evaluation. Additional information regarding how the survey was administered and the fidelity of program implementation would have been helpful for the purpose of interpretation, determining implications, and would have strengthened the confidence in these results.

Finally, an additional concern is the limited amount of research available on the AVID and GEAR UP programs, making it challenging to determine whether the results presented here truly align with previous research findings. Furthermore, much of the existing research was correlational and/or descriptive, making it challenging to draw

strong conclusions about study results. Although this study sheds some light on the AVID program and participant perceptions of whether the program helps to improve self-efficacy, college intentions, and beliefs, it is still unclear whether the AVID program yields a good return on the investment, especially given the mixed results for underrepresented populations of students.

Implications

The disparities in educational outcomes, including graduation rates and college readiness, continue to be concerning. Federal, state, and local government continue to invest in college preparatory programs (e.g., AVID, GEAR UP) even though the results, including those in the present study, have been marginal. Although both the reduced regression models and the bivariate correlations that were analyzed in this study showed statistically significant associations between predictor variables and outcomes (see Tables 2–4), all associations were small. In particular, the results of the reduced regression models did not show much variation across demographic groups, even for those that were found to have a statistically significant relationship with college intentions and beliefs.

Larger longitudinal studies are needed to explore program effects, especially given "the national push toward using measures of student growth…for accountability decisions" (Conaway, Keesler, & Schwartz, 2015). With many of the existing studies on AVID and GEAR UP not extending much beyond four years, it is challenging to make any inferences as to the long-term impact of such programming. For example, due to this study's cross-sectional design and the average participant only having had two years' worth of experience with the AVID program, any inference of long-term causation would be inappropriate.

Based on the limitations of this study and others like it, researchers need access to longitudinal data systems that allow for an evaluation of long-term outcomes, especially in relation to underrepresented groups. Looking to the present study, the data was gathered from schools throughout the state, but researchers were not able to link the survey responses to other longitudinal data that were collected by the state (e.g., graduation rates and college attendance). Collaborations between government agencies and researchers are necessary to obtain a better picture of how AVID and other programs impact standard outcome measures. In fact, this study and many of the existing studies on AVID and GEAR UP have not used a standard measure for program effectiveness. Future researchers should determine which measures best capture information on program effectiveness and future studies should implement those measures to help compare results across studies.

Researchers and educators need to gain a better understanding of support that results in positive outcomes for students who encounter the most barriers within our education system, underserved students and male students. Howard (2010) reminds readers that we must "develop a more complex notion of culture … [so we can better understand] how culture plays out in schools and connects to varying types of knowledge" (p. 54) and outcomes. Cultural differences between the genders may be at play here. Researchers and educators should explore the impact of these cultural differences as well as the association between teacher gender and student outcomes.

The AVID and GEAR UP programs may be effective for some students in certain contexts; however, additional research is needed to see whether these programs actually work to close the Opportunity Gap in American schools, including graduation rates; and

if they do not, educators and researchers must determine why. For example, in the present study, it was unclear why some students reported a perception of AVID helping while others did not. Perhaps this finding relates back to an association reported by the Pugh and Tschannen-Moran (2016) study. They found that the number of years in AVID was positively associated with self-efficacy; however, the differences in reports of AVID helping could also be due to other issues such as fidelity of implementation. With fidelity issues, it makes it challenging to determine causal relationships. That being said, a qualitative and/or longitudinal exploration of these perceptions, as well as gathering data from program staff, could potentially shed some light on the differences in student reports of AVID helping. Also, future research should examine how implementation differences may be associated with student outcomes.

Additionally, there is an assumption in funding these programs that all students want to or should be going to college or taking AP coursework. Brooks (2018) questioned whether this is a good practice. Other researchers have raised concerns over whether AP courses have been diluted by creating increased access. In 2013, Gardner reported that "the overall pass rate [for AP tests] dropped from 61 percent for the class of 2002 to 57 percent for the class of 2012" (https://blogs.edweek.org). His findings indicate that students who are taking these courses are less prepared than they have been in the past, which is the exact opposite goal of the AVID and GEAR UP programs.

States, districts, and administrators should consider investing funds in additional professional development options for educators. For example, funds might be better allocated towards training in recognizing implicit bias and cross-cultural awareness, especially context specific trainings. By providing these opportunities, teachers will be

better prepared to counteract tracking and other systemic issues that may be reinforcing barriers to more equitable outcomes for underserved student populations.

In conclusion, while "the educational system, no matter how well-intentioned, [cannot] adequately provide the resources that low-income, underrepresented, and high-need students require" (Swail, 2000, p. 88), it does not mean that schools should *not* continue to try. Researchers and educators must continue to explore the impact of participation in these programs, the complexities of program implementation, and how participation differs across diverse sets of students while also being culturally responsive in the process; the implication of which could have a profound effect on educational programming, outcomes, and ultimately, the Opportunity Gap.

APPENDIX A: AVID EVALUATION: STUDENT SURVEY SCRIPT

Terms of assent. Your school is committed to preparing you for success in college and careers. As part of this goal, your school is using the Advancement Via Individual Determination (AVID) program to help better prepare students for college and/or careers. The Educational Policy Improvement Center (EPIC) is working to provide the funders of the Oregon AVID project with information about how students are engaged in school and what motivates them when thinking about future college/careers. To ensure that we have heard from students about these topics, EPIC staff have developed a survey to collect these data directly from students. This survey is a follow up to the survey that you completed in the fall of this school year.

Use of Student Survey Data. The use of survey data by EPIC will include providing funders with key information about student engagement and motivation in school and their participation in the College and Career Readiness program.

Confidentiality. EPIC will take all steps necessary to make sure your identity is kept confidential. Your name will not be connected to your survey. Surveys are collected at the school level and delivered to EPIC for statistical analysis.

Terms of Assent. Completing this survey is voluntary. Your decision to participate will not affect your grades. If you decide to complete the survey, you are free to stop at any time. EPIC does not believe that there are any risks related to your participation and hope that your survey responses will help the project team to better understand how students are engaged and motivated in school. If you have questions regarding the survey or the project, you may contact the evaluator, Tracy Bousselot, at 541.246.2665 or tracy_bousselot@epiconline.org.

Creating an identification number. If you completed this survey in the fall of 2016, you were asked to create a unique six-digit ID number that will be used to allow us to connect your responses at the beginning and end of the school year without our knowing your name. Please enter the same ID number you entered when you completed the fall survey. If you did NOT complete the survey in the fall, please use the method below to create an ID now. To create the ID number, you were asked to use the following method: Your middle initial (if you don't have a middle name, use the letter X) The first initial of your mother's first name (if not applicable, use the letter X) The first initial of your father's first name (if not applicable, use the letter X) Your two-digit birth month (for example, if you were born in February, the two digit birth month would be 02) The number of older siblings you have.

EXAMPLE: Sally Marie Perez was born in March. Her mother's name is Linda and her father's name is James. She has no older brothers or sisters. Her ID number would be MLJ030.

Student Survey

Please enter you six-digit ID number here: [1-middle initial][1-first initial of mother's name][1-first initial of father's name][2-two-digit birth month][1-number of older siblings]

1. What is your age?
   - 11
   - 12
   - 13
   - 14
   - 15
   - 16
   - 17
   - 18
   - 19
   - Choose not to respond
2. What grade are you in this school year?
   - 6
   - 7
   - 8
   - 9
   - 10
   - 11
   - 12
   - Choose not to respond

3. I identify my gender as…
    - Female
    - Male
    - Trans
    - Choose not to respond
4. Are you Hispanic/Latino?
    - Yes
    - No
    - Choose not to respond
5. Please select your race(s) from the list below. Choose all that apply:
    - American Indian or Alaska Native
    - Asian
    - Black or African American
    - Native Hawaiian or other Pacific Islander
    - White
    - Choose not to respond
6. Which of the following statements best describes your experience as an AVID student?
    - This is my first year in the AVID program
    - This is my second year in the AVID program
    - This is my third year in the AVID program
    - This is my fourth year in the AVID program
    - This is my fifth year in the AVID program
    - Choose not to respond

7. Have any of your family members attended college?

	Yes	No	Don't know	Not applicable	Choose not to respond
Mother(s)/female guardian(s)	○	○	○	○	○
Father(s)/male guardian(s)	○	○	○	○	○
Grandparent(s)	○	○	○	○	○
Brother(s)/sister(s)	○	○	○	○	○

8. How would you rate yourself on the following skills?

	1	2	3	4	5	6
Writing	○	○	○	○	○	○
Reading	○	○	○	○	○	○
Working with other students	○	○	○	○	○	○
Organizing my school work	○	○	○	○	○	○
Understanding the content being taught	○	○	○	○	○	○

9. How often do you use the following strategies to help increase your writing skills:

	Never	Rarely	Sometimes	Often	Always	Choose not to respond
Revise or rewrite your notes and/or create a summary of your notes (from readings, classroom lectures, etc.)	○	○	○	○	○	○
Write about what you have read, reflecting on a section, chapter, or unit	○	○	○	○	○	○
Write in journals or logs reflecting on what you have been learning in your classes, as well as how you are doing and/or what goals you have for yourself	○	○	○	○	○	○

10. How often do you use the following collaboration strategies in class to help increase your learning:

	Never	Rarely	Sometimes	Often	Always	Choose not to respond
Debate a statement or question in written form only, using chart paper or a white board	○	○	○	○	○	○
Think about a question prompt on your own, and then discuss it with a classmate or classmates	○	○	○	○	○	○
Participate in showing and looking at student work by posting it around the room and then moving in small groups from example to example, discussing the work with each other	○	○	○	○	○	○

11. How often do you use the following strategies to help increase your organization skills:

	Never	Rarely	Sometimes	Often	Always	Choose not to respond
Use a three-ring binder to keep work in and keep it orderly	○	○	○	○	○	○
Use writing planning where you first come up with and write a clear thesis and then organize details and facts to support your thesis before you start writing	○	○	○	○	○	○
Use a form/guideline for writing assignments to help you with organizing the facts/details to use, identify a thesis statements, etc.	○	○	○	○	○	○

12. How often do you use the following strategies to help increase you understanding of what you read:

	Never	Rarely	Sometimes	Often	Always	Choose not to respond
Number the paragraphs, circle key items, underline author's claims, and use this information to engage in activities about the text	○	○	○	○	○	○
Participate in Socratic seminars--that is, engage in collaborative discussions about the text	○	○	○	○	○	○
Use tables, graphs, or pictures to organize the information in the text into a more understandable form (such as Venn diagrams, acrostics, spider diagrams, timelines, concept maps, etc.)	○	○	○	○	○	○

13. How often do you use the following strategies to help increase your understanding of new information

	Never	Rarely	Sometimes	Often	Always	Choose not to respond
Ask yourself if what you're reading is related to what you already know	○	○	○	○	○	○
Consciously focus your attention on important information	○	○	○	○	○	○

14. Please indicate your level of agreement with the following statements:

	Disagree strongly	Disagree	Disagree somewhat	Neither agree nor disagree	Agree somewhat	Agree	Agree strongly	Choose not to respond
If I can't understand my schoolwork at first, I keep going over it until I do.	○	○	○	○	○	○	○	○
I feel very pleased with myself when I really understand what I'm taught at school.	○	○	○	○	○	○	○	○
When I study, I usually study in places where I can concentrate.	○	○	○	○	○	○	○	○
I'm able to use some of the things I learn at school in other parts of my life.	○	○	○	○	○	○	○	○
Sometimes I don't try hard at assignments so I have an excuse if I don't do so well.	○	○	○	○	○	○	○	○
When I don't do so well at school, I'm often unsure how to avoid that happening again.	○	○	○	○	○	○	○	○
I feel very pleased with myself when I do well at school by working hard.	○	○	○	○	○	○	○	○
Each week I'm trying less and less.	○	○	○	○	○	○	○	○
If my homework is difficult, I keep working at it trying to figure it out.	○	○	○	○	○	○	○	○
When exams and assignments are coming up, I worry a lot.	○	○	○	○	○	○	○	○
Often, the main reason I work at school is because I don't want people to think that I'm dumb.	○	○	○	○	○	○	○	○

15. Please indicate your level of agreement with the following statements:

	Disagree strongly	Disagree	Disagree somewhat	Neither agree nor disagree	Agree somewhat	Agree	Agree strongly	Choose not to respond
When I get a good grade I often don't know how I'm going to get that grade again.	○	○	○	○	○	○	○	○
If I try hard, I believe I can do my schoolwork well.	○	○	○	○	○	○	○	○
Learning at school is important.	○	○	○	○	○	○	○	○
I don't really care about school anymore.	○	○	○	○	○	○	○	○
When I get a bad grade I'm unsure how I'm going to avoid getting that grade again.	○	○	○	○	○	○	○	○
When I study, I usually organize my study area to help me study best.	○	○	○	○	○	○	○	○
I'm often unsure how I can avoid doing poorly at school.	○	○	○	○	○	○	○	○
I worry about failing exams and assignments.	○	○	○	○	○	○	○	○
Often, the main reason I work at school is because I don't want people to think bad things about me.	○	○	○	○	○	○	○	○
I get it clear in my head what I'm going to do when I sit down to study.	○	○	○	○	○	○	○	○
I've pretty much given up being involved in things at school.	○	○	○	○	○	○	○	○
If I don't give up, I believe I can do difficult schoolwork.	○	○	○	○	○	○	○	○
I sometimes don't study very hard before exams so I have an excuse if I don't do so well.	○	○	○	○	○	○	○	○
I feel very pleased with myself when what I learn at school gives me a better idea of how something works.	○	○	○	○	○	○	○	○

16. Please indicate your level of agreement with the following statements:

	Disagree strongly	Disagree	Disagree somewhat	Neither agree nor disagree	Agree somewhat	Agree	Agree strongly	Choose not to respond
I feel very pleased with myself when I learn new things at school.	○	○	○	○	○	○	○	○
Before I start an assignment, I plan out how I am going to do it.	○	○	○	○	○	○	○	○
When I'm taught something that doesn't make sense, I spend time to try to understand it.	○	○	○	○	○	○	○	○
I've pretty much given up being interested in school.	○	○	○	○	○	○	○	○
I try to plan things out before I start working on my homework or assignments.	○	○	○	○	○	○	○	○
Often the main reason I work at school is because I don't want to disappoint my parents.	○	○	○	○	○	○	○	○
When I study, I usually try to find a place where I can study well.	○	○	○	○	○	○	○	○
If I have enough time, I believe I can do well in my schoolwork.	○	○	○	○	○	○	○	○
What I learn at school will be useful one day.	○	○	○	○	○	○	○	○
I sometimes do things other than study the night before an exam so I have an excuse if I don't do so well.	○	○	○	○	○	○	○	○
I'll keep working at difficult schoolwork until I think I've worked it out.	○	○	○	○	○	○	○	○

17. Please indicate your level of agreement with the following statements:

	Disagree strongly	Disagree	Disagree somewhat	Neither agree nor disagree	Agree somewhat	Agree	Agree strongly	Choose not to respond
When I do tests or exams I don't feel very good.	○	○	○	○	○	○	○	○
Often the main reason I work at school is because I don't want my teachers to think less of me.	○	○	○	○	○	○	○	○
I usually stick to a study timetable or study plan.	○	○	○	○	○	○	○	○
If I work hard enough, I believe I can get on top of my schoolwork.	○	○	○	○	○	○	○	○
It's important to understand what I'm taught at school.	○	○	○	○	○	○	○	○
I sometimes put assignments and study off until the last moment so I have an excuse if I don't do so well.	○	○	○	○	○	○	○	○
In terms of my schoolwork, I'd call myself a worrier.	○	○	○	○	○	○	○	○
When I study, I usually study at times when I can concentrate best.\	○	○	○	○	○	○	○	○

18. Which of the following courses do you plan to take or have you taken in high school? Select all that apply

- ○ Algebra I
- ○ Algebra II
- ○ Geometry
- ○ Trigonometry
- ○ Calculus
- ○ Chemistry
- ○ Physics
- ○ Foreign Language
- ○ Career Technical Education (CTE) Elective (please specify)_____
- ○ At least one Advanced Placement (AP) course (please specify)_____
- ○ At least one dual credit course (please specify)_____
- ○ Choose not to respond

19. Which of the following best describes your intentions about continuing your education after high school?

- o I plan on attending college/other postsecondary training program
- o I will not attend college/other postsecondary training program because it's too expensive
- o I don't need college for my planned job/want to work right away
- o My grades are not good enough for college
- o I'm not interested in attending college/I don't like school
- o I want to join the military
- o I don't want to be away from home
- o I want to start a family
- o Some other reason (please specify)_____
- o Choose not to respond

20. If I go to college, I believe:

	Don't believe at all	Somewhat believe	Believe	Definitely believe	Choose not to respond
I will be able to pay for college	o	o	o	o	o
I will impress my family	o	o	o	o	o
It will be hard for me to pass my classes	o	o	o	o	o
I will have better opportunities in life	o	o	o	o	o
I will contribute more to society as a result of going to college	o	o	o	o	o
I will not be able to take care of myself	o	o	o	o	o
I will feel different from my family	o	o	o	o	o
I will feel confused in my classes	o	o	o	o	o
I will make new friends	o	o	o	o	o
I will make other people's lives better because of my college experiences	o	o	o	o	o
I will not have enough money for things like clothes, movies, or other activities	o	o	o	o	o
I will gain respect from others	o	o	o	o	o
I will be proud of myself	o	o	o	o	o
I will be prepared academically	o	o	o	o	o
My parents will support my decision	o	o	o	o	o
My family might not understand my choice to attend college	o	o	o	o	o
I will be successful in college	o	o	o	o	o
My friends will be jealous of me	o	o	o	o	o
I will feel different from my friends	o	o	o	o	o
My parents will approve of me	o	o	o	o	o

20. (continued)

	Don't believe at all	Somewhat believe	Believe	Definitely believe	Choose not to respond
My other responsibilities will make it hard for me to do well in school	○	○	○	○	○
I will not fit in with friends at home	○	○	○	○	○
My family will not approve of me	○	○	○	○	○
My friends will be happy for me	○	○	○	○	○
I will make a lot of money after I graduate	○	○	○	○	○

21. Do you feel like the AVID class has helped you to become a better student?
    - ○ Yes
    - ○ No

22. Please list up to three ways that the AVID class has helped you to become a better student?

23. If the AVID class has not helped you to become a better student, please explain why it has not helped.

APPENDIX B

Table 5. Summary of Estimated Means and of Estimated Standard Deviations.

	All Values	EM
Age	15.060	15.060
Grade	9.490	9.350
Sex/Gender	1.430	1.430
American Indian/Alaskan Native	.080	.080
Asian	.080	.080
Black/African American	.090	.090
Native Hawaiian/Pacific Islander	.040	.040
White	.500	.500
Race no response	.350	.350
AVID Experience	2.030	2.030
Hispanic	.500	.500
Mom/female guardian college	.414	.417
College intentions	.774	.774
Perceptions of AVID help	.870	.850
Dad/male guardian college	.331	.346
Grandparent college	.276	.329
Sibling college	.355	.368
College beliefs	11.610	11.610

Table 6. Summary of Estimated Standard Deviations.

	All Values	EM
Age	1.573	1.573
Grade	1.497	1.489
Sex/Gender	.514	.514
American Indian/Alaskan Native	.264	.264
Asian	.271	.271
Black/African American	.279	.279
Native Hawaiian/Pacific Islander	.193	.193
White	.500	.500
Race no response	.478	.478
AVID Experience	1.180	1.181
Hispanic	.500	.501
Mom/female guardian college	.493	.493
College intentions	.419	.419
Perceptions of AVID help	.336	.343
Dad/male guardian college	.471	.472
Grandparent college	.447	.451
Sibling college	.478	.480
College beliefs	4.410	4.410

APPENDIX C

Table 7. Regression Model Results for the Full Model Predicting College Intentions.

Variable	*b*	*SE*	β	*t*	*p*
Intercept	0.559	0.075		7.452	0
Age	-0.032	0.011	-0.121	-3.057	0.002
Grade level	0.071	0.012	0.252	6.176	0
Sex	-0.086	0.012	-0.101	-7.441	0
Hispanic/Latino	0.009	0.014	0.010	0.637	0.524
American Indian/Alaskan Native	-0.071	0.022	-0.045	-3.293	0.001
Asian	0.056	0.022	0.037	2.589	0.010
Black/African American	-0.052	0.021	-0.034	-2.493	0.013
Native Hawaiian/Pacific Islander	-0.074	0.030	-0.034	-2.494	0.013
AVID Experience	0	0.006	0.001	0.063	0.950
Mom/female guardian college	-0.006	0.016	-0.007	-0.40	0.689
Dad/male guardian college	0.021	0.017	0.024	1.232	0.218
Grandparent college	0.016	0.018	0.018	0.874	0.382
Sibling college	0.022	0.013	0.025	1.764	0.078
Perception of AVID help	0.066	0.018	0.051	3.720	0

a Dependent Variable: College Intentions

APPENDIX D

Table 8. Regression Model Results for the Full Model Predicting College Beliefs.

Variable	*b*	*SE*	*β*	*t*	*p*
Intercept	10.535	0.802		13.136	0
Age	-0.215	0.113	-0.076	-1.897	0.058
Grade level	0.464	0.123	0.156	3.774	0
Sex	-0.279	0.124	-0.031	-2.253	0.024
Hispanic/Latino	-0.191	0.145	-0.022	-1.319	0.187
American Indian/Alaskan Native	-0.47	0.232	-0.028	-2.031	0.042
Asian	0.156	0.233	0.01	0.669	0.503
Black/African American	-1.012	0.221	-0.064	-4.579	0
Native Hawaiian/Pacific Islander	-0.336	0.319	-0.015	-1.053	0.292
AVID Experience	-0.083	0.062	-0.022	-1.343	0.179
Mom/female guardian college	-0.142	0.169	-0.016	-0.841	0.4
Dad/male guardian college	0.164	0.181	0.018	0.905	0.366
Grandparent college	0.06	0.194	0.006	0.309	0.757
Sibling college	-0.048	0.134	-0.005	-0.361	0.718
Perception of AVID help	0.528	0.189	0.039	2.795	0.005

a Dependent Variable: college beliefs

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