AVID College Completion Project
Final Comprehensive Evaluation Report

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AVID College Completion Project

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Executive Summary

Background

In fall 2013, AVID Center received a grant from the Michael & Susan Dell Foundation (MSDF) to implement the AVID for Higher Education (AHE) program at a diverse group of nine colleges and universities across the country. The following colleges and universities participated in the MSDF-funded AVID College Completion Project: Atlanta Technical College, Butler Community College, California State University – San Marcos, Fort Valley State University, Saddleback College, Texas Wesleyan University, Tougaloo College, University of North Carolina – Asheville, and Washington State University, Tri-Cities. Six 4-year institutions and three 2-year colleges, located in seven different states, participated in the program.

The primary goal of the AHE program is to improve student persistence and graduation outcomes for students enrolled at participating institutions. The program relies on a series of institution-wide processes (e.g., creation of a site team to facilitate cross departmental discussions about student success, AVID-related professional development for faculty and staff, establishment of peer tutoring programs using Socratic questioning approaches, and the infusion of student-centered instructional practices and skill-based content into first year experience (FYE) and other targeted freshman courses to accomplish its goals. Staff and faculty at participating institutions of higher education (IHEs) participated in professional development (PD) related to the implementation and administration of the AHE program. They also participated in PD related to inquiry-based, high engagement strategies (i.e., the use of active and collaborative learning), effective reading strategies, time management, test-taking strategies, and other topics. In addition, most of the participating institutions sent their peer tutors to training on how to use Socratic tutoring approaches in their work with students at the campus tutoring and student success centers.

Gibson Consulting Group was hired to conduct a comprehensive evaluation of the AHE program. A variety of data sources were used in the evaluation, including:

- Annual site visits to participating institutions (which involved group interviews with college leaders, faculty members, and peer tutors, and observations of freshman course sections taught by AVID-trained faculty and nonparticipating instructors);
- Annual PD participant surveys (e.g., administrators, instructors, and tutors);
- Annual student surveys (AVID and non-AVID course sections);
- Program implementation scores provided by AVID Center; and
- Student-level data files collected from participating institutions related to student demographics and prior academic achievement (e.g., SAT/ACT, high school GPA), college enrollment, course enrollment and grades, and degree attainment.

This report explores program implementation, instructional practices, and related student outcomes for nine participating colleges and universities, and three cohorts of students (i.e., those participating in the AHE program and matched nonparticipating students) who began college in fall 2014 (Cohort 1), 2015 (Cohort 2), and 2016 (Cohort 3). This evaluation utilizes a variety of statistical models to explore the near-
term and long-term effects of AHE participation on student persistence and course passing rates. Outcomes for each of the three student cohorts are followed through fall 2018.¹

Key Findings

AHE Program Implementation

Based on multiple data sources, it is evident that colleges and universities participating in the MSDF-funded grant program made concerted efforts to have college administrators, faculty, and tutors participate in AVID-based PD with the goal of improving instructional practices and student engagement in freshman courses. PD participants were in agreement that the PD they attended was impactful.

- Over the course of this project, the AHE program had an extensive reach – directly impacting over 1,150 faculty members and college leaders through professional learning and nearly 12,000 students enrolled in targeted courses taught by AVID-trained faculty.²
- The vast majority of college administrators indicated that the PD they received onsite and at AVID Summer Institutes were helpful in helping them implement AHE at their institutions. Further, college leaders shared that AHE provided a pivotal role in improving communications related to improving success between academic affairs, student services, tutoring, and other departments.
- College instructors and peer tutors who participated in AVID PD felt that the training provided onsite and at AVID national events was relevant, impactful, and contributed to their continued and expanded use of active and collaborative learning strategies in their classes and work with students.

Strong evidence exists that targeted freshman courses, typically FYE courses, were successfully redesigned to provide for skill-based content and instructional practices geared toward active student participation, which effectively connects students to peers and their instructor.

- The majority of students enrolled in AVID-infused freshman course sections shared that skill-based content (e.g., structured note-taking, test taking approaches, time management skills, and critical thinking and inquiry) were emphasized, and active and collaborative learning strategies were utilized by their instructors (e.g., small group and hands-on activities).
- High-engagement strategies most commonly observed in AVID course section include quick writes, think-pair-share, jigsaw, gallery walks, and critical reading strategies (e.g., marking the text and rereading).

¹ Propensity matched, regression-adjusted models are used to control for demographic and academic differences between students participating in the AHE program and matched nonparticipating students.
² This does not include the many students who were enrolled in courses taught by faculty teaching courses outside of the targeted FYE or freshman courses, and does not include students who may have benefitted from tutoring services received by AVID-trained peer tutors.
After attending AVID PD, roughly two-thirds of respondents indicated that they increased the use of AVID-based strategies during the 2014-15, 2015-16, and 2016-17 academic years.

In the majority of course sections taught by AVID-trained faculty, small group activities (79%) and reflective writing exercises (69%) were noted by Gibson researchers during classroom observations.

Not all participating institutions were able to implement the AHE model with equally high levels of fidelity, but more positive persistence results were observed at those which did.

Substantive differences in AHE CSS implementation scores were observed across the nine participating colleges and universities, with six of the nine participating institutions at or approaching routine use of AHE.

Colleges and universities with generally higher implementation scores (e.g., Texas Wesleyan University, UNC Asheville, Saddleback College, and Butler Community College) tended to post the largest effects of AHE program participation on student college persistence results.\(^3\)

### Differences in Instructional Practices between AVID-Trained and Nonparticipating Faculty

Higher levels of student engagement and collaboration in AVID freshman course sections were evident through student surveys and classroom observations.

- Students reported more frequent usage of active and collaborative learning strategies (e.g., small group and hands-on activities) and skill-based content, such as note-taking approaches, effective time management practices, test taking strategies designed to lower anxiety, and critical thinking exercises, in targeted freshman courses. This was particularly evident for the first (starting college in fall 2014) and third (starting college in fall 2016) cohorts of students.

- Based on direct observation by Gibson evaluators, course sections taught by AVID-trained faculty exhibited higher degrees of student engagement in the lesson and more student collaboration than sections taught by nonparticipating faculty members.

Differences in instructional practices and the content of FYE courses were evident with instructors in AVID sections using more active and collaborative learning strategies and providing more skill-based content than instructors who did not participate in AVID training.

- Students reported that courses taught by AVID-trained faculty more commonly involved active and collaborative learning strategies (e.g., small group work, hands-on-activities) and content designed to improve their academic and nonacademic skills (e.g., structured note-taking, time

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\(^3\) Some institutions with high AHE implementation marks (e.g., Washington State University, Tri-Cities) could not be included in student outcomes analyses due to the lack of a viable comparison group.
management, test taking strategies, critical thinking) than comparable course sections taught by nonparticipating instructors.4

- A substantially larger proportion of AVID students in Cohort 1 (68% vs. 45%), Cohort 2 (70% vs. 52%), and Cohort 3 (73% vs. 43%) indicated they were familiar with high-engagement instructional strategies (e.g., Think-pair-share, Gallery walks, Socratic seminars) than students in course sections not taught by AVID-trained faculty.

- For each of the three student cohorts, a larger proportion of students enrolled in AVID course sections consistently reported that: small group activities were conducted on a weekly basis (Cohort 1: 84% vs. 68%; Cohort 2: 82% vs. 77%; and Cohort 3: 83% vs. 65%); critical thinking and inquiry was emphasized (Cohort 1: 90% vs. 83%; Cohort 2: 91% vs. 88%; and Cohort 3: 92% vs. 85%); and structured note-taking strategies were emphasized (Cohort 1: 74% vs. 56%; Cohort 2: 76% vs. 61%; and Cohort 3: 79% vs. 53%).

- AVID classrooms scored higher than sections taught by nonparticipating faculty for each of the four observation metrics: 1) student engagement; 2) student collaboration; 3) classroom energy exhibited by student; and 4) classroom energy exhibited by the instructor.

- The use of writing activities was far more commonly observed in AVID-based freshman course sections (69.1%) than non-AVID course sections (32.9%) over the 2014-2016 period. These activities most commonly involved short quick writes on a particular topic or reflective journal entries made by students.

- Small group activities were also observed more frequently in freshman AVID course sections (79.4%) than non-AVID course sections (48.3%) over the 2014-2016 period.

### Ways in Which Instructional Approaches and Skill-Based Content Matter to Students

*Student exposure to highly-engaging instruction is associated with students feeling that the course has improved critical skills and confidence levels. In addition, this exposure is also correlated with students being more willing to access college resources (e.g., tutoring, faculty office hours), participate in campus events, and connect with peers through study groups.*

After controlling for differences in student characteristics:

- Students in freshmen course sections who reported higher degrees of student-centered instruction and skill-building activities/content were significantly more likely to feel that the course improved their skills and their confidence that they will be successful in college.

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4 This may be the result of the AVID-based PD, or it could be the result of instructors who were already using more active and collaborative learning approaches volunteering to attend or being selected to attend AVID training, or some combination of these and other reasons.
Students in freshmen course sections who reported higher degrees of student-centered instruction and skill-building activities/content were also significantly more likely to be willing to access university resources through faculty office hours and tutoring center attendance, participate in campus events, and organizing or participate in peer study groups.

A positive and statistically significant relationship was found between students’ perceptions of how the targeted freshman course may have impacted their skills and confidence to be successful in college and connection to university resources and peers (i.e., their willingness to access university resources, participate in campus events, and engage with other students in peer study groups).

### Relationship between AHE Participation and Student Persistence in College (and Degree Attainment)

The results from statistical models, conducted at the institution level, suggest that there is a positive statistical relationship between AHE participation and student persistence in college. However, program effects vary substantially by institutions and appear to be related to program implementation fidelity.

After controlling for differences in student characteristics and high school academic performance between AVID and non-AVID students, AVID students persisted in college at higher rates than their non-AVID counterparts:

- For 71% of student cohorts across nine institutions, AVID students posted higher freshman fall-to-spring persistence rates than their non-AVID peers – in 33% of the cohort analyses, persistence rates for AVID students were 5 percentage points or more, and 24% of the differences were positive and statistically significant.

- For 76% of student cohorts across nine institutions, AVID students posted higher year 1-to-year 2 persistence rates than their non-AVID peers – in 52% of the cohort analyses, persistence rates for AVID students were 5 percentage points or more, and 29% of the differences were positive and statistically significant.

- For 77% of student cohorts across nine institutions, AVID students posted higher year 1-to-year 3 persistence rates than their non-AVID peers – in 39% of the cohort analyses, persistence rates for AVID students were 5 percentage points or more, and 15% of the differences were positive and statistically significant.

- The random effects meta-analysis, which calculates AHE program effects on persistence across participating institutions rates at 4-year institutions, yielded modest and consistently positive (but not statistically significant) AHE program effects on persistence when examining both near-term (+0.68 to +1.29 percentage points) and longer-term (+1.92 to +2.43 percentage points) persistence. These results reflect the variation in implementation fidelity across institutions and the results are differentially influenced by larger institutions in the program which did not yield the strongest student persistence results.
Based on the random effects meta-analysis conducted for 2-year institutions, substantive and statistically significant AHE program effects on persistence at 2-year colleges and universities were observed when examining both freshman fall-to-spring (+6.29 percentage points) and year 1-to-year 2 (+8.22 percentage points) persistence. While not statistically significant, AVID student cohorts obtained associate’s degrees within three years at higher rates (+2.08 percentage points) than their non-AVID peers.

Four of the nine participating colleges and universities, which implemented the program at a higher level by getting faculty and staff involved in AVID PD to increase student engagement and focus on enhancing student study skills, posted consistently positive college persistence effects for AVID students.

- Student persistence results were most positive at four institutions which exhibited higher degrees of AHE implementation fidelity: Texas Wesleyan University, UNC Asheville, Butler Community College, and Saddleback College.

- While no significant differences in bachelor’s degree attainment rates within four years of starting college were observed, a substantive difference in degree attainment was observed between AVID (31.5%) and non-AVID (19.6%) students at Texas Wesleyan College.

- Cohort 1 AVID students, who started at Saddleback College in fall 2014, were also more likely than their non-AVID counterparts to receive an associate’s degree or program certificate (+9.4 percentage points).

Relationship between AHE Participation and Course Passing Rates

While the relationship between AHE participation and course passing rates was relatively weak across participating institutions, positive effects were more likely to be observed during the first year of college when the outcome of freshman year passing rates was more proximal to the AHE intervention.

After controlling for differences in student characteristics and high school academic performance between AVID and non-AVID students:

- 62% of the AVID student cohorts across nine participating institutions passed a higher proportion of freshman courses (71.4% of 21 student cohorts). However, the program effect sizes were small with only 14% of the AVID student cohorts posting course passing rates five percentage points higher than their non-AVID peers.

- The relationship between AHE participation and course passing rates became even weaker the further removed students were from the freshman AHE intervention. None of the AVID student cohorts posted year 2, year 3, or year 4 course passing rates of five percentage points higher than their non-AVID peers, and none of the differences were positive and statistically significant.
The relationship between AHE participation and course passing rates was certainly weaker for institutions across the board; however, one institution (Texas Wesleyan University) which posted the promising program effects on persistence, also demonstrated the most consistently positive program effects on course passing rates.

- For Cohort 1 students at Texas Wesleyan University, 2014-15 freshman course passing rates were 9.1 percentage points higher than non-AVID students. For Cohort 2 students, their 2015-16 freshman course passing rates were 8.1 percentage points higher than their non-AVID counterparts.5

- Sophomore year course passing rates for AVID students at Texas Wesleyan University were also consistently higher for AVID students than non-AVID (+1.2 percentage points for Cohort 1, +3.1 percentage points for Cohort 2, and +0.01 percentage points for Cohort 3).6 Junior and senior year course passing rate differences were more mixed as students moved further away from the freshman year AHE intervention.

Relationship between AVID Participation in High School and College-level Student Outcomes

Students who took AVID in high school tended to be at higher risk of academic failure than students who did not enroll in an AVID elective course in high school, and these students were more likely to be enrolled in AHE during their freshman year in college.

- A higher proportion of students who took an AVID elective course in high school were first generation college students (55% vs. 33%), were more often economically disadvantaged and recipients of a federal Pell grant (47% vs. 28%), had lower high school GPA (3.30 vs. 3.43) and lower SAT reading and math composite scores (936 vs. 1048), and worked during the fall semester of their freshman year of college (50% vs. 40%) than students who did not participate in AVID during high school. These findings are expected because the high school AVID elective targets these students, as they are more academically at risk.

- Students who took AVID in high school were more likely to be enrolled in an AVID-infused freshman college course than the students who did not take AVID in high school (65% vs. 49%).

There is some descriptive evidence to suggest that students who took AVID in high school had higher college freshman course passing rates and freshman fall-to-spring persistence than their non-AVID counterparts, but little evidence from this exploratory analysis to suggest that taking AVID in high school may be related to longer-term freshman-to-sophomore persistence.7

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5 Both of these differences are significantly different at the .05 level.
6 None of these differences reached statistical significance.
7 Previous studies using National Student Clearinghouse data showed more promising college persistence results for students who were enrolled in AVID during high school (see Adams, 2014).
• Little differences in freshman fall-to-spring and freshman-to-sophomore year persistence rates were observed between students who took AVID in high school and those who didn’t; however high school AVID students passed a higher percentage of their freshman courses than non-AVID students.

• After controlling for differences in student characteristics, only one significant finding emerged – students who took AVID in high school persisted from fall-to-spring of their freshman year in college at higher rates than students who did not have AVID in high school.

Summary

This comprehensive evaluation of the AHE program reveals a number of important findings related to:

• The implementation of AHE across a diverse group of colleges and universities;
• The perceived impact of AVID PD;
• Instructional practices of instructors who have participated in AVID PD;
• The perceived impact of freshman student exposure to student-centered instruction and skill-based content;
• How student participation in AHE may be related to persistence in college and college course passing rates; and
• The relationship between students’ participation in AVID in high school, participation in AHE and student outcomes.

Results presented in this report show that, while each participating institution sent administrators, faculty members, and peer tutors to AVID PD offerings, AHE program implementation fidelity varied substantially across the nine participating IHEs. As a byproduct of AHE program implementation, college leaders shared that participating in the program helped to improve student success-related communications between academic affairs, student services, tutoring, and other departments.

PD participants shared that the AVID training they attended was of high quality, relevant to their work as college administrators, instructors, and tutors, and helped to improve the quality of their instructional practices. The research team at Gibson found that faculty who participated in AVID-related PD were more likely to implement active and collaborative learning approaches (e.g., small group, hands on, and reflective writing activities) and skill-based content (e.g., note-taking, time management, test taking, reading, critical thinking strategies) aimed at improving academic and non-academic skills in their courses.

When these instructional practices and course contents were used more commonly in targeted freshman courses, typically FYE courses, students were significantly more inclined to feel that the course had improved their skills and their confidence that they will be successful in college. In addition, students who were exposed to higher degrees of collaborative and active learning instruction and skill-based content in a targeted freshman course were also more likely to express willingness to connect
with university resources through attending faculty office hours and campus tutoring centers, participate in campus events, and organize or participate in peer study groups.

After controlling for differences in student demographic and characteristics and prior academic achievement, students who were enrolled in targeted freshman courses taught by AVID-trained instructors persisted in college at consistently higher rates than their non-AVID peers. While college persistence results varied substantially across participating institutions, colleges and universities which implemented AHE with higher degrees of fidelity (e.g., UNC Asheville, Texas Wesleyan University, Saddleback College, and Butler Community College) posted more positive AHE program effects on persistence. The relationship between AHE participation and college course passing rates was weak and inconsistent across participating institutions. Only one IHE, Texas Wesleyan University, posted significantly higher freshman year course passing rates.

Students who took AVID in high school tended to be at higher risk of academic failure than students who did not enroll in an AVID elective course in high school, and these students were more likely to be enrolled in AHE during their freshman year in college. There is some descriptive evidence to suggest that students who took AVID in high school had higher college freshman course passing rates and freshman fall-to-spring persistence than their non-AVID counterparts, but little evidence to suggest that taking AVID in high school may be related to longer-term freshman-to-sophomore persistence.

In summary, this study of the AHE program reveals promising results and suggests that additional program supports from the AVID Center and IHE administration may be required to improve implementation fidelity to a level necessary to achieve positive student outcomes.
1 – Introduction

Background

The AVID for Higher Education (AHE) Student Success Initiative (SSI) was created in response to a growing need at institutions of higher education (IHEs) to increase student persistence and graduation. AVID Center’s work with three pilot sites in 2009 revealed that the participating institutions should include the following programmatic elements:

- Strong campus leadership, vision, and support
- Students access to rigorous credit-bearing coursework (i.e., rather than developmental coursework)
- Coherence in student experiences, which can be achieved through structures such as student cohorts, learning communities, linked courses, etc.
- Learner-centered instruction that engages students in AVID’s WICOR components (i.e., writing, inquiry, collaboration, organization, and reading)
- Participation in an AVID or AVID-like course during their freshman year

In 2010, the Texas Higher Education Coordinating Board (THECB) provided funding to implement the AHE program at 11 colleges and universities across Texas. This work expanded to include a second cohort of Texas IHEs. Evaluation results showed some promising findings, particularly at institutions deemed to have implemented the program with fidelity.

AVID Center received a grant from the Michael & Susan Dell Foundation (MSDF) to implement the AHE Student Success Initiative at IHEs and to measure the impact of the program on institutional and student outcomes. The project is referred to as the AVID College Completion Project. The primary goal of the AHE program is to provide supports to help students persist in their studies and succeed in college. It is designed to impact the expectations and behaviors of administrators, faculty, and staff across the entire campus. The 2013-14 academic year served as a planning period for participating IHEs, and the first cohort of AHE students was served in fall 2014. The second and third cohorts of AHE students were served in fall 2015 and fall 2016, respectively. This report follows the progress of each of these student cohorts through fall 2018 enrollment.

Through the AHE program, the AVID Center partnered with IHEs to systemically address the goals of increased learning, persistence, completion, and success in and beyond college, particularly for economically disadvantaged, first-generation, and minority students. The AHE program strives to address systemic institutional barriers that traditionally limit student academic achievement (e.g., lack of communication between academic and student affairs or limited tutoring opportunities for students), and assist students who are not fully prepared for college by providing training and support to develop their skills for academic success and persistence.
The focus of this report is on AHE program implementation and related student outcomes (e.g., persistence rates, course passing rates) at sites over the 2014-15 to 2016-17 period for the fall 2014, fall 2015, and fall 2016 student cohorts. Institutions listed in Table 1.1 Participated in the AVID College Completion Project.

Table 1.1. – IHEs Participating in the AHE College Completion Project

<table>
<thead>
<tr>
<th>Participating Institution</th>
<th>Location</th>
<th>Institution Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>Atlanta, Georgia</td>
<td>Two-Year</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>El Dorado, Kansas</td>
<td>Two-Year</td>
</tr>
<tr>
<td>California State University San Marcos</td>
<td>San Marcos, California</td>
<td>Four-Year</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>Fort Valley, Georgia</td>
<td>Four-Year</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>Mission Viejo, California</td>
<td>Two-Year</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>Fort Worth, Texas</td>
<td>Four-Year</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>Tougaloo, Mississippi</td>
<td>Four-Year</td>
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<tr>
<td>University of North Carolina Asheville</td>
<td>Asheville, North Carolina</td>
<td>Four-Year</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>Richland, Washington</td>
<td>Four-Year</td>
</tr>
</tbody>
</table>

Source: AVID Center, 2019.

Overview and Research and Evaluation Objectives

The five-year evaluation of the AVID College Completion Project includes three cohorts of AHE students (i.e., fall 2014, fall 2015, and fall 2016). This study follows these student cohorts and their matched comparison groups into the 2018-19 academic year to assess program impact on persistence rates, course-passing rates (with a grade of C or better), certificate/degree attainment, and transfer rates from two-year institutions to four-year institutions.

Each of the nine participating AVID College Completion Project sites began serving students with a gateway AVID-infused course in fall 2014, which was typically, but not always, an first year experience (FYE) or freshman seminar course. Subsequent student cohorts were served through the program in fall 2015 and fall 2016. The performance of these three AVID cohorts are compared against the outcomes of a matched comparison group of students who did not directly participate in the AHE program (i.e., they were not enrolled in a freshman gateway course taught by an AVID-trained faculty member).

This report addresses the following research questions:

1. To what extent did participating institutions implement AHE with fidelity?
   a. How many faculty members attended professional development over the course of the grant?
   b. How many students were directly impacted by participation in the AHE program?
   c. How did administrators, faculty, staff and tutors perceive the quality, relevance, and impact of AVID professional development?
   d. To what extent did participating institutions offer first year experience or content courses infused with AVID strategies?
e. To what extent did participating institutions implement AHE as intended?

2. In what ways, if any, are instructional practices and content in FYE course sections taught by AVID-trained faculty different than course sections taught by nonparticipating faculty?
   a. From the student perspective, in what ways did instructional practices and course content differ between treatment and control course sections?
   b. From an observational perspective, how did instructional practices differ between treatment and control course sections?

3. How is the usage of active and collaborative learning strategies and skill-based content in freshman courses related to student perceptions of how their academic and non-academic skills and confidence have changed, and their willingness to utilize university resources, attend campus events, and organize/participate in student study groups?

4. What is the relationship between student participation in the AHE program and student outcomes?
   a. After controlling for differences between AVID and non-AVID students, what is the relationship between student participation in the AHE program and the rate of student persistence at their institution?
   b. After controlling for differences between AVID and non-AVID students, what is the relationship between student participation in the AHE program and student completion of associates degree and program certificates (at 2-year institutions), and bachelor’s degrees (at 4-year institutions)?
   c. Which, if any, institutions displayed evidence of strong implementation fidelity and consistently positive student persistence or degree attainment outcomes over the course of the project?
   d. After controlling for differences between AVID and non-AVID students, what is the relationship between student participation in the AHE program and the course passing rates?
   e. Which, if any, institutions displayed evidence of strong implementation fidelity and consistently positive student persistence or degree attainment outcomes over the course of the project?

5. What is the relationship between a student participating in the AVID program in high school and academic outcomes in college?
   a. Are there demographic differences in the students who indicated that they participated in AVID in high school and those who did not?
   b. Did students who indicated that they participated in AVID in high school have different postsecondary outcomes (e.g., persistence and course passing rates) than students who did not participate in AVID in high school?
   c. After adjusting for demographic differences between groups, are there differences in postsecondary outcomes between students who did and did not participate in AVID during high school and AHE in college?
The multi-year, multi-cohort quasi-experimental research design employed by Gibson allows the evaluation team to follow the first cohort of students at 4-year institutions, who began college in fall 2014, through fall 2018 (i.e., 4-year degree completion or into a fifth year of college persistence). This design also allows the team to follow the second cohort of students, who began college in fall 2015, through fall 2018 (i.e., into their senior year of college). Lastly, this research approach allows the team to follow the third cohort of students, who began college in fall 2016, into their junior year of college. For students attending 2-year colleges, the evaluation team collected and analyzed two years of student outcomes data for each of the three cohorts of students who started college in fall 2014, 2015, and 2016.

Because of the diverse nature of the IHEs and the manner in which IHEs implement the AVID program, the Gibson evaluation team conducted institution-level analyses, as well as a meta-analysis, with results separated for two- and four-year institutions.

Data Sources

Data and research methods used to address each of the five primary research questions are outlined below. To assess the extent to which each of the participating IHEs has implemented the AHE program with fidelity, the Gibson Consulting Group, Inc. (Gibson) evaluation team relied on five primary means of data:

- Certification Self-Study (CSS) data collected from AVID Center at the conclusion of each year
- Student surveys related to the FYE course or other freshmen course(s) identified for the AHE intervention
- AHE professional development participant survey data
- Interview, focus group, and observation data collected during annual evaluation site visits
- Student-level data related to student characteristics, college enrollment, course-taking, and course grades.

Certification Self-Study Data

Certification is based on an annual institutional self-study using the AHE CSS Continuum document. Starting in the fall of 2014, and in each fall annually thereafter, each IHE campus team prepared the self-study document to assess where the IHE is at the beginning of the academic year and to inform the planning and goals for improving and expanding AHE SSI on the campus. The campus teams revised the same document to reflect the steps taken, improvements made, and areas in need of further improvement for the CSS completed in the spring at the end of the academic year. Participating institutions submitted their CSS with supporting documentation to AVID Center, who determined a final certification recommendation for each AHE SSI institution.

AVID Center defined five AHE Essentials for successful SSI implementation. These AHE Essentials are designed to transform campus culture by engaging all key campus members and programs in the change process, and include:

- Essential 1 — Administrative Leadership and Support
Essential 2 — AVID Campus Team: Campus-Wide Collaboration
Essential 3 — Faculty Development and Professional Learning
Essential 4 — AVID Experience: First Year through Completion
Essential 5 — Assessment and Research

The CSS is based off of these Five Essentials and evaluates how well the IHE implements each of the 30 indicators spread across the Five Essentials, based on documented evidence. The IHE rates itself on each factor according to the following standards defined by AVID: Not AVID (Level 0); Meets Certification Standards (Level 1); Routine Use (Level 2); and Institutionalization (Level 3).

Gibson used CSS data from 2014-15 through 2017-18 to assess the extent to which participating institutions met AHE certification standards. CSS data is just one of several measures the evaluators used to assess program implementation fidelity. In order to meet minimum AHE certification standards in a particular year, a score of 1 or higher must be observed for each of the five AHE Essentials.

### On-Site Data Collection

During fall semesters of the 2014-15, 2015-16, and 2016-17 academic years, Gibson evaluators visited each of the colleges and universities participating in the AVID College Completion Project to gain a sound understanding of how the AHE program was being implemented at each of the colleges and universities. Depending upon the number of courses selected for observation and the course schedules, the evaluators conducted one- or two-day site visits. The purpose of the site visits was to assess how various aspects of the AHE program were implemented across participating institutions. The evaluators conducted the following data collection activities while on-site:

- **Group interviews with the AVID implementation team:** In fall 2014, nine group interviews were conducted across participating institutions, with a total of 48 participants. In fall 2015, nine group interviews were conducted across participating institutions, with a total of 51 participants. In fall 2016, nine group interviews were conducted across participating institutions, with a total of 62 participants.

- **Group interviews with FYE-course instructors and faculty members:** In fall 2014, nine group interviews were conducted across participating institutions, with a total of 36 participants. In fall 2015, nine group interviews were conducted across participating institutions, with a total of 45 participants. In fall 2016, nine group interviews were conducted across participating institutions, with a total of 48 participants.

- **Group interviews with AVID-trained peer tutors:** In fall 2014, group interviews were conducted with peer tutors at seven participating institutions, with a total of 36 participants. In fall 2015, group interviews were conducted with peer tutors at three participating institutions, with a total of 22 participants. In fall 2016, group interviews were conducted with peer tutors at six participating institutions, with a total of 26 participants.
• **Observations of treatment and control course sections (FYE course and freshman courses):** Over the fall 2014 to fall 2016 period, a total of 100 course observations, distributed fairly evenly over the three data collection periods (i.e., fall 2014, fall 2015, and fall 2016), were conducted at participating AHE institutions. A total of 68 observations were conducted in course sections taught by AVID-trained faculty and 32 observations were of course sections taught by non-participating faculty.\(^8\)

Interviewers took detailed notes, which were used to describe the implementation progress made by each institution, to provide formative feedback to the AVID Center about the perceived value of the faculty development and planning days, and to describe the ways in which the organization can better support colleges and universities in the implementation of the AHE program.

**Surveys of Students Regarding Experiences in Targeted Freshmen Courses**

The AHE program intervention across participating institutions includes the use of student-centered, high-engagement andragogy and cross-disciplinary skill-building content in targeted freshman courses. The most common scenario involved the use of AVID-based active and collaborative learning strategies in FYE courses during the first and sometimes second semesters of a student’s freshman year in college. Some colleges (e.g., Atlanta Technical College, WSU, Tri-Cities, and Saddleback College) expanded their AVID program offerings out to different courses.

In fall 2014, fall 2015, and fall 2016 a paper survey was administered to students in their first year at the institution who were enrolled in targeted AVID-infused and non-AVID freshman course sections to gauge their experiences with the course. Three primary survey constructs were developed: 1) Andragogy and skill-based content of course; 2) Impact of course on confidence and skills; and 3) Impact of the course on the use of university resources.

The overall fall 2014 response rate for students in AVID course sections was 72%, while the overall response rate for students in non-AVID course sections was 49%. For fall 2015, the overall response rate for students in AVID course sections was 69% compared to 54% for students in non-AVID course sections. For fall 2016, the overall response rate for students in AVID course sections was 61% compared to 71% for students in non-AVID course sections. (Figure 1.1)

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\(^8\) In fall 2014, a total of 33 freshman courses (i.e., 20 AVID-based courses and 13 non-AVID course sections) were observed, with student-centered instructional approaches documented, and student-engagement levels scored using an observation rubric developed by Gibson for this study. In fall 2015, a total of 35 freshman courses (i.e., 26 AVID-based courses and nine non-AVID course sections) were observed. In fall 2016, a total of 32 freshman courses (i.e., 22 AVID-based courses and 10 non-AVID course sections) were observed.
Figure 1.1 – Student Survey Response Rates, Fall 2014, 2015, and 2016

Response rates for the first two administrations of the student survey (fall 2014 and fall 2015) were higher for AVID-infused treatment course section than they were for control course sections taught by nonparticipating faculty. Overall response rates were higher for non-AVID sections in fall 2016. Refer to Appendix A for institution-level survey response rate information.

The student survey measured the extent to which the targeted courses met the needs of AVID cohort students, how the experiences of students in AVID and non-AVID-infused courses differed in terms of skill-based course content and andragogy (e.g., small group activities, hands-on activities, and AVID strategies), the students’ perceptions of how the course may have impacted their skills and confidence in being successful in college, and the students’ perceptions of how the course may have impacted their awareness of university resources (e.g., tutoring center, faculty office hours, and peer study groups) as well as their willingness to utilize those resources.

Gibson analyzed data descriptively and assessed the differences in student responses for AVID-infused and non-AVID-infused course sections. In the spring of 2015, 2016, and 2017, participating colleges and universities were provided with formative, institution-level reports on survey findings for AVID-infused and non-AVID freshman course sections that they could use to further refine the skill-based content and andragogy in their targeted freshman courses. In addition, the student survey data served as a key

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9 This may have been impacted by Fort Valley State University not participating in the survey effort and three other institutions not having a control group for survey administration in fall 2016.
measure of AHE program implementation fidelity, by assessing the extent to which instructional approaches and student responses to the AVID-related intervention differed for students across AVID-infused and non-AVID course sections. Gibson used this implementation metric as an independent variable in the models used to assess the relationship between program participation and student outcomes.

Section 4 of this report includes a detailed analysis of the fall 2014, 2015, and 2016 student survey data. Specifically, the relationship between the following three survey constructs are explored:

1) Student exposure to active and collaborative learning instructional practices and skill-based content;
2) Student perceptions of how the course has impacted their skills and confidence to be successful in college; and
3) Student perceptions about how the course has impacted student connections to university resources (e.g., tutoring center and faculty office hours) and peer networks (e.g., student study groups and making friends in class).

Multivariate statistical models are utilized by the evaluation team to explore these important relationships, which may be integrally related to student success and persistence in college.

**AVID Professional Development Participation and Survey Data**

AVID staff and consultants provide institutional staff (i.e., AVID liaisons, administrators, freshman seminar instructors, faculty members, and peer tutors/mentors) with on-site, targeted professional development (e.g., high-engagement strategies, advising, critical-reading strategies, peer tutoring, mentor training, etc.). During the AVID Summer Institutes, AVID staff and consultants also provide the institutional staff with three days of intensive training based on their role and their related professional development (PD) strand. This delivery of high-quality faculty development is a cornerstone of the AHE program. As a result, it is an important program implementation fidelity measure.

Gibson queried campus staff members participating in interviews and focus groups about their experiences with the PD provided by the AVID Center and administered an online survey to all AVID-involved campus administration staff, faculty/instructors, and tutor/mentors to systematically measure perceptions of the PD among all participants (i.e., a larger group than those participating in site visit activities). The evaluation team developed the survey instrument in collaboration with staff at the AVID Center to ensure that we included appropriate constructs of measurement, used appropriate terminology, and asked applicable questions of each target group. The online survey included the following areas:

- The quality and relevance of PD
- The impact of PD on the use of AVID-related instructional practices in the classroom and in tutoring/mentoring sessions
The use of AVID-related administrative practices

Student engagement and performance

In spring 2015, Gibson successfully delivered 639 survey invitations to faculty at participating institutions who participated in off-site faculty development (e.g., AVID Summer Institutes) or on-site faculty and staff development provided by AVID Center staff and consultants. Over the course of the survey period, April 20, 2015 to May 13, 2015, institutional staff completed and submitted a total of 134 surveys through the online system (i.e., a 21% response rate). In spring 2016, Gibson successfully delivered 849 survey invitations to participating faculty and staff. Between April 14, 2016 and May 11, 2016, a total of 225 surveys were completed online for a 27% response rate. In spring 2017, Gibson successfully delivered 926 survey invitations to participating faculty and staff. Between April 13, 2017 and May 20, 2017, a total of 170 surveys were completed online for an 18% response rate (Figure 1.2). Refer to Appendix A for professional development participant survey response rates by participating institution.

**Figure 1.2. – Professional Development Participant Survey Response Rates, Spring 2015, 2016, and 2017**


Gibson analyzed survey data descriptively to assess the perceived quality of the PD provided by AVID Center Staff and consultants and determine the extent to which training provided by the AVID Center had impacted the professional and instructional practices of participants.

**Student-Level Data Collected from Participating Institutions and Student-Matching Approach**

To address research questions related to how participation in the AHE program may be associated with various near-term student outcomes (e.g., freshman fall-to-spring persistence, first to second year persistence, and freshman and sophomore year course grades) and longer-term student outcomes (e.g.,
first to third year, first to fourth year, and first to fifth year persistence, degree completion), the evaluation team requested student-level data files from participating IHEs.

Gibson obtained data related to student demographics, baseline academic information (e.g., high school GPA, high school class rank, SAT/ACT scores, and math and reading placement scores), financial-aid information (e.g., Pell eligibility and Pell Grant recipient status), as well as course enrollment and grades from each of the participating colleges and universities for the cohorts of students who began college in fall 2013 (the year prior to AHE implementation), fall 2014 (the first year of AHE implementation), fall 2015 (second year of AHE implementation), and fall 2016 (year 3 of AHE implementation).\textsuperscript{10} Through a variety of statistical models, the evaluation team estimated the effect of AVID participation on the following outcomes of interest:

**Near-Term Persistence Rates Calculated for 2-year and 4-Year Institutions**
- Freshman Fall-to-Spring Persistence Rates (i.e. fall of freshman year to spring of freshman year)
- Fall of Year 1 to fall of Year 2 Persistence Rates (i.e., Freshman-to-Sophomore)

**Long-Term Persistence Rates for 4-Year Institutions Only**
- Fall of Year 1 to fall of Year 3 Persistence Rates (i.e., Freshman-to-Junior)
- Fall of Year 1 to fall of Year 4 Persistence Rates (i.e., Freshman-to-Senior)
- Fall of Year 1 to fall of Year 5 Persistence Rates (i.e., Freshman-to-Year 5 Senior or graduation)

**Degree Attainment Rates**
- 4-year Degree Completion Rates (i.e., Bachelor’s Degree Completion completed within four years) for Cohort 1 only
- 2-Year Degree Completion Rates (i.e., Associate’s Degree Completion completed within three years)
- Associates Degree or Certificate Completion Rates within three years

**Near-Term Course Passing Rates for 2-Year and 4-year Institutions**
- Percentage of courses passed with a C or higher in first year of college
- Percentage of courses passed with a C or higher in second year of college

**Long-Term Course Passing Rates for 4-year Institutions Only**
- Percentage of courses passed with a C or higher in third year of college
- Percentage of courses passed with a C or higher in fourth year of college

**Methods for Addressing Program Impact Research Questions**

The evaluation team relied on statistical procedures to ensure students who were enrolled in AHE-infused classrooms were compared against peers who were not enrolled in these course sections but who had similar measured baseline academic performance ability and demographic attributes. The evaluation

\textsuperscript{10} The fall 2013 comparison group for the year prior to AHE implementation was only used in Cohort 1 analyses.
design is quasi-experimental, where students who enrolled in an AHE FYE course are compared to students who did not enroll in an AVID-infused FYE course but who nonetheless resemble, based on the academic and non-academic measures provided by each institution, participating students. Two comparison groups were created for Cohort 1 (Fall 2014); however, only within-year analyses were conducted for Cohorts 2 and 3 (fall 2015 and fall 2016):

1. Cohort 0 (Fall 2013):\textsuperscript{11} Non-participating students from the school year prior to the implementation of the AHE program (i.e., 2013-14) were compared to participating students from the first year of implementation (i.e., 2014-15). Comparisons between outcomes for Cohort 0 and Cohort 1 were only conducted for the first cohort of AVID students who began college in fall 2014.\textsuperscript{12}

2. Cohort 1 (Fall 2014): Non-participating students from the first year of implementation who first enrolled at the institution in fall 2014 were compared to participating students who also first enrolled at the institution in fall 2014, as well as to Cohort 0 students who first enrolled in college in fall 2013.

3. Cohort 2 (Fall 2015): Non-participating students from the second year of implementation who first enrolled at the institution in fall 2015 were compared to participating students who also first enrolled at the institution in fall 2015.

4. Cohort 3 (Fall 2016): Non-participating students from the third year of implementation who first enrolled at the institution in fall 2016 were compared to participating students who also first enrolled at the institution in fall 2016.

For each comparison group design, the outcomes analyses proceeded in two stages. First, propensity scores were estimated to quantify the probability of AHE FYE participation, conditional on available pre-treatment covariates provided by participating institutions. This score was then used to weight non-participating students in order to balance pre-treatment covariates between non-participating students and participating students so that, on average, both the participant and the non-participant groups were equivalent based on the covariates available to the research team.\textsuperscript{13} Next, multivariate regression was used to estimate the difference in the outcomes between treatment and comparison students. The difference represented the average treatment effect on the treated (ATET) group. The treated group refers to students who participated in the AHE program during the first enrollment year for each cohort (fall 2014, 2015, and 2016). Additional technical detail about this approach is provided in Appendix C. Gibson performed student outcome analyses, including the specification of the propensity score,

\textsuperscript{11} This comparison was not available at two-year institutions due to inadequate data.

\textsuperscript{12} Detailed results from all of the propensity matched regression-adjusted analyses, including the Cohort 1 vs. Cohort 0 analyses, are presented in Appendix D.

\textsuperscript{13} The variables available for inclusion in the model to estimate the propensity score used varied by institution, as some IHEs were able to provide all of the variables the research team requested. Appendix C includes variables used to match AVID students with comparison group students for each institution included in the analysis. The appendix also details the methods used in the propensity score matching procedure.
separately for each institution in order to calculate an institution-specific program participation effect. Similar to Shields et al. (2014), the disaggregated institution-level effects were aggregated using random effects meta-analysis models to provide a combined average program AVID participation effect.

**Organization of the Report**

Following this introduction, Section 2 provides an assessment of the extent to which participating IHEs have implemented core components of the AHE program with fidelity (e.g., participation in AVID-related faculty development, the perceived impact on faculty development on professional and instructional practices across IHEs, and the extent to which AVID-based instructional approaches and suggested cross-disciplinary skill-building content are being infused into targeted courses). In Section 3, we explore whether the experiences of students in course sections taught by AVID-trained faculty and nonparticipating faculty are materially different than those of students enrolled in course sections taught by instructors who did not participate in AVID professional learning opportunities. Section 4 explores the relationship between three student survey constructs: the presence of active and collaborative learning approaches and skill-based content, students’ perceptions of how the course impacted their skills and confidence, and students’ perceptions of how the course impacted their willingness to access college resources and connect with other students through peer study groups. Section 5 examines the relationship between student participation in AHE and student persistence and degree attainment. Section 6 examines the relationship between student participation in AHE and course passing rates. Lastly, Section 7 explores the relationship between students’ taking AVID courses in high school and college outcomes.

Appendix A includes the survey instruments administered to students in AVID and non-AVID course sections in fall 2014, 2015, and 2016.14 Appendix A also includes student and PD participant survey response rates by participating institution and respondent profiles. Appendix B provides further detail regarding the methodological approach to estimating relationships between the three primary student survey constructs related to the targeted freshman course in which they were enrolled. Appendix C provides the methodological detail for the statistical models which explored the relationship between program participation and student outcomes. Appendix D presents detailed results from each of the statistical models which explored the relationship between program participation and student outcomes. Appendix E presents persistence and course passing results by institution. Appendix F describes the methods for estimating the effect of having AVID in high school on college persistence and course passing rates. Lastly, Appendix G contains the AVID classroom observation tool used to assess instruction in AVID and non-AVID course sections.

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14 PD participant survey instruments are not included in the appendix, but are available upon request.
2 – Program Implementation Overview

Key Findings:

*Based on multiple data sources, it is evident that colleges and universities participating in the MSDF-funded grant program made concerted efforts to have administrators, faculty, staff, and tutors participate in AVID-based PD with the goal of improving instructional practices and student engagement in freshman courses, and participants felt that this training was impactful.*

*It is also clear that targeted courses, typically FYE courses, were successfully redesigned to provide for skill-based content and instructional practices geared toward active student participation which connects students to peers and their instructor.*

*Lastly, it is apparent that not all institutions were able to implement the AHE model with equally high levels of fidelity.*

- Over the course of this project, the AHE program had an extensive reach – directly impacting over 1,150 faculty members through professional learning and nearly 12,000 students enrolled in targeted courses taught by AVID-trained faculty.

- College administrators indicated that the professional development they received onsite and at AVID Summer Institutes were helpful in helping them implement AHE at their institutions.

- As a byproduct of the AHE program, college leaders shared that AHE played a pivotal role in improving communications related to improving success between academic affairs, student services, tutoring, and other departments.

- Faculty who participated in AVID PD felt that the training provided onsite and at AVID national events was relevant, impactful, and contributed to their continued and expanded use of active and collaborative learning strategies in their classes. Roughly two-thirds of respondents said they increased the use of AVID-based strategies during 2014-15, 2015-16, and 2016-17 academic year after attending PD.

- The majority of students enrolled in AVID-infused freshman course sections shared that skill-based content (e.g., structured note-taking, test taking approaches, time management skills, and critical thinking and inquiry) were emphasized, and that active and collaborative learning strategies were utilized by their instructors.

- Substantive differences in AHE CSS implementation scores were observed across the nine participating colleges and universities, with colleges and universities with higher implementation scores posting the largest effects of program participation of student persistence results.
Before exploring the relationship between student participation in AHE and various short- and long-term outcomes, it is first important to assess program implementation fidelity and how instructional methods and skill-based content may or may not be different in course sections taught by AVID-trained faculty and nonparticipating faculty. This section of the report addresses the following implementation-related research questions:

**Research Question 1: To what extent did participating institutions implement AHE with fidelity?**

- a. How many faculty members attended professional development over the course of the grant?
- b. How many students were directly impacted by participation in the AHE program?
- c. How did administrators, faculty, staff, and tutors perceive the quality, relevance, and impact of AVID professional development?
- d. To what extent did participating institutions offer first year experience or content courses infused with AVID strategies?
- e. To what extent did participating institutions implement AHE as intended?

**Participation in AVID-Based Professional Development and Number of Students Impacted**

During the planning year of 2013-14, and throughout the grant period, a four different types of PD and planning assistance were provided by AVID Center staff and consultants:

1) AVID national conferences (i.e., team-oriented training for administrators and faculty);
2) AVID Summer Institutes (i.e., team-oriented training for administrators and faculty);
3) On-campus faculty development (e.g., high engagement instructional strategies, Socratic questioning strategies for peer tutors, reading to learn strategies); and
4) On-campus planning days (e.g., targeted, institution specific technical assistance)

The AVID College Completion Project began in December 2013 with 38 representatives from participating colleges and universities attending introductory meetings and AVID-related PD at the national AVID conference in Dallas, Texas. This meeting set the stage for three years of PD provided onsite by AVID staff and at national meetings, conferences, and AVID Summer Institutes, which directly supported the student cohorts included in this evaluation.

In 2014, there were a total 567 staff and faculty who attended AVID PD at their respective institutions, and 83 who attended offsite PD at national conferences, meetings, or most commonly, the AVID Summer Institute. Since this was the first year of AHE implementation, it is not surprising that the largest number

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15 Analyses are restricted to PD and support services provided over the December 2013 through May 2017 period, which cover the delivery of AHE services to three cohorts of incoming students who first enrolled at participating institutions in fall 2014, fall 2015, and fall 2016.
of individuals attended training in 2014. During the 2014-15 academic year, a total of 1,538 students were enrolled in freshman course sections taught by AVID-trained faculty.

In 2015, there were a total 315 staff and faculty who attended onsite AVID PD at their respective institutions, and 79 who attended offsite PD. By 2016, the number of onsite AVID PD attendees dropped to 232 and the number of offsite PD attendees dropped to 42. During the spring semester of the 2016-17 academic year, another 138 faculty and staff at participating colleges and universities participated in AVID-based PD session. During the 2015-16 academic year, a total of 3,170 students who were taught by AVID-trained faculty were enrolled at participating institutions.

Figure 2.1 shows the unduplicated number of faculty and staff trained through the AVID College Completion Project, either on-site or off-site, by year (over the December 2013 through May 2017 period) for each participating institution. As of May 2017, a total of 1,157 higher education faculty and staff members participated in AHE professional development. During the 2016-17 academic year, a total of 4,838 students who were taught by AVID-trained faculty were enrolled at participating institutions.

Over the fall 2014 to fall 2018 period, almost 12,000 students were directly impacted by the MSDF-funded AVID College Completion Project by being enrolled in targeted courses (typically an FYE course) taught by trained faculty. This does not include other students enrolled in other, non-targeted freshman courses or upper division courses taught by trained faculty, and other students impacted through exposure to peer mentoring and tutorial services provided by mentors and tutors trained in the use of Socratic questioning by AVID staff and consultants.

As Figure 2.1 illustrates, the largest number of AHE PD attendees were from Saddleback College (n=187), Butler Community College (n=180), WSU, Tri-Cities (n=144), and UNC Asheville (n=141).

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16 This total is likely an underestimate of the total number of faculty and staff attending training as not all institutions accurately captured and reported PD participation lists.

17 During the 2017-18 academic year, a total of 11,971 students who were taught by AVID-trained faculty were enrolled at participating institutions. The large increase between 2016-17 and 2017-18 is due primarily to the expansion of AVID-based course offerings at Saddleback College.

18 It is important to note that the number of staff members reported as attending AVID-based PD at each institutions is a function of the size of the institutions, interest in the professional learning opportunity, and compliance with tracking and reporting faculty and staff PD participants.
Figure 2.1. – Number of Faculty and Staff Participating in AVID Professional Development, December 2013 – May 2017


Notes: Due to incomplete reporting of PD attendees to AVID Center by some institutions (particularly for 2016 and 2017), the figures presented in this table are likely an under-representation of the total number of faculty and staff trained through the AVID College Completion Project.

Perspectives on AVID-Based Professional Development

College administrators, faculty, staff, and peer tutors who participated in AVID-related professional development were asked to complete an online survey regarding their perspectives on the quality and relevance of the professional development received through one or more sessions attended, and the perceived impact of the professional development on their work during the 2014-15, 2015-16, and 2016-17 academic years. Responses in this section are based on 134 completed surveys from the 2014-15 academic year, 225 completed surveys from the 2015-16 academic year, and 170 completed surveys from the 2016-17 academic year. Descriptive data related to the role of survey respondents, and the content areas taught by survey respondents are provided in Appendix A.

College Administrator Perspectives

College administrators and AVID program leaders attended PD related to collaborative strategies used to implement the AHE program at their respective institutions. Administrators were asked a series of questions about the extent to which their attendance at AVID professional development sessions may have impacted their administrative practices. As Figure 2.2 shows, the majority of college and university administrators were in agreement that the AVID training helped them with an array of items related to program implementation, including:

- Improving their understanding of how to implement AHE at their school (76% in 2014-15, 88% in 2015-16, and 89% in 2016-17);
- Implementing strategies to facilitate change (69% in 2014-15, 76% in 2015-16, and 71% in 2016-17); and
- Developing strategies for increasing collaboration between academic affairs and student services (71% in 2014-15, 70% in 2015-16, and 67% in 2016-17).

During group interviews conducted with AVID site teams during fall 2014, 2015, and 2016 campus visits, administrators and faculty members commonly shared that AHE helped to bring different departments together for meetings to discuss how they can work together to improve student success at their institutions, while others felt that AHE helped to deepen an already strong relationship between university departments. Interviewees also noted that over time, AHE implementation discussions tended to become part of regular meetings about student success as opposed to a separate program-specific discussion. The following quotations from college leaders at participating institutions illustrate these sentiments:

“**AVID provides the tools to infuse into the institution to move us forward, improve cross-departmental collaboration, and bring the college together.**”

“**With AVID, there is now more cross-talk across departments linked with a professional development focus.**”

Survey data also reveal that the use of implementation strategies learned by college administrators provided through onsite PD and AVID Summer Institutes increased in the second and third years of AHE implementation. In 2014-15, 69% of college administrators and AVID liaisons agreed that they frequently used strategies that they learned from PD sessions compared to 82% in 2015-16 and 80% in 2016-17. Similarly, during the first two years of AHE implementation, a smaller proportion of college administrators were in agreement that the training helped to improve their understanding of how to develop a PD plan to better support a student-focused culture at their institution (58% in 2014-15, 51% in 2015-16 versus 69% in 2016-17). (Figure 2.2)
Figure 2.2. – Percent of College Administrators in Agreement with Statements about Strategies Taught at AVID Professional Development

![Bar Chart]


Note: In 2014-15, the number of respondents ranged from 60 to 62, depending upon the question. In 2015-16, the number of respondents ranged from 59 to 60, depending upon the question. In 2016-17, the number of respondents was 45.

College Faculty and Instructional Staff Perspectives

Figures 2.3 and 2.4 summarize faculty and staff perspectives of onsite and off-site AVID training attended during the 2014-15, 2015-16, and 2016-17 academic years. Overall, attendees at both on-site and off-site AVID PD rated the professional learning experience highly across a wide range of metrics (e.g., organization of PD, adequate detail, and clarity in how to implement strategies being introduced). Ratings tended to be somewhat higher for on-site training than off-site training. This may be a result of on-site training being more tailored to the individual needs of participating colleges and universities. The lowest ratings were for off-site training during the first year, which is consistent with the anecdotes of the challenges when developing new PD materials for college faculty.

The vast majority of PD participants who attended on-site PD provided at their respective colleges and universities were in agreement that the content of the AVID PD sessions was appropriate for higher education faculty (ranging from 87% in 2015-16 to 90% in 2016-17). In each successive year, an increasing share of respondents who attended the off-site AVID Summer Institute and national AVID conferences agreed with that statement (ranging from 76% in 2014-15 to 93% in 2016-17). (Figure 2.4)
Figure 2.3. – Percent of Survey Respondents In Agreement With Statements Regarding On-Site AVID Professional Development, 2014-15 to 2016-17

<table>
<thead>
<tr>
<th>Statement</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies were presented in a way that helped me understand how to implement them</td>
<td>89.0%</td>
<td>86.3%</td>
<td>84.3%</td>
</tr>
<tr>
<td>I have used the strategies presented to me at the session</td>
<td>86.2%</td>
<td>81.9%</td>
<td>89.2%</td>
</tr>
<tr>
<td>The strategies presented to me were appropriate for higher education</td>
<td>88.2%</td>
<td>86.9%</td>
<td>89.9%</td>
</tr>
<tr>
<td>Strategies were presented in enough detail</td>
<td>90.3%</td>
<td>91.2%</td>
<td>89.9%</td>
</tr>
<tr>
<td>The professional development was of high quality</td>
<td>90.4%</td>
<td>93.1%</td>
<td>92.0%</td>
</tr>
<tr>
<td>The professional development was well organized</td>
<td>93.6%</td>
<td>95.6%</td>
<td>95.7%</td>
</tr>
</tbody>
</table>

Source: Gibson Survey of AVID Professional Development Participants, spring 2015, spring 2016, and spring 2017.

Note: The number of respondents in spring 2015 ranged from 93 to 94, depending upon the question. The number of respondents in spring 2016 ranged from 159 to 160, depending upon the question. The number of respondents in spring 2017 ranged from 137 to 140, depending upon the question.
Figure 2.4. – Percent of Survey Respondents In Agreement With Statements Regarding Off-Site AVID Professional Development, 2014-15 to 2016-17

<table>
<thead>
<tr>
<th>Statement</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies were presented in a way that helped me understand how to implement them</td>
<td>73.2%</td>
<td>85.7%</td>
<td>91.7%</td>
</tr>
<tr>
<td>I have used the strategies presented to me at the session</td>
<td>79.5%</td>
<td>85.1%</td>
<td>85.7%</td>
</tr>
<tr>
<td>The strategies presented to me were appropriate for higher education</td>
<td>76.1%</td>
<td>83.0%</td>
<td>92.9%</td>
</tr>
<tr>
<td>Strategies were presented in enough detail</td>
<td>83.1%</td>
<td>89.6%</td>
<td>78.6%</td>
</tr>
<tr>
<td>The professional development was of high quality</td>
<td>85.3%</td>
<td>85.7%</td>
<td>95.8%</td>
</tr>
<tr>
<td>The professional development was well organized</td>
<td>88.7%</td>
<td>95.9%</td>
<td>85.7%</td>
</tr>
</tbody>
</table>

**Source:** Gibson Survey of AVID Professional Development Participants, spring 2015, spring 2016, and spring 2017.

**Note:** The number of respondents in spring 2015 ranged from 68 to 73, depending upon the question. The number of respondents in spring 2016 ranged from 43 to 49, depending upon the question. Due to the declining number of faculty and staff from participating institutions attending the AVID Summer Institute in 2016, the number of respondents in spring 2017 dropped to 14.

The majority of survey respondents (59% to 63% depending upon year of survey administration) who attended on-site training sessions shared that they were familiar with most or all of the strategies and content presented in AVID PD sessions.

AVID PD participants were also asked about how the various training sessions they attended may have impacted their professional and instructional practices during the academic year. As Figure 2.5 illustrates, despite already being familiar with many of the strategies presented in the AVID training, college instructors report feeling more confident in their ability to apply AVID strategies after attending PD. Over 80% of survey respondents in each year said they were more confident in implementing instructional strategies in their classroom. The vast majority of survey respondents (81% to 86%) were in agreement that they used information and strategies from AVID training to promote student interaction and engagement. During faculty focus group session conducted during fall 2014, 2015, and 2016 campus visits, faculty shared the following perspectives regarding their instructional practices:
“AVID has reinvigorated me as an educator. I am much more conscious about trying to reach all students in my class.”

“AVID has totally transformed my teaching. I am now riffing and improvising. I used to get cranky about student performance, but now I realize it was me.”

“We are very glad to have been exposed to AVID Strategies. They have been effective for promoting student engagement.”

Another faculty member noted that shifting from a lecture based approach to active and collaborative learning approach has the following unexpected result:

“AVID has made me more approachable as a faculty member and I’m seeing more students coming to my office hours.”

As Figure 2.5 shows, overall respondents reported feeling confident in their ability to apply AVID strategies. After attending AVID professional development:

- Over 80% of survey respondents in each year said they were more confident in implementing instructional strategies in their classroom; and
- Between 61% and 70% of respondents said they attempt to use one or more AVID strategy in each class or tutoring session.

Respondents in 2015-16 were less likely to say they used AVID strategies in each class and were consistently less likely to agree with using any specify strategy. Even so, over half of respondents were able to implement AVID strategies. As Figure 2.5 shows, the majority of survey respondents in spring 2015, 2016, and 2017 indicated that they were able to implement the following AVID strategies into their classes:

- AVID inquiry strategies (72% to 78%);
- Writing strategies (69% to 82%);
- Critical reading strategies (62% to 71%);
- Collaboration strategies (58% to 70%); and
- Structured note-taking strategies (55% to 60%).
Figure 2.5. – Percent of Survey Respondents In Agreement with Statements about Strategies Taught at AVID Professional Development

<table>
<thead>
<tr>
<th>Statement</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>More confident in implementing instructional strategies in classroom</td>
<td>80.4%</td>
<td>84.3%</td>
<td>84.1%</td>
</tr>
<tr>
<td>During each class or tutoring session, I attempt to use one or more AVID strategy</td>
<td>66.0%</td>
<td>61.4%</td>
<td>70.4%</td>
</tr>
<tr>
<td>Used information/strategies learned to promote more student interaction</td>
<td>84.4%</td>
<td>80.7%</td>
<td>85.6%</td>
</tr>
<tr>
<td>Able to utilize AVID inquiry strategies in my classes</td>
<td>71.7%</td>
<td>77.6%</td>
<td></td>
</tr>
<tr>
<td>Able to implement AVID writing strategies into my classes</td>
<td>70.2%</td>
<td>68.5%</td>
<td>81.5%</td>
</tr>
<tr>
<td>Able to implement AVID critical reading strategies into my classes</td>
<td>62.3%</td>
<td>71.0%</td>
<td></td>
</tr>
<tr>
<td>Able to use AVID collaboration strategies in my classes</td>
<td>58.0%</td>
<td>68.4%</td>
<td>69.6%</td>
</tr>
<tr>
<td>Encourage students to use Cornell Notes or other structured note-taking strategies</td>
<td>60.4%</td>
<td>54.8%</td>
<td>60.0%</td>
</tr>
</tbody>
</table>

Source: Gibson Survey of AVID Professional Development Participants, Spring 2015-2017. Note: In 2014-15, the number of respondents ranged from 95 to 98, depending upon the question. In 2015-16, the number of respondents ranged from 143 to 146, depending upon the question. In 2016-17, the number of respondents ranged from 124 to 126, depending upon the question.

Approximately two-thirds of survey respondents indicated that after attending AVID PD they implemented AVID strategies in their classes or mentoring sessions much more frequently (26% to 30%) or somewhat more frequently (36% to 42%). This was consistent across the 2014-15, 2015-16, and 2016-17 academic years. Approximately 30% of respondents in all three years indicated they use AVID strategies about the same as before the training. (Figure 2.6)
Figure 2.6. – Use of AVID-Based Strategies Employed After Attending AVID Professional Development

Source: Gibson Survey of AVID Professional Development Participants, spring 2015, spring 2016, and spring 2017.

Note: The number of respondents in spring 2015 was 107. The number of respondents in spring 2016 was 144. The number of respondents in spring 2017 was 124.

Most respondents perceived changes in the campus climate after the AHE program was implemented at their institution. Respondents were in agreement that students are more engaged in their learning (85% to 89%), more involved in the campus community (71% to 74%), more likely to join study groups (78% to 83%), engaged in classroom discussion more often (86% to 91%), displayed greater levels of confidence in their academic ability (76% to 85%), are afforded service learning opportunities (66% to 74%), and are more inclined to use tutoring services (71% to 84%). Additionally respondents said that the quality of tutoring services improved and that faculty members are discussing teaching strategies more frequently. (Figure 2.7)
Figure 2.7 – Percent of Respondents In Agreement With Statements about Changes In Campus Climate after AVID Professional Development

<table>
<thead>
<tr>
<th>Statement</th>
<th>2014-15</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students are more engaged in their learning</td>
<td>84.6%</td>
<td>88.9%</td>
<td>87.2%</td>
</tr>
<tr>
<td>Students are more involved in their campus community</td>
<td>73.1%</td>
<td>70.6%</td>
<td>74.3%</td>
</tr>
<tr>
<td>Students are more inclined to establish or become part of study groups</td>
<td>78.2%</td>
<td>80.0%</td>
<td>83.3%</td>
</tr>
<tr>
<td>Students engage in classroom discussions more often</td>
<td>86.2%</td>
<td>90.8%</td>
<td>86.8%</td>
</tr>
<tr>
<td>Students demonstrate greater understanding of the material</td>
<td>86.4%</td>
<td>85.0%</td>
<td>80.9%</td>
</tr>
<tr>
<td>Students are afforded more service learning opportunities</td>
<td>74.1%</td>
<td>65.7%</td>
<td>72.2%</td>
</tr>
<tr>
<td>Students display greater levels of confidence in academic abilities</td>
<td>76.0%</td>
<td>85.1%</td>
<td>85.3%</td>
</tr>
<tr>
<td>Students are more inclined to utilize tutoring services</td>
<td>71.2%</td>
<td>73.5%</td>
<td>84.3%</td>
</tr>
<tr>
<td>The quality of tutoring services has improved</td>
<td>85.5%</td>
<td>87.8%</td>
<td>86.7%</td>
</tr>
<tr>
<td>Faculty members are discussing teaching strategies more frequently</td>
<td>86.5%</td>
<td>84.0%</td>
<td>85.0%</td>
</tr>
</tbody>
</table>


Note: Excludes respondents who answered “Not applicable/Don’t know.” In 2014-15, the number of respondents ranged from 52 to 88 depending upon the question. In 2015-16, the number of respondents ranged from 68 to 120, depending upon the question. In 2016-17, the number of respondents ranged from 66 to 117.

While the majority of faculty indicated that they were able to successfully implement AVID strategies in their classes, some faculty noted barriers to using active and collaborative learning strategies in their courses. As Figure 2.8 shows, approximately 1 in 5 survey respondents said that AVID strategies are too time consuming, which hinders ability to address content (19% to 22%). In each progressive year, a smaller share of respondents said that AVID strategies were not appropriate for higher education (17% in 2014-15 compared to just 10% in 2016-17).

However, an increasing share of respondents said that they had tried unsuccessfully to use AVID strategies in their course and have since abandoned them (17% in 2014-15 vs. 26% in 2016-17). This could be the result of a larger share of respondents having attempted more high engagement strategies and
encountering implementation challenges. Consistent with other survey findings, 24% to 28% of survey respondents indicated that their instructional practices did not change after attending AVID PD. (Figure 2.8)

Figure 2.8. – Percent of Survey Respondents In Agreement with Statements about Strategies Taught at AVID Professional Development

![Figure 2.8](image)


Note: In 2014-15, the number of respondents ranged from 96 to 99 depending upon the question. In 2015-16, the number of respondents ranged from 144 to 146, depending upon the question. In 2016-17, the number of respondents ranged from 124 to 126, depending upon the question.

Evidence that AVID-based Strategies have been Implemented in Freshman Courses

Below, we provide a description of constructs that were created from the survey items and used in the analyses of student responses. Constructs represent a series of survey items which are rolled up to a single scale score that capture a latent, common concept that is important for understanding the impact of AVID course strategies or AVID course participation. The three main constructs or scales are: 19

- Construct 1: Course Andragogy and Skill-based Content
- Construct 2: Course Impact on Students’ Skills and Confidence
- Construct 3: Course Impact on Students’ Connection to University Resources

---

19 The student survey instrument is provided in Appendix A. The items associated with each of the three main scales/constructs are organized using the boldfaced headings on the survey instrument.
To assess the extent to which the AVID-based instruction and skill-based content was an integral part of the targeted freshman courses, the evaluation team administered a survey to freshman students in AVID and non-AVID course sections at the end of the fall 2014, 2015, and 2016 semesters.

As illustrated in Figure 2.9, students entering college in fall 2014 (Cohort 1), fall 2015 (Cohort 2), and fall 2016 (Cohort 3) were in agreement that student-centered teaching and skill-based content was utilized in their AVID-based FYE or content course, and that the course included skill-based content which facilitated growth in study, reading, and critical thinking skills (mean score of 3.06 in 2014, 3.03 in 2015, and 3.10 in 2016 on the aforementioned four-point scale).

**Figure 2.9. – Average Student Survey Content and Andragogy Construct Score for AVID Course Sections, Fall 2014 to Fall 2016**

![Bar chart showing mean survey construct scores from Fall 2014 to Fall 2016](image)

*Source: Survey of Students Regarding Targeted Freshman Course, Gibson Consulting Group, 2015, 2016, and 2017.*

Table 2.1 includes 10 survey questions included on the four-point agreement scale, which measured andragogy and skill-based content of targeted courses (i.e., the Course Content and Andragogy construct score included in Figure 2.9 above). Students enrolled in targeted AVID-infused freshman courses, typically FYE courses, were asked to rate their agreement with a series of statements on a 1 to 4 scale, where 1 means strongly disagree and 4 means strongly agree.

As Table 2.1 shows, across participating institutions, large proportions of students enrolled in AVID-infused course sections indicated that high-engagement andragogy and skill-based content was an integral part of their courses in all three semesters (fall 2014, 2015, and 2016) in which incoming freshman students were enrolled. In fall 2014, 2015, and 2016, over three quarters of students were in agreement that the targeted AVID-infused course in which they were enrolled:

- Emphasized critical thinking and inquiry (90% to 92%);
- Included useful advice from their instructor about college planning (86% to 89%);
- Included weekly small group activities (82% to 84%);
Encourages students to visit the college’s tutoring centers (77% to 85%); and
Includes effective time management strategies (83% to 91%).

Sizable increases in the levels of agreement by AVID students were observed for the following items related to skill-building course content between fall 2014 and fall 2016:

- Test-taking strategies are taught in this course (+10.7 percentage points)
- Effective time management strategies are taught in this course (+8.0 percentage points)
- Course includes activities which connect me to campus events/activities (+6.0 percentage points)

### Table 2.1 – Percentage of AVID Students in Agreement with Statements Related to the Andragogy and Content of their Targeted Freshman Course

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
<th>Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>We do hands-on activities in this course every week.</td>
<td>70.6%</td>
<td>68.8%</td>
<td>73.3%</td>
</tr>
<tr>
<td>We do small group activities in this course every week.</td>
<td>83.8%</td>
<td>82.1%</td>
<td>82.7%</td>
</tr>
<tr>
<td>I am encouraged to visit the college’s tutoring center(s) in this course.</td>
<td>84.9%</td>
<td>85.1%</td>
<td>77.2%</td>
</tr>
<tr>
<td>This course includes activities which connect me to campus events and activities.</td>
<td>74.7%</td>
<td>77.2%</td>
<td>80.7%</td>
</tr>
<tr>
<td>Effective time management strategies are taught in this course.</td>
<td>83.0%</td>
<td>85.8%</td>
<td>91.0%</td>
</tr>
<tr>
<td>Note-taking strategies (e.g., Cornell notes) are emphasized in this course.</td>
<td>73.6%</td>
<td>76.3%</td>
<td>78.7%</td>
</tr>
<tr>
<td>I am familiar with AVID strategies (e.g., Think-Pair-Share, Costa’s Levels of Questioning, Quick Writes, Re-reading the text, Marking the text, etc.) because of this course.</td>
<td>68.4%</td>
<td>69.6%</td>
<td>73.4%</td>
</tr>
<tr>
<td>Test taking strategies are taught in this course.</td>
<td>63.5%</td>
<td>63.1%</td>
<td>74.2%</td>
</tr>
<tr>
<td>This course emphasizes critical thinking and inquiry.</td>
<td>90.0%</td>
<td>91.4%</td>
<td>91.6%</td>
</tr>
<tr>
<td>I receive useful advice from my instructor about college planning in this course.</td>
<td>87.6%</td>
<td>85.5%</td>
<td>88.6%</td>
</tr>
</tbody>
</table>


Note: Agreement percentages include students who either “agree” or strongly agree” with the statement.

### Implementation Fidelity Measurements

Certification is based on an annual institutional self-study using the AHE CSS Continuum document. During the fall semester of the 2014-15 academic year, each participating institution prepared a self-study document to assess where the IHE is at the beginning of each academic year, and to inform the planning and goals to be achieved to improve and expand AHE SSI on the campus. The CSS was then revised to reflect the steps taken, improvements made, and areas needing further improvement in the spring at the end of the academic year. The same process was followed during each institution’s second year of AHE implementation during the 2015-16 academic year.
The AVID Center determined a final certification recommendation for each AHE SSI institution, based on the following rubric:

- Not AVID (Level 0)
- Meets Certification Standards (Level 1)
- Routine Use (Level 2)
- Institutionalization (Level 3)

Figure 2.10 provides average CSS ratings (based on scores for each of the five AHE Essentials) for each of the participating institutions for 2014-15, 2015-16 and 2016-17. Overall, the average CSS rating among participating colleges and universities rose from 1.27 in 2014-15 to 1.67 in 2015-16 to 1.84 in 2016-17.

Substantial variation in AHE implementation scores were observed across participating institution, with some making substantial progress over the 2014-15 to 2016-17 period, and some remaining stagnant in their progress toward meeting AHE implementation milestones. Six of the nine participating institutions improving their rating between over the three years of AHE implementation. The CSS rating for two institutions dropped between the first and third years of AHE implementation, and the CSS rating remained unchanged for one institution between year 1 and year 3.

The highest 2016-17 CSS ratings were reported for Saddleback College (mean=3.0), WSU, Tri-Cities (mean=2.8), Butler Community College (mean=2.4), Texas Wesleyan University (mean=2.0), and Atlanta Technical College (mean=2.0). Saddleback College and WSU, Tri-Cities were at or close to “institutional use” level, where AHE practices were being institutionalized across the campus. Atlanta Technical College and Texas Wesleyan University were, on average, at the “routine use” level of AHE implementation, and UNC-Asheville was approaching the “routine use” level with a mean CSS score of 1.8 at the end of the 2016-17 academic year. In order for an institution to meet Level 1 certification standards, they must receive a score of 1 or higher on each of the five AHE Essentials.

Essential 2 required that the institution have an AVID campus team which works collaboratively to develop, implement, and sustain AHE. Essential 4 requires that AHE students receive support through the AVID seminar and other curricular and co-curricular experiences that continue through graduation or program completion. It is important to note that CSU-San Marcos did not meet minimum certification standards in 2015-16 (based on a score of 0 for Essential 2) and 2016-17 (based on a score of 0 for Essential 4). In addition, Fort Valley State University did not meet minimum certification standards in 2016-17 (based on a score of 0 for Essential 2).
Figure 2.10. – AHE Certified Self-Study Ratings for 2014-15 to 2016-17 Academic Years, Average CSS Implementation Scores

Source: Certified Self Study (CSS) Ratings for 2014-15 through 2016-17 Academic Years, AVID Center, 2017.

Note: Certification data are only reported through 2016-17, implementation year for the final AVID cohort included in this evaluation. The scores represent the overall mean of the five CSS implementation sub-scores for each participating institution.
3 - Differences in Instructional Practices between AVID-Trained and Nonparticipating Faculty

Key Findings:

Higher levels of student engagement and collaboration in AVID freshman course sections were evident through student surveys and classroom observations. Differences in instructional practices and the content of FYE courses were evident with instructors in AVID sections using more active and collaborative learning strategies and providing more skill-based content than instructors who did not participate in AVID training.

- Students reported more frequent usage of active and collaborative learning strategies (e.g., small group and hands-on activities) and skill-based content, such as note-taking approaches, effective time management practices, test taking strategies designed to lower anxiety, and critical thinking exercises, in targeted freshman courses. This was particularly evident for the first (starting college in fall 2014) and third (starting college in fall 2016) cohorts of students.

- Based on direct observation by Gibson evaluators, course sections taught by AVID-trained faculty exhibited higher degrees of student engagement in the lesson and more student collaboration than sections taught by nonparticipating faculty members.

- In addition to student engagement and collaboration, classroom energy exhibited by students and faculty was substantially higher in observed AVID rooms when compared to course sections taught by faculty who did not participate in AVID PD.

- High-engagement strategies most commonly observed in AVID course sections include quick writes, think-pair-share, jigsaw, gallery walks, and critical reading strategies (e.g., marking the text and rereading).

This section of the report explores whether or not instructional strategies and the inclusion of skill based content in FYE and other targeted courses were different for AVID-trained faculty and faculty member who did not attend AVID-based training (i.e., control group sections). The following research questions are addressed:

Research Question 2: In what ways, if any, are instructional practices and content in FYE course sections taught by AVID-trained faculty different than course sections taught by nonparticipating faculty?

a. From the student perspective, in what ways did instructional practices and course content differ between treatment and control course sections?

b. From an observational perspective, how did instructional practices differ between treatment and control course sections?
Student Perspective

As Figure 3.1 illustrates, average Course Content and Andragogy scale scores were significantly higher for AVID students in fall 2014 (3.06 vs. 2.86) and fall 2016 (3.10 vs. 2.90) than they were for their peers in course sections taught by instructors who did not attend AVID PD. In fall 2015, the average Course Content and Andragogy score for student enrolled in AVID course sections (3.03) was not statistically different than the score for students in non-AVID course sections (3.00).

These results show that instructional methods and content were perceived by students to be different in courses taught by AVID-trained faculty when compared to comparable course sections taught by nonparticipating instructors (in 2014-15 and 2016-17).²⁰

Figure 3.1. – Average Student Survey Content and Andragogy Construct Scores, AVID versus Non-AVID, Fall 2014, Fall 2015, and Fall 2016


Notes: *p<0.1; ** p<0.05; *** p<0.01

²⁰This may be the result of the AVID-based PD, or it could be the result of instructors who were already using more active and collaborative learning approaches volunteering to attend or being selected to attend AVID training, or some combination of these and other reasons.
As Table 3.1 shows, over two-thirds of students in freshman course sections in fall 2014 (68%), fall 2015 (70%), and fall 2016 (73%) taught by AVID-trained faculty indicated that they were familiar with student-centered strategies, such as think-pair share, Costa’s levels of questioning, quick writes, re-reading the text, and marking the text, among others. Further, this finding was unique to AVID-based courses sections. A substantially larger proportion of AVID students in Cohort 1 (68% vs. 45%), Cohort 2 (70% vs. 52%), and Cohort 3 (73% vs. 43%) indicated they were familiar with these strategies than students in course sections not taught by AVID-trained faculty. For each of the three student cohorts, a larger proportion of students enrolled in AVID course sections consistently reported that:

- Small group activities were conducted on a weekly basis (Cohort 1: 84% vs. 68%; Cohort 2: 82% vs. 77%; and Cohort 3: 83% vs. 65%);
- Critical thinking and inquiry was emphasized (Cohort 1: 90% vs. 83%; Cohort 2: 91% vs. 88%; and Cohort 3: 92% vs. 85%); and
- Cornell note-taking strategies were emphasized (Cohort 1: 74% vs. 56%; Cohort 2: 76% vs. 61%; and Cohort 3: 79% vs. 53%).
Table 3.1. – Percentage of AVID and non-AVID Students in Agreement with Statements Related to the Andragogy and Content of their Targeted Freshman Course

<table>
<thead>
<tr>
<th>Course Andragogy and Skill-Based Content</th>
<th>Class type</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
<th>Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>We do hands-on activities in this course every week.</td>
<td>AVID</td>
<td>70.6%</td>
<td>68.8%</td>
<td>73.3%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>59.0%</td>
<td>74.4%</td>
<td>67.1%</td>
</tr>
<tr>
<td>We do small group activities in this course every week.</td>
<td>AVID</td>
<td>83.8%</td>
<td>82.1%</td>
<td>82.7%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>67.5%</td>
<td>77.0%</td>
<td>65.0%</td>
</tr>
<tr>
<td>I am encouraged to visit the college’s tutoring center(s) in this course.</td>
<td>AVID</td>
<td>84.9%</td>
<td>85.1%</td>
<td>77.2%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>77.3%</td>
<td>80.0%</td>
<td>71.0%</td>
</tr>
<tr>
<td>This course includes activities which connect me to campus events and activities.</td>
<td>AVID</td>
<td>74.7%</td>
<td>77.2%</td>
<td>80.7%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>80.0%</td>
<td>78.4%</td>
<td>75.6%</td>
</tr>
<tr>
<td>Effective time management strategies are taught in this course.</td>
<td>AVID</td>
<td>83.0%</td>
<td>85.8%</td>
<td>91.0%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>81.7%</td>
<td>88.1%</td>
<td>80.8%</td>
</tr>
<tr>
<td>Note-taking strategies (e.g., Cornell notes) are emphasized in this course.</td>
<td>AVID</td>
<td>73.6%</td>
<td>76.3%</td>
<td>78.7%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>56.3%</td>
<td>61.2%</td>
<td>53.1%</td>
</tr>
<tr>
<td>I am familiar with AVID strategies (e.g., Think-Pair-Share, Costa’s Levels of Questioning, Quick Writes, Re-reading the text, Marking the text, etc.) because of this course.</td>
<td>AVID</td>
<td>68.4%</td>
<td>69.6%</td>
<td>73.4%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>44.8%</td>
<td>52.4%</td>
<td>43.9%</td>
</tr>
<tr>
<td>Test taking strategies are taught in this course.</td>
<td>AVID</td>
<td>63.5%</td>
<td>63.1%</td>
<td>74.2%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>56.6%</td>
<td>65.9%</td>
<td>53.3%</td>
</tr>
<tr>
<td>This course emphasizes critical thinking and inquiry.</td>
<td>AVID</td>
<td>90.0%</td>
<td>91.4%</td>
<td>91.6%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>83.3%</td>
<td>87.7%</td>
<td>84.6%</td>
</tr>
<tr>
<td>I receive useful advice from my instructor about college planning in this course.</td>
<td>AVID</td>
<td>87.6%</td>
<td>85.5%</td>
<td>88.6%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>88.2%</td>
<td>92.0%</td>
<td>91.1%</td>
</tr>
</tbody>
</table>


Note: Agreement percentages include students who either “agree” or strongly agree” with the statement.
Classroom Observations

To supplement student survey data, and to gain a better understanding of the teaching and learning in AVID and non-AVID course sections, the evaluation team observed 100 classrooms over the 2014 to 2016 period. This includes 68 classes taught by AVID-trained faculty and 32 courses taught by non-trained faculty. Each classroom that was observed received two ratings for the following four measures of the classroom environment (i.e., one for the first half of the class and one for the second half of the class):

1) **Student Engagement** (where 3 = High “Almost all students are engaged, on-task, and actively participating for the majority of the observed session”; 2 = Medium “Either half of the students are engaged, on-task, and actively participating for the majority of the observed session OR students are sometimes engaged and sometimes not engaged”; and 1 = Low “Most students are not engaged, off-task, and/or not actively participating for the majority of the session”)

   **Classroom Energy - Instructor** (where 3 = High “For the majority of the session, the instructor’s energy level is high”; 2 = Medium “The instructor’s energy level is sometimes high and sometimes not”; and 1 = Low “For the majority of the session, the instructor’s energy level is not high”)

2) **Classroom Energy - Students** (where 3 = High “The majority of students have high energy level for some or most of the period observed”; 2 = Medium “Some students have high energy level for at least some of the period observed”; and 1 = Low ”Few students, if any, have high energy level during the observed period”)

3) **Student Collaboration** (where 3 = High “The majority of students are engaged in active discussion with peers and with the instructor”; 2 = Medium “Some students are engaged in active discussion with peers and with the instructor for at least part of the session”; and 1 = Low “Few students, if any, are engaged in active discussion with peers and the instructor during the observation period”)

For each of these four measures, mean scores on the three-point scale described above were calculated for AVID and non-AVID classrooms. As Figure 3.2 illustrates, among 100 observations conducted in fall 2014, fall 2015, and fall 2016 (66 AVID classes and 34 non-AVID classes), AVID classrooms demonstrated significantly higher levels of:

- Student engagement (2.74 vs. 2.38 for non-AVID course sections);
- Classroom energy from students (2.59 vs. 2.09 for non-AVID course sections); and
- Student collaboration (2.54 vs. 1.99 for non-AVID course sections).

Only minor differences were observed in classroom energy levels exhibited by AVID-trained instructors (2.86) and instructors who did not participate in AVID training (2.74).
Figure 3.2. – Mean Observation Scores for Classroom Environment, Fall 2014 - Fall 2015

Source: Fall 2014 and 2015 Classroom Observations of Target Courses, Gibson Consulting Group, 2014-2016.  
Note: N=100, which includes 66 AVID classroom observation and 34 non-AVID classroom observations.

As Figure 3.3 illustrates, the use of writing activities was more common in observed first semester freshman AVID course sections (69.1%) than non-AVID course sections (32.9%) over the 2014-2016 period. These activities most commonly involved short quick writes on a particular topic or reflective journal entries made by students. Similarly, small group activities were much more commonly observed in first semester freshman AVID course sections (79.4%) than non-AVID course sections (48.3%) over the 2014-2016 period. (Figure 3.3)

Figure 3.3. – Percent of Classrooms Where Writing and Small-Group Activities Were Observed, AVID versus Non-AVID, Fall 2014 - Fall 2016

Source: Fall 2014 and 2015 Classroom Observations of Target Courses, Gibson Consulting Group, 2014-2016.  
Note: N=100, which includes 68 AVID classroom observation and 32 non-AVID classroom observations.
Over three years of classroom observations, high-engagement strategies most commonly observed in AVID course section include quick writes, think-pair-share, jigsaw, gallery walks, and critical reading strategies (e.g., marking the text and rereading). However, more elaborate strategies to engage students, such as Socratic Seminar and Philosophical Chairs, where students engage in debate-style dialogue over challenging texts and/or social issues, were observed in a small number of AVID classrooms.
4 – Relationship Between Student-Centered Instruction & Skill-Based Content and Students’ Perceptions of How the Course Impacted Their Skills and Confidence Levels and Willingness to Access University Resources

Key Findings:

The instructional methods and skill-based content provided in targeted freshman courses matter to students. A clear relationship was found between more frequent use of active and collaborative learning strategies and skill-based content in freshman course sections and student perceptions that the course improved their skills and confidence that they will succeed in college.

Further, student-centered instruction and skill-based content and student confidence were associated with students’ willingness to access university resources, attend campus events, and participate in peer student groups.

After controlling for differences in student characteristics:

- Students in freshmen course sections who reported higher degrees of student-centered instruction and skill-building activities/content were significantly more likely to feel that the course improved their skills and their confidence that they will be successful in college.
- Students in freshmen course sections who reported higher degrees of student-centered instruction and skill-building activities/content were also significantly more likely to be willing to access university resources through faculty office hours and tutoring center attendance, participating in campus events, and organizing or participating in peer study groups.
- When students felt that their targeted freshman course impacted their skills and confidence they were significantly more likely to indicate that they would be willing to access university resources, participate in campus events, and engage with other students in peer study groups.

In this section, we present the findings that describe the relationship between students’ perceptions of the use of student-centered andragogy and skill-based content in a targeted freshman course (typically an FYE course), their own improved skills and competency to be successful in college, and their own willingness to utilize university resources. The analyses presented in this section address the following research question:

Research Question 3: How is the usage of active and collaborative learning strategies and skill-based content in freshman courses related to student perceptions of how their academic and non-academic skills and confidence have changed, and their willingness to utilize university resources, attend campus events, and organize/participate in student study groups?

This broad research question is operationalized into the following sub-questions:
What is the relationship between the use of student-centered instructional methods and skill-based content and students’ perceptions of their improved skills and competency to be successful in college?

What is the relationship between the use of student-centered instructional methods and skill-based content and students’ willingness to utilize university resources?

What is the relationship between students’ perceptions of their improved skills and competency to be successful in college and their willingness to utilize university resources?

At the end of their first semester in college, a sample of students who were enrolled in AVID-infused sections and non-AVID sections of targeted freshman courses (typically, but not always a first year experience course) were surveyed regarding their perceptions of the course. Students were asked about the teaching methods used by the course instructor, how the course may have impacted their skills and confidence that they would be successful in college, and how the course may have impacted their propensity to utilize university resources, participate in school events, and get involved in peer study groups. These three primary survey constructs are previously described in sections 2 and 3 of this report. Below are the operational definitions of the three survey constructs included in the analysis.

**Student-Centered Instruction & Skill-Based Content**

The student-centered andragogy and skill-based content scale score is calculated as the average of ten questions about the andragogy that were used in the surveyed course. The questions were:

- We do hands-on activities in this course every week
- We do small group activities in this course every week
- I am encouraged to visit the college's tutoring center(s) in this course
- This course includes activities which connect me to campus events and activities
- Effective time management strategies are taught in this course
- Note-taking strategies are emphasized in this course
- I am familiar with AVID strategies because of this course
- Test-taking strategies are taught in this course
- This course emphasizes critical thinking and inquiry
- I receive useful advice from my instructor about college planning in this course

**Skills and Confidence**

The skills and confidence scale score is calculated as the average of nine questions about how students perceive the surveyed course improving their skills and confidence. The questions were:

- This course will help me be successful in college
- I have made friends with other students in this course
- This course has helped me better plan for college so I can graduate on time
- This course has helped to make me a better problem solver
- This course has helped to make me think more critically about issues
- This course has made me a more confident college student
- This course has made me less anxious about taking exams
- This course has helped to improve my note-taking skills
- Note-taking strategies I learned have impacted how I take notes in other courses.

As Table 4.1 shows, the primary area in which AVID students felt the targeted courses benefited them more profoundly than non-AVID students was in note-taking skills. In fall 2014 (+12.7 percentage points) and fall 2015 (+10.5 percentage points) and fall 2016 (+15.7 percentage points), students enrolled in AVID sections of targeted freshman courses were much more likely to agree that the course had improved their note-taking skills. They were also more likely to feel that the note-taking strategies learned in the course positively impacted the way they take notes in other classes. Students in AVID course sections in fall 2014 and fall 2016 were also more inclined to feel that the course improved their critical thinking skills (+5.6% in fall 2014 and +6.6 percentage points in fall 2016) and their problem solving skills (+3.8% in fall 2014 and +7.7 percentage points in fall 2016).

Table 4.1. – Percentage of AVID and non-AVID Students in Agreement with Statements Related to How the Targeted Freshman Course has Impacted their Skills and Confidence that they will be Successful in College

<table>
<thead>
<tr>
<th>Impact of Course on Student’s Skills and Confidence</th>
<th>Class type</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
<th>Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course will help me be successful in college.</td>
<td>AVID</td>
<td>82.6%</td>
<td>84.3%</td>
<td>86.6%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>82.4%</td>
<td>88.2%</td>
<td>84.7%</td>
</tr>
<tr>
<td>I have made friends with other students in this course.</td>
<td>AVID</td>
<td>89.3%</td>
<td>91.4%</td>
<td>91.3%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>84.7%</td>
<td>88.1%</td>
<td>86.1%</td>
</tr>
<tr>
<td>This course has helped me better plan for college so I can graduate on time.</td>
<td>AVID</td>
<td>75.8%</td>
<td>79.4%</td>
<td>82.6%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>78.4%</td>
<td>85.6%</td>
<td>81.0%</td>
</tr>
<tr>
<td>This course has helped to make me a better problem solver.</td>
<td>AVID</td>
<td>70.0%</td>
<td>73.2%</td>
<td>76.5%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>66.2%</td>
<td>74.7%</td>
<td>68.8%</td>
</tr>
<tr>
<td>This course has helped to make me think more critically about issues.</td>
<td>AVID</td>
<td>81.6%</td>
<td>84.1%</td>
<td>83.4%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>76.0%</td>
<td>82.0%</td>
<td>76.8%</td>
</tr>
<tr>
<td>This course has made me a more confident college student.</td>
<td>AVID</td>
<td>77.9%</td>
<td>78.9%</td>
<td>80.4%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>76.5%</td>
<td>81.0%</td>
<td>77.7%</td>
</tr>
<tr>
<td>This course has made me less anxious about taking college exams.</td>
<td>AVID</td>
<td>54.2%</td>
<td>58.2%</td>
<td>58.1%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>51.6%</td>
<td>56.7%</td>
<td>48.1%</td>
</tr>
</tbody>
</table>
This course has helped to improve my note-taking skills.

<table>
<thead>
<tr>
<th>Class type</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
<th>Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVID</td>
<td>61.6%</td>
<td>68.9%</td>
<td>64.2%</td>
</tr>
<tr>
<td>Non-AVID</td>
<td>48.9%</td>
<td>58.4%</td>
<td>48.5%</td>
</tr>
</tbody>
</table>

The note-taking strategies I learned in this course has positively impacted the way I take notes in other classes.

<table>
<thead>
<tr>
<th>Class type</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
<th>Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVID</td>
<td>58.0%</td>
<td>64.3%</td>
<td>60.9%</td>
</tr>
<tr>
<td>Non-AVID</td>
<td>47.5%</td>
<td>57.7%</td>
<td>45.6%</td>
</tr>
</tbody>
</table>


Note: Agreement percentages include students who either “agree” or strongly agree” with the statement.

As Figure 4.1 illustrates, in fall 2014 and fall 2016, the mean skills and confidence survey construct score was significantly higher for students in freshman course sections taught by AVID-trained faculty than they were in control group classes taught by faculty who did not participate. Thus, students in AVID course sections were in stronger agreement than their non-AVID peers that the targeted course for which they answered the survey helped to improve their academic (note-taking, inquiry) and nonacademic (time management) skills and enhance their confidence that they will be successful in college. However, for the second cohort of students who began college in fall 2015, little differences were observed in the mean skills and confidence construct scores of AVID and non-AVID students.

It is also of note that the mean skills and confidence construct scores increased in each year for AVID course sections moving from 2.90 in fall 2014 to 2.94 in fall 2015, to 2.97 in fall 2016. This shows a gradually deepening of the impact of AVID course sections on how students feel about their academic and nonacademic skills and their confidence as a college student as a result of taking the targeted freshman course. Meanwhile, the construct score for students in non-AVID course sections increased substantially from 2.80 to 2.95 between fall 2014 and fall 2015, but dropped back to 2.80 in fall 2016.
Figure 4.1. – Mean Student Survey Skills and Confidence Construct Scores, AVID versus Non-AVID, Fall 2014, 2015, and 2016

Notes: *p<0.1; ** p<0.05; *** p<0.01

University Resources

The university resources scale score is calculated as the average of nine questions presented in Table 4.2.

Larger percentages of students in AVID sections of targeted courses were in agreement with the following statements in fall 2016, when compared to students in AVID sections fall 2014:

- Because of this course, I am more likely to participate in group study sessions (+10.2 percentage points)
- Because of this course I am more likely to utilize college resources (+4.1 percentage points)
- Because of this course, I am more likely to organize group study sessions with other students (+9.6 percentage points)
Table 4.2. – Percentage of AVID and Non-AVID Students in Agreement with Statements Related to How the Targeted Freshman Course has Impacted their Connection to Peers and University Resources

<table>
<thead>
<tr>
<th>Impact of Course on Student’s Willingness to Access University Resources</th>
<th>Class type</th>
<th>Fall 2014</th>
<th>Fall 2015</th>
<th>Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>This course has increased my awareness of how to access college resources available to me.</td>
<td>AVID</td>
<td>91.2%</td>
<td>93.8%</td>
<td>91.3%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>90.7%</td>
<td>92.8%</td>
<td>90.1%</td>
</tr>
<tr>
<td>Because of this course, I am more likely to utilize college resources.</td>
<td>AVID</td>
<td>83.4%</td>
<td>88.4%</td>
<td>86.5%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>83.1%</td>
<td>88.1%</td>
<td>85.2%</td>
</tr>
<tr>
<td>Because of this course I am more likely to seek assistance from a college advisor or counselor.</td>
<td>AVID</td>
<td>82.4%</td>
<td>85.5%</td>
<td>85.6%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>83.3%</td>
<td>86.5%</td>
<td>84.0%</td>
</tr>
<tr>
<td>This course motivated me to seek assistance at one of the college’s tutoring centers.</td>
<td>AVID</td>
<td>67.8%</td>
<td>73.7%</td>
<td>68.1%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>63.2%</td>
<td>72.1%</td>
<td>62.7%</td>
</tr>
<tr>
<td>This course has made me more comfortable visiting professors during scheduled office hours.</td>
<td>AVID</td>
<td>74.0%</td>
<td>79.8%</td>
<td>78.4%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>74.0%</td>
<td>79.8%</td>
<td>76.2%</td>
</tr>
<tr>
<td>I feel comfortable calling on my instructor in the future for assistance or advice.</td>
<td>AVID</td>
<td>82.7%</td>
<td>84.8%</td>
<td>85.3%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>84.1%</td>
<td>87.3%</td>
<td>82.2%</td>
</tr>
<tr>
<td>I increased my level of involvement in campus events due to this course</td>
<td>AVID</td>
<td>53.1%</td>
<td>57.7%</td>
<td>56.1%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>55.5%</td>
<td>58.5%</td>
<td>52.9%</td>
</tr>
<tr>
<td>Because of this course, I am more likely to participate in group study sessions.</td>
<td>AVID</td>
<td>65.8%</td>
<td>76.0%</td>
<td>76.0%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>61.0%</td>
<td>67.7%</td>
<td>60.1%</td>
</tr>
<tr>
<td>Because of this course, I am more likely to organize study groups with other students.</td>
<td>AVID</td>
<td>61.1%</td>
<td>70.5%</td>
<td>70.7%</td>
</tr>
<tr>
<td></td>
<td>Non-AVID</td>
<td>58.5%</td>
<td>62.6%</td>
<td>57.1%</td>
</tr>
</tbody>
</table>

Source: Surveys of Students Regarding Targeted Freshman Course, fall 2014 – fall 2016.

Note: Agreement percentages include students who either “agree” or strongly agree” with the statement.

As Figure 4.2 illustrates, for the construct related to students’ connection to university resources and to peers through study groups, there is no statistically detectable difference between the AVID and non-AVID student groups for the students cohorts which began college in fall 2014 and fall 2015. However, in fall 2016, AVID students indicated stronger levels of agreement with statements related to their willingness to attend faculty office hours, visit the campus tutoring center, attend campus events, and organize or participate in peer study groups than their non-AVID peers.
Figure 4.2. – Mean Student Survey Connection to University Resources Construct Scores, AVID versus Non-AVID, Fall 2014, 2015, and 2016


Notes: *p<0.1; * p<0.05; *** p<0.01

Methods and Results

Regression analyses were used to describe the relationship between the three important student survey constructs: 1) the use of student-centered andragogy and skill-based content in freshman courses; 2) students’ perception of the extent to which the targeted freshman course helped to improve their skills and increase their competencies to be successful in college; and 3) the extent to which the targeted freshman course increased student’s willingness to utilize university of resources (e.g., attend faculty office hours, visit the tutoring center, participate in campus events, and engage with other students in peer study groups). There may be concern that the relationships among these measures are also related to other factors. For example, there is potential for students from one demographic group to be more likely or less likely to report student-centered andragogy and to have higher (or lower) skills and confidence. To address this concern, the regression models, described in Appendix C, adjust for differences in student background. Nevertheless, there may still be omitted variables and the regressions
should not be interpreted as causal evidence. The relationships described in the regression models are discussed below.21

**What is the relationship between the use of student-centered instructional methods and skill-based content and students’ perceptions of their improved skills and competency to be successful in college?**

There is a positive relationship between the use of student-centered andragogy and skill-based content and a student’s perception of their improved skills and competency to be successful in college. As shown in Table C1 in Appendix C, after controlling for differences between students22, the model predicts that a student whose Content and Andragogy score was 33 percent higher (i.e., one point higher on the 4-point survey agreement scale) would have a Skills and Confidence score that was 18 percent higher (i.e., 0.55 points on the 4-point agreement scale).23

In summary, students who indicated more consistent use of student-centered instruction and skill-based content had significantly higher levels of agreement with statements about how the targeted freshman course improved their skills and confidence levels. It is important to recognize that the analyses used to address research questions 1-3 in this chapter are correlational in nature and are not necessarily causal.

**What is the relationship between the use of student-centered instructional methods and skill-based content and students’ willingness to utilize university resources?**

While not as strong as the relationship described in research question 1 above, there is also a positive statistical relationship between the use of student-centered andragogy and students’ willingness to access university resources. As shown in Table C1 in Appendix C, after controlling for student differences, the model predicts that the student whose Content and Andragogy score was 33 percent higher (i.e., one point higher on the 4-point survey agreement scale) would have a University Resources score that was approximately eight percent higher (i.e., 0.23 points on the 4-point agreement scale).

In summary, students who indicated more consistent use of student-centered instruction and skill-based content had significantly higher levels of agreement with statements about how the targeted freshman course impacted their willingness to access college resources and peer networks, such as tutoring services, faculty office hours, and peer study groups. The inverse relationship was also found to be true – students who were in stronger agreement with items related to a more profound connection to the university events and resources were more likely to agree that they were exposed to student-centered skills and

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21 The coefficients from the regression models are reported in Table B.1 in Appendix B.

22 To address each of the research questions in this chapter, linear regression models with fixed effects for cohort and institution and standard errors clustered by institution were used to assess the relationship between student exposure to student-centered andragogy and skill-based content and the Skills and Confidence and Connection to University Resources survey constructs.

23 These relationships are not strictly the opposite of each other because other demographics, such as race or college, may be better predictors of andragogy score than they are of skills and confidence.
instructional approaches. The direction of this relationship is not clear. It could be that the student-centered content and andragogy is driving students’ willingness to connect more deeply with the university and peers, or it could be that students enrolled in sections of courses taught by more approachable and hand-on instructors were more likely to agree that active and collaborative learning approaches were employed.

What is the relationship between students’ perceptions of their improved skills and competency to be successful in college and their willingness to utilize university resources?

There is also a positive statistical relationship between how students felt their freshman course impacted their skills and confidence and how they felt the course impacted their willingness to access university resources. After controlling for student differences, the model predicts that a student whose Skills and Confidence score was 33 percent higher (i.e., one point higher on the 4-point survey agreement scale) would have a Connection to University Resources score that was approximately 16 percent higher (i.e., 0.47 points on the 4-point agreement scale).

In summary, students who reported higher levels of agreement on items about whether their freshman course positively impacted their skills (e.g., note-taking, critical thinking) and confidence that they will be successful in college reported statistically higher agreement on items related to how the course increased their willingness to participate in campus events, access university resources, and engage in peer study groups with other students. Since the inverse is also true, it is unclear from this analysis whether improved skills and confidence motivates students to be more active on campus, or that students who are more willing to be active on campus are more likely to agree that their freshman course helped improve their skills and confidence.

24 In the inverse relationship, the model predicts that a student whose Connection to University Resources score was 33 percent higher (i.e., one point higher on the 4-point survey agreement scale) would have a Skills and Confidence score that was 18 percent higher (i.e., 0.55 points on the 4-point agreement scale).
5 – Relationship between AHE Participation and Student Persistence and Degree Attainment Outcomes

**Key Findings:**

*The results from statistical models suggests that there is a positive statistical relationship between AHE participation and student persistence in college. However, program effects vary substantially by institutions and appear to be related to program implementation fidelity.*

*Four of the nine participating colleges and universities, which made concerted efforts to get faculty and staff involved in PD related to increasing student engagement and enhancing student study skills, posted consistently positive college persistence effects for AVID students.*

After controlling for differences in student characteristics and high school academic performance between AVID and non-AVID students, AVID students persisted in college at higher rates than their non-AVID counterparts, for example:

- For 71% of student cohorts across nine institutions, AVID students posted higher freshman fall-to-spring persistence rates than their non-AVID peers – in 33% of the cohort analyses, persistence rates for AVID students were 5 percentage points or more higher, and 24% of the differences were positive and statistically significant.

- For 76% of student cohorts across nine institutions, AVID students posted higher year 1-to-year 2 persistence rates than their non-AVID counterparts – in 52% of the cohort analyses, persistence rates for AVID students were 5 percentage points or more higher, and 29% of the differences were positive and statistically significant.

- For 77% of student cohorts across nine institutions, AVID students posted higher year 1-to-year 3 persistence rates than their non-AVID peers – in 39% of the cohort analyses, persistence rates for AVID students were 5 percentage points or more higher, and 15% of the differences were positive and statistically significant.

Student persistence results were most positive at four institutions which exhibited higher degrees of AHE implementation fidelity: Texas Wesleyan University, UNC Asheville, Butler Community College, and Saddleback College.

While no significant differences in bachelor’s degree attainment rates within four years of starting college were observed, a substantive difference in degree attainment was observed between AVID (31.5%) and non-AVID (19.6%) students at Texas Wesleyan College.

Cohort 1 AVID students who started at Saddleback College in fall 2014 were also more likely than their non-AVID counterparts to receive an associate’s degree or program certificate (+9.4 percentage points).
In this section, we address the following research questions related to the effect of a student participating in AHE on persistence rates and degree attainment rates:

**Research Question 4: What is the relationship between student participation in the AHE program and student outcomes?**

a. After controlling for differences between AVID and non-AVID students, what is the relationship between student participation in the AHE program and the rate of student persistence at their institution?

b. After controlling for differences between AVID and non-AVID students, what is the relationship between student participation in the AHE program and student completion of associates degree and program certificates (at 2-year institutions), and bachelor’s degrees (at 4-year institutions)?

c. Which, if any, institutions displayed evidence of strong implementation fidelity and consistently positive student persistence or degree attainment outcomes over the course of the project?

**Outcome Measures and Methods**

The following persistence and degree attainment outcome measures were examined for each cohort at each of the nine participating institutions (when usable data were provided and a control group of nonparticipating students was in place). Operational definitions of student persistence and grade attainment outcomes are provided below. The following seven student outcomes were examined:

**College Persistence Rates**

1) Freshman Fall-to-spring persistence (2-year and 4-year colleges and universities)

2) Year 1-to-year 2 persistence (2-year and 4-year colleges and universities)

3) Year 1-to-year 3 persistence (4-year colleges and universities only)

4) Year 1-to-year 4 persistence (4-year colleges and universities only)

5) Year 1-to-year 5 persistence or bachelor’s degree attainment (4-year, Cohort 1 institutions only)

**College Degree Attainment Rates**

6) Attainment of bachelor’s degree within 4 years (4-year, Cohort 1 institutions only)

7) Attainment of an associate’s degree or certificate within three years (2-year institutions only)

For each of the three student cohorts (i.e., those who began attending the institution in fall 2014, fall 2015, or fall 2016), students who enrolled in a targeted freshman course taught by an AVID-trained faculty member were compared to students who were enrolled in a comparable course section taught by a nonparticipating instructor.

First, propensity scores were estimated to quantify the probability of AHE FYE participation, conditional on available pre-treatment covariates provided by participating institutions. This score was then used to weight non-participating students in order to balance pre-treatment covariates between nonparticipating...
students and participating students so that, on average, both the participant and the nonparticipant groups were equivalent based on the covariates available to the research team.\textsuperscript{25} Next, multivariate regression was used to estimate the difference in the outcomes between treatment and comparison students. The difference represented the average treatment effect on the treated (ATET). The treated group refers to students who participated in the AHE program during the first enrollment year for each cohort wave. All student outcomes analyses were performed separately for each institution in order to calculate an institution-specific program participation effects. The disaggregated institution-level effects were aggregated using meta-analysis to provide a combined average program AVID participation effect.\textsuperscript{26}

### Participating Institutions

The results presented in this section represent propensity score reweighted regression adjusted estimates of persistence for the AVID and non-AVID student groups. The AVID group includes students who were enrolled in an AVID-infused first year experience (FYE) or targeted content course during their first semester in college, and non-AVID comparison group students include students who were not enrolled in an AVID-infused course during their first semester in college.

The following four-year institutions are included in the analysis: California State University-San Marcos (CSU-San Marcos); Fort Valley State University (FVSU); Texas Wesleyan University (TWU); Tougaloo College (TC); University of North Carolina at Asheville (UNC-Asheville); and Washington State University, Tri-Cities (WSU, Tri-Cities). Results for the full duration of the study (i.e., 2014-15 through fall 2018 enrollment) are presented for each institution in Appendices D and E.\textsuperscript{27} Two 2-year colleges are included in the Cohort 1 analyses (Atlanta Technical College and Saddleback College), which compare the results of AVID students who entered college in fall 2014 to other students who entered college in fall 2014 but did not participate in the AHE program. Three colleges (Atlanta Technical College, Butler Community College, and Saddleback College) are included in the Cohort 2, which compare the results of AVID students who entered college in fall 2015 to other students who entered college during those times who did not participate in the AHE program. Two 2-year colleges are included in the Cohort 1 analyses (Butler Community College and Saddleback College), which compare the results of AVID students who entered college in fall 2016 to other students who entered college during that semester but did not participate in the AHE program.\textsuperscript{28}

It is important to recognize that 2-year technical and community colleges typically collect less student-level data than 4-year institutions. This reduces the research team’s ability to adjust for a robust set of

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\textsuperscript{25} The covariates used for the propensity score reweighting procedure are listed in Appendix C.

\textsuperscript{26} Additional technical detail about the statistical approaches can be found in Appendix C.

\textsuperscript{27} Neither Fort Valley State University nor Tougaloo College provided course enrollment and completion data for 2017-18 or fall 2018 enrollment.

\textsuperscript{28} Usable Cohort 1 student-level data were not made available by Butler Community College; however, data for students entering Butler in fall 2015 (i.e., Cohort 2) and fall 2016 (i.e., Cohort 3) were provided and included in the analyses.
student-level characteristics that are associated with both AVID participation and the outcomes considered in this evaluation. For example, high school grade point average and SAT/ACT scores are not available for enough students to include those covariates in the model. This limits the research team’s ability to control for differences in the composition between the AVID and non-AVID students and yields potentially biased effect estimates. For these reasons, the results for two-year institutions should be viewed with some caution.

In addition, first to second year persistence rates for 2-year colleges should also be interpreted with some caution because the estimates do not account for students who successfully transferred to 4-year institutions after their first year in college. The extent to which students from AVID and non-AVID groups transferred, and the extent to which transfer rates are different for the two groups is not known at this time. The evaluation team attempted to collect these data from participating two-year institutions, but were unable to systematically obtain the student-level transfer records required for this analysis.

**Relationship between AHE Participation and Student Persistence in College**

<table>
<thead>
<tr>
<th>Descriptive Summary of Institution-Level Propensity Matched, Regression-Adjusted Estimates of AHE Program Effects (College Persistence Rates)</th>
</tr>
</thead>
</table>

Since statistical models calculated AHE program effect estimates at the institution level for each student cohort, we examine the consistency of results across the nine participating institutions and the three cohorts of students for which college persistence rates were calculated. Figure 5.1 displays percentage of student cohorts where the estimated effect of AVID program participation on college persistence rates was: 1) Positive effect; 2) Positive effect with an effect size of five percentage points or more; or 3) Positive and statistically significant effect.

When interpreting Figure 5.1, it is important to note that freshman fall-to-spring and year 1 to year 2 (i.e., freshman to sophomore year) persistence rates have more statistical results to review (21 different student cohorts across nine institutions) than longer-term persistence rates (i.e., year 1 to year 3, n=13, year 1 to year 4, n=8, and year 1 to year 5/graduated, n=4).  

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29 This reflects the fact that for the two shorter-term persistence calculations, each of the three student cohorts at all nine participating 2- and 4-year institutions (n=27) could have potentially been included in the freshman fall-to-spring and first to second year persistence calculations; however, usable data were not available in six of these cases. The number of potential first to third year, and first to fourth year persistence calculations are further reduced by 2-year institutions being removed from the analyses, the unavailability of data for Cohort 3 institutions by fall 2017, and data issues related to the lack of comparison group students or data reliability problems. Lastly, because only 4-year institutions from Cohort 1 (i.e., students who began college in fall 2014) could be included in the first to fifth year persistence and bachelor’s degree attainment calculation, and two institution did not provide usable data for Cohort 1, only four student cohorts were available for this long-term persistence and graduation measure.
Models designed to measure the relationship between AHE participation and near-term student persistence (i.e. freshman fall-to-spring and year 1-to-year 2 persistence) were run for 21 different student cohorts at 2-year and 4-year colleges and universities. Longer-term persistence rate models (i.e., year 1-year 3, year 1-to-year 4, and year 1-to-year 5) were only appropriate for student cohorts at 4-year institutions, resulting in smaller numbers of cohorts included the further the persistence measure moved from the year of intervention.

As Figure 5.1 illustrates, after controlling for differences in student characteristics and prior academic performance, the majority of AVID student cohorts had higher freshman fall to spring (71.4% of 21 student cohorts) and year 1 to year 2 (76.2% of 21 student cohorts) persistence rates than their non-AVID peers. Similarly, consistently positive AHE program participation effects were observed when assessing the impact of the program on year 1 to year 3 (76.9% of 13 student cohorts), year 1 to year 4 (87.5% of 8 student cohorts), and year 1 to year 5 or graduation (all four of the student cohorts included in the analysis).

Figure 5.1 – Percentage of Students Cohorts for which Positive Statistical Relationships between AHE Participation and Persistence were Observed

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Note: Year 1 to Year 5 persistence includes students who returned to college for a fifth year or received a bachelor’s degree from a 4-year institution. This figure excludes some cohort-institutions based on the quality or presence of an available comparison. Cohort 3 was excluded for Tougaloo College due to the lack of a comparison group. Cohorts 2 and 3 were excluded from WSU, Tri-Cities due to the lack of an appropriate comparison group. Cohort 1 for Tougaloo College and Butler Community College were not available for analysis, and Cohort 3 for Fort Valley State University was also unavailable.

The largest differences in persistence between AVID and non-AVID students was observed for year 1-to-year 2 persistence, where over half of the student cohorts (52.3%) experienced positive AHE effects of five percentage points or greater. That is, the propensity-matched, regression-adjusted persistence
results were at least five percentage points higher for AVID cohort students than for their non-AVID peers. Similarly, year 1-to-year 2 persistence is where we observed the largest proportion of student cohorts where the difference in rates between AHE participants and non-AVID students was positive and statistically significant (28.5% of the 21 student cohorts).

Almost 39 percent of student cohorts at 4-year institutions posted AHE effects on year 1-to-year 3 persistence of five percentage points or more; however, only 15.3 percent of student cohorts recorded statistically higher rates from AHE students than non-AVID students. As Figure 5.1 shows, the longer-term effect of AHE participation tends to weaken as students get three to four years removed from the freshman year intervention.

**Random-Effects Meta Analysis: AHE Participation on Persistence and Degree Attainment**

The evaluation team at Gibson also conducted random effects meta-analysis to calculate a combined average estimate of the difference in persistence between AVID and non-AVID students. Table 5.1 presents the random effects meta-analysis results for persistence rates at 4-year institutions. Modest and consistently positive, but not statistically significant, AHE program effects on persistence at 4-year colleges and universities were observed when examining both near-term (+0.68 to +1.29 percentage points) and longer-term (+1.92 to +2.43 percentage points) persistence. These results reflect the variation in implementation fidelity across institutions and the results are differentially influenced by larger institutions in the program which did not yield the strongest student persistence results. While not statistically significant, AVID student cohorts obtained bachelor’s degrees within four years at higher rates (+1.00 percentage points) than their non-AVID peers.

**Table 5.1. – Four-Year Institutions, Random Effects Meta-Analysis of Propensity Score Reweighted and Regression Adjusted Average Treatment Effect Combined Across Cohorts**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Estimate</th>
<th>P-value</th>
<th>Number of Calculations included in Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman fall to spring persistence</td>
<td>0.68</td>
<td>0.40</td>
<td>13</td>
</tr>
<tr>
<td>Year 1 to Year 2 persistence</td>
<td>1.29</td>
<td>0.45</td>
<td>13</td>
</tr>
<tr>
<td>Year 1 to Year 3 persistence</td>
<td>2.41</td>
<td>0.19</td>
<td>13</td>
</tr>
<tr>
<td>Year 1 to Year 4 persistence</td>
<td>2.43</td>
<td>0.11</td>
<td>8</td>
</tr>
<tr>
<td>Year 1 to Year 5 persistence</td>
<td>1.92</td>
<td>0.44</td>
<td>4</td>
</tr>
<tr>
<td>Obtained Bachelor’s Degree</td>
<td>1.00</td>
<td>0.52</td>
<td>4</td>
</tr>
</tbody>
</table>

*Source: Administrative Data Collected from Participating Institutions, 2014-2018.*

*Note: +p<0.1; * p<0.05; ** p<0.01.*

In addition to persistence rates, the evaluation team conducted meta-analyses of bachelor’s degree attainment rates within four years, and associate’s degree or program certificate attainment rates within
three years. Small differences of less than one percentage point were observed between bachelor’s degree attainment rates of AVID and non-AVID students at UNC Asheville and CSU San Marcos. These findings are in line with their first to fifth year persistence results. (Table 5.2)

A small, though not statistically significant, difference of +3.1 percentage points was observed between AVID and non-AVID students at WSU, Tri-Cities, and a larger +11.9 percentage point difference was observed at Texas Wesleyan University. The combined average effect of AHE participation on bachelor’s degree attainment was just +1.0 percentage points.

Table 5.2. – Four-Year Institutions, Propensity Score Reweighted and Regression Adjusted Bachelor’s Degree Rates for Cohort 1

<table>
<thead>
<tr>
<th>Bachelor’s Degree</th>
<th>College</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of North Carolina – Asheville</td>
<td>41.4</td>
<td>41.5</td>
<td>-0.1</td>
<td>0.99</td>
<td>628</td>
<td></td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>10.1</td>
<td>9.6</td>
<td>0.5</td>
<td>0.75</td>
<td>1,713</td>
<td></td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>24.4</td>
<td>21.3</td>
<td>3.1</td>
<td>0.66</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>31.5</td>
<td>19.6</td>
<td>11.9</td>
<td>0.17</td>
<td>310</td>
<td></td>
</tr>
</tbody>
</table>

Combined average effect size: 1.0 0.52

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: +p<0.1; * p<0.05; ** p<0.01. Data for 2017-18 were not provided by Fort Valley State University so they could not be included in the bachelor’s degree attainment analyses.

As Table 5.3 shows, substantive and statistically significant AHE program effects on persistence at 2-year colleges and universities were observed when examining both freshman fall-to-spring (+6.29 percentage points) and year 1-to-year 2 (+8.22 percentage points) persistence. While not statistically significant, AVID student cohorts obtained associate’s degrees within three years at higher rates (+2.08 percentage points) than their non-AVID peers.

Table 5.3. – Two-Year Institutions, Random Effects Meta-Analysis of Propensity Score Reweighted and Regression Adjusted Average Treatment Effect Combined Across cohorts

<table>
<thead>
<tr>
<th>Two-Year Institution Overall Outcomes</th>
<th>Estimate</th>
<th>P-value</th>
<th>Number of Calculations included in Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman fall to spring persistence</td>
<td>6.29**</td>
<td>&lt;0.001</td>
<td>8</td>
</tr>
<tr>
<td>Year 1 to Year 2 persistence</td>
<td>8.22**</td>
<td>&lt;0.001</td>
<td>8</td>
</tr>
<tr>
<td>Obtained degree/certificate</td>
<td>2.08</td>
<td>0.51</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: Note: +p<0.1; * p<0.05; ** p<0.01. Cohort 1 was unavailable for analysis for Butler Community College. NA indicates that this cohort has not been observed long enough to be included in this year’s report.

30 Data were not available to conduct these analyses for all institutions.
31 The difference of +11.9 percentage points did not quite reach statistical significant (p=.167).
For students who began college in fall 2014 (Cohort 1), a larger proportion of AVID students at Saddleback College (+9.4 percentage points) obtained an associate’s degree or program certificate within three years than their non-AVID peers. The observed difference between AVID and non-AVID students was substantially smaller (+2.5 percentage points) for Cohort 2 students who first enrolled at Saddleback in fall 2015. (Table 5.4)

Table 5.4. – Two-Year Institutions, Propensity Score Reweighted and Regression Adjusted Associate’s Degree or Program Certificate Attainment Rates within Three Years, Cohorts 1 - 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cohort 1: Obtained Associate’s Degree or Program Certificate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saddleback College</td>
<td>14.7</td>
<td>5.3</td>
<td>9.4**</td>
<td>0.01</td>
<td>639</td>
</tr>
<tr>
<td>Atlanta Technical College</td>
<td>25.2</td>
<td>28.8</td>
<td>-3.6</td>
<td>0.39</td>
<td>874</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>3.3</td>
<td>0.61</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cohort 2: Obtained Associate’s Degree or Program Certificate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saddleback College</td>
<td>26.4</td>
<td>23.9</td>
<td>2.5</td>
<td>0.35</td>
<td>1,399</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>8.3</td>
<td>12.3</td>
<td>-4.0</td>
<td>0.50</td>
<td>117</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>1.4</td>
<td>0.58</td>
<td></td>
</tr>
</tbody>
</table>

Notes: †p<0.1; * p<0.05; ** p<0.01. As usable Cohort 1 data were not available, large differences in results between Cohorts 1 and 2 at Saddleback College may be driven by differences in cohort definition and composition.

Identification of Institutions with Positive Persistence Outcomes

While AHE implementation fidelity was a challenge for some participating institutions, a number of 2- and 4-year colleges and universities demonstrated high levels of commitment to implementing the AHE program with fidelity and posted positive student persistence and/or degree attainment results.

High Performing 4-year Institutions

Texas Wesleyan University
Texas Wesleyan University offered an FYE course to incoming freshman students in their first semester in college. Students enrolled in FYE course sections without knowing whether the course was taught by AVID-trained faculty or faculty who did not participate in AVID-related professional development. A total of 89 students were enrolled in AVID-infused course sections in fall 2014, 126 in fall 2015, and 125 in fall 2016. Cohort 1 and Cohort 2 included a higher proportion of Pell eligible students in AVID sections (69.2% and 50.8% for AVID students and 21.7% and 17.6% for non-AVID students, respectively). However, Cohort 3 students, entering college in fall 2016, had comparable rates of Pell eligibility for AVID (56.0%) and non-AVID students (53.1%). In fall 2016, the student population at Texas Wesleyan changed substantially with

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32 The Cohort 1 difference of 9.4 percentage points is statistical significant at the .01 level, while none of the other differences shown in Table 5.4, reach statistical significance.
the introduction of a collegiate football program. This may have had an impact on near-term persistence rates for this university.

As Figure 5.2 illustrates, with the exception of freshman fall-to-spring and Year 1-to-Year 2 persistence for Cohort 3 (i.e., first-time, full time freshman enrolling at Texas Wesleyan in fall 2016), positive AHE program effects were observed across all students cohorts and persistence rates. Based on the small cohort sizes of 89 to 126 students, depending upon cohort, fairly large effect sizes are required for AVID/non-AVID differences to reach statistical significance; however, first to second year persistence for Cohort 1 (+11.2 percentage point difference), and the first to fifth year persistence or graduation rate was significantly higher for AVID than non-AVID students (+18.2 percentage points). Much of this difference was driven by an 11.9 percentage point difference in bachelor’s degree attainment rates between AVID and non-AVID students at Texas Wesleyan University.

For Cohort 1, two of the five persistence rate calculations were five or more percentage points higher for the AVID group than non-AVID students. For the second cohort of first-time, full-time students (starting college in fall 2015), all four calculations yielded regression-adjusted persistence rates for AVID students between 5.1 percentage points to 7.0 percentage points higher than non-AVID students. Lastly, for the third student cohort, after having near-term persistence rates slightly lower than their non-AVID peers (2-3 percentage points), first to third year persistence for AVID students outpaced non-AVID students by 7.9 percentage points. (Figure 5.2)

**Figure 5.2. – Texas Wesleyan College, Propensity Matched, Regression-Adjusted AHE Program Effect on Student Persistence in College**

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: Notes: first to second year persistence difference of +11.3 percentage points for Cohort 1 and +18.2 percentage points for Cohort 2 were statistically significant at the .05 level.
University of North Carolina – Asheville

UNC Asheville FYE courses were offered through a variety of departments, such as English, economics, business, education, biology, fine arts, history, political science and chemistry, among others. The subject matter of the course followed the discipline of the faculty member teaching the course, but was taught with active or collaborative learning methods. For the fall 2014 student cohort (Cohort 1), AVID students participated in living learning communities, which also included a separate study skills component that was taught in a separate course offered only to students in the AVID living learning community in 2014-15.

The living learning community requirement was dropped for cohorts 2 (fall 2015) and 3 (fall 2016). For these cohorts, AVID students were enrolled in first year experience courses taught by an AVID-trained faculty member and the course was co-taught by a staff member from the student success department. In addition, a select group of students beginning college at UNC Asheville in fall 2015 and fall 2016 were invited to enroll in the Jump Start Program. The invitation only Jump Start Program provides students with the opportunity to be a part of a structured learning community for the fall semester, learn about UNC Asheville and college expectations, and develop the necessary skills to help students transition smoothly from high school into their first year of college. AVID strategies are a core component to this initiative.

Cohort 1 (fall 2014) included 99 AVID students, Cohort 2 (fall 2015) had 130 AVID students and Cohort 3 (fall 2016) consisted of 134 AVID students. Although the difference decreased after Cohort 1, students in AVID sections were more likely in each cohort to be eligible for Pell Grants (80% for AVID and 16% for non-AVID in Cohort 1, 54% for AVID and 26% for non-AVID in Cohort 3), and the mean SAT scores for AVID students in cohorts 2 and 3 was substantially lower than for students in Cohort 1.

Figure 5.3 shows a large persistence difference between AVID and their non-AVID peers for freshman fall-to-spring persistence (+10.5 percentage points, which was statistically significant at the .01 level). This near-term persistence rate finding may be driven by student participation in the living learning community. Persistence rate differences between AVID and non-AVID students in Cohort 1 gradually decline over time (+5.4 percentage points for first to second year, +1.6 percentage points for first to third year, less than +1.0 percentage points for first to fourth year and first to fifth year persistence).

After the programmatic adjustments described above, AVID students in Cohorts 2 and 3 at UNC Asheville persisted in college at higher rates than their non-AVID counterparts. As Figure 5.3 illustrates, across the board, higher persistence rates were observed for Cohort 2 AVID students than their non-AVID peers at UNC Asheville:

- +3.7 percentage points for freshman fall-to-spring persistence;
- +6.0 percentage points for Year 1-to-Year 2 persistence;
- +7.0 percentage points for Year-1 to-Year 3 persistence; and
• +4.1 percentage points for Year 1-to-Year 4 persistence

Persistence results for AVID students Cohort 3 (i.e., first-time, full-time students who started college in fall 2016) were the most robust of the three UNC Asheville student cohorts. As Figure 5.3 shows, the freshman fall-to-spring persistence rate is 3.7 percentage points higher for AVID students than their non-AVID peers. However, larger statistically significant differences are observed for Cohort 3 year 1-to-year 2 persistence (+9.9 percentage points), and year 1-to-year 3 persistence (+11.1 percentage points).

Figure 5.3. – UNC Asheville, Propensity Matched, Regression-Adjusted AHE Program Effect on Student Persistence in College

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: The Cohort 1 freshman fall-to-spring persistence rate difference of 1.5 percentage points is statistically significant at the .05 level, the Cohort 3 year 1-to-year 2 persistence rates is statistically significant at the 0.10 level, and the Cohort 3 year 1-to-year 3 persistence rates is statistically significant at the .05 level.

In summary, every one of the 12 persistence rates calculated for the three student cohorts at UNC Asheville yielded positive AHE program effects on persistence, with half of the persistence calculations (6 of 12) resulting in differences of five percentage points or more, and three of the 12 persistence calculations resulting in statistically significant differences between AVID and non-AVID students.

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33 While two of the four persistence rates were five percentage points or more, none of these differences reached statistical significance.
High Performing 2-year Institutions

Butler Community College

In fall of 2014, 2015, and 2016, Butler Community College offered students first year experience courses, with some sections taught by AVID-trained faculty and others taught by non-participating faculty. For Cohort 1, Butler was not able to provide usable data for AVID and non-AVID student, which resulted in this initial cohort not being included in our analyses. However, relatively small cohorts of 36 AVID students in Cohort 2 (fall 2015)\(^{34}\) and 85 AVID students in Cohort 3 (fall 2016) were included in the analysis.\(^{35}\)

Over the course of the grant, Butler Community College developed a robust professional development program centered on high engagement instructional strategies central to the AHE program. High levels of participation in AVID-related PD by full-time faculty and part-time adjunct instructors provided by AVID staff and consultants and through the annual Summer Jam PD events sponsored by Butler Community College were observed.

While data were not available for the first cohort of students who began college in fall 2014, consistently positive program effects of AHE program participation on persistence at Butler Community College were observed for Cohort 2 (fall 2015) and Cohort 3 (fall 2016) AVID students when compared to matched comparison group students. As Figure 5.4 shows, the estimated effect of participation in AHE on first to second year persistence was 16.7 percentage points\(^{36}\) for Cohort 2 students, and 5.8 percentage points for Cohort 3 students.

For Cohort 2, little difference in freshman fall-to-spring persistence was observed between AVID and non-AVID students; however, the 13.7 percentage point difference between AVID and non-AVID students in Cohort 3 was statistically significant at the .05 level.

\(^{34}\) One course section of AVID students was removed from the analysis because it consisted of high school students enrolled in a dual credit course, which was taught by an AVID-trained faculty member. This further reduced the already limited AVID sample at Butler Community College.

\(^{35}\) Due to the low number of students enrolled in AVID-infused courses (particularly for Cohort 2) and limited control variables available for use in the analysis for Butler Community College, results should be interpreted with caution. The availability of few control variables did not allow the research team to account for potential differences among students in the AVID cohort and control groups, particularly academic and socioeconomic differences, when comparing persistence and course passing rate outcomes.

\(^{36}\) This difference is statistically significant at the 0.10 level.
Saddleback College

At Saddleback College, the fall 2014 AVID group included only students enrolled in AVID-infused sections of the Counseling 140 (FYE) course in fall 2014, which emphasized study skills and college/career planning, and their results were compared to students in non-AVID sections of that course. In fall 2015 and fall 2016, the AHE program was expanded substantially at Saddleback College with AVID-trained faculty teaching a wide array of courses that were designated as “AVID Courses” and promoted in course registration information. These AVID courses included sections taught by faculty who had attended AVID professional development or were part of the college’s teaching practicum. Thus, students were aware of the AVID course status prior to enrolling in the course section. In fall 2015 (Cohort 2) and fall 2016 (Cohort 3), the AVID cohort included all students who were enrolled in an AVID-infused course, regardless of discipline, during the first semester of that respective academic year.

The persistence and course passing outcomes for these students are compared to those for a matched comparison group of students who did not take an AVID-infused course during each of these fall semesters. A total of 206 Cohort 1 students participated in the AVID Counseling 140 (FYE) course in the fall of 2014. A total of 1,039 Cohort 2 students and 731 Cohort 3 students were enrolled in an AVID-infused course in fall 2015 and fall 2016, respectively.

Following an initial year of modest, yet promising results for the first cohort of AVID students at Saddleback College, AVID students benefitting from the expanded array of AVID-infused courses posted significantly higher persistence rates than students who did not enroll in courses taught by AVID-trained faculty committed to implementing active and collaborative instructional approached in their courses. As
Figure 5.5 shows, with the exception of Cohort 1, AVID students persisted at Saddleback College at higher rates than their non-AVID counterparts.

Year 1-to-year 2 persistence rate persistence for AVID students was 5.4 percentage points higher for the fall 2014 cohort, 9.8 percentage points higher for Cohort 2 students starting at Saddleback in fall 2015, and 11.4 percentage points higher for Cohort 3 students starting at the college in fall 2016.37

Figure 5.5. – Saddleback College, Propensity Matched, Regression-Adjusted AHE Program Effect on Student Persistence in College

Note: All persistence rate differences (freshman fall-to-spring and year 1–to-year 2) for Cohorts 2 and 3 are statistically significant at the 0.10 level.

37 The differences in year 1-to-year 2 persistence for AVID and non-AVID students in Cohorts 2 and 3 was statistically significant at the .01 level.
6 - Relationship between AHE Participation and Student Course Passing Rate Outcomes

Key Findings:

While the relationship between AHE participation and course passing rates was relatively weak across participating institutions, positive effects were more likely to be observed during the first year of college when the outcome of freshman year passing rates was more proximal to the AHE intervention.

At one institution, Texas Wesleyan University, a positive and statistically significant relationship was found between AHE participation and course passing rates for two of the three cohorts of students (fall 2014 and fall 2015).

After controlling for differences in student characteristics and high school academic performance between AVID and non-AVID students:

- 62% of the AVID student cohorts across nine participating institutions passed a higher proportion of freshman courses (71.4% of 21 student cohorts). However, the program effect sizes was small with only 14% of the AVID student cohorts posting course passing rates five percent higher than their non-AVID peers.

- The relationship between AHE participation and course passing rates became even weaker the further removed students were from the freshman AHE intervention. None of the AVID student cohorts posted year 2, year 3, or year 4 course passing rates of five percentage points higher than their non-AVID peers, and none of the differences were positive and statistically significant.

- At Texas Wesleyan University, AVID students in the fall 2014 and 2015 cohorts posted significantly higher course passing rates during their freshman year than their non-AVID counterparts (+9.1 percentage points for Cohort 1 and +8.1 percentage points for Cohort 2).

In this section, we address the following research questions related to the effect of a student participating in AHE on persistence rates and degree attainment rates:

Research Question 4: What is the relationship between student participation in the AHE program and student outcomes?

d. After controlling for differences between AVID and non-AVID students, what is the relationship between student participation in the AHE program and the proportion of courses (of 3 credits or more) which were passed with a grade of C or better?

e. Which, if any, institutions displayed evidence of strong implementation fidelity and consistently positive course passing rate outcomes over the course of the project?
Outcome Measures and Methods

The following course passing rate outcome measures were examined for each student cohort enrolled at the nine participating institutions (when usable data were provided and a control group of nonparticipating students was in place). The following four course passing rates were examined:

1) Year 1, or freshman year, course passing rates (2-year and 4-year colleges and universities)
2) Year 2, or sophomore year, course passing rates (2-year and 4-year colleges and universities)
3) Year 3, or junior year, course passing rates (4-year colleges and universities only)
4) Year 4, or senior year, course passing rates (4-year colleges and universities only)

See Section 5 of this report for a description of the research methods used to calculate propensity matched, regression-adjusted course passing rates for AVID and non-AVID students. Appendix C contains even more detailed methods regarding this research approach.

Participating Institutions

Similar to the persistence results presented in Section 5 of this report, the results presented in this section represent propensity score reweighted regression adjusted estimates of course passing rates for the AVID and non-AVID student groups. The AVID group includes students who were enrolled in an AVID-infused first year experience (FYE) or targeted content course during their first semester in college, and non-AVID comparison group students include students who were not enrolled in an AVID-infused course during their first semester in college.

The following 4-year institutions are included in the analysis: California State University-San Marcos; Fort Valley State University; Texas Wesleyan University; Tougaloo College; University of North Carolina at Asheville; and Washington State University, Tri-Cities. Course passing results for the full duration of the study (i.e., 2014-15 through fall 2018 enrollment) are presented for each institution in Appendices D and E. 38 Two 2-year colleges are included in the Cohort 1 analyses (Atlanta Technical College and Saddleback College), which compare the results of AVID students who entered college in fall 2014 to other students who entered college in fall 2014 but did not participate in the AHE program. Three colleges (Atlanta Technical College, Butler Community College, and Saddleback College) are included in the Cohort 2 and Cohort 3 analyses. 39

38 Neither Fort Valley State University nor Tougaloo College provided course enrollment and completion data for the 2017-18 academic year.
39 Usable Cohort 1 student-level data were not made available by Butler Community College; however, data for students entering Butler in fall 2015 (i.e., Cohort 2) and fall 2016 (i.e., Cohort 3) were provided and included in the analyses.
See Section 5 for limitations related to student outcome results presented for 2-year institutions. The same cautions regarding the lack of robust control variables in the 2-year models for persistence rate calculations also apply to course passing rate calculations presented in this section.

**Relationship between AHE Participation and College Course Passing Rates**

**Descriptive Summary of Institution-Level Propensity Matched, Regression-Adjusted Estimates of AHE Program Effects (Course passing Rates)**

Since statistical models calculated AHE program effect estimates at the institution level for each student cohort, we examine the consistency of results across the nine participating institutions and the three cohorts of students for which course passing rates were calculated. Figure 6.1 displays percentage of student cohorts where the estimated effect of AVID program participation on course passing rates was: 1) Positive effect; 2) Positive effect with an effect size of five percentage points or more; or 3) Positive and statistically significant.

When interpreting Figure 6.1, it is important to note that for first and second year student cohorts, course passing rates have more statistical results to review (21 different student cohorts for year 1 and 18 student cohorts for year 2) than longer-term course passing rates (i.e., year 3 has data for eight student cohorts and year 4 has data for just four student cohorts).

In contrast to Figure 5.1 in the previous section, which illustrated a more consistent relationship between AHE participation and student persistence in college, Figure 6.1 shows that a relatively weak relationship exists between a student being in AHE and their propensity to pass college courses with a C or higher. After controlling for differences in student characteristics and prior academic performance, 62% of the 21 AVID student cohorts across nine participating institutions passed a higher proportion of freshman courses (71.4% of 21 student cohorts). However, only 14% of the AVID student cohorts had freshman year course passing rates of five percentage points or higher than their non-AVID peers and in only 14% of the cohorts were the AVID vs. non-AVID course passing rate differences statistically significant.

As Figure 6.1 illustrates, the relationship between AHE participation and course passing rates became even weaker the further removed students were from the freshman AHE intervention. None of the AVID student cohorts posted year 2, year 3, or year 4 course passing rates of five percentage points higher than their non-AVID peers, and none of the differences were positive and statistically significant.
Random-Effects Meta-Analysis: AHE Participation on Course Passing Rates

The evaluation team conducted random effects meta-analysis to calculate a combined average estimate of the difference in course passing rates between AVID and non-AVID students. Table 6.1 presents the random effects meta-analysis results for course passing rates at four-year institutions. These results are consistent with the descriptive findings on course passing rates presented above, with the strongest results observed for year 1 passing rates, which are most proximate to the time of the freshman year intervention. However, even the random effects meta-analysis of propensity score weighted and regression adjusted treatment effect AHE participation on freshman course passing rates was modest (ranging from -1.44 percentage points for Cohort 3 to +1.28 percentage points for Cohort 2 and +3.49 percentage points for Cohort 1). \(^{40}\)

Only second year course passing rates for students at 4-year institutions who began college in fall 2016 (Cohort 3) were found to be statistically different for AVID and non-AVID students – with AVID students passing their sophomore courses 2.35 percentage points less frequently.

\(^{40}\) None of these differences reached statistical significance.
Table 6.1 – Four-Year Institutions, Random Effects Meta-Analysis of Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AHE Participation on Course Passing Rates

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>P-value</td>
<td>Estimate</td>
<td>P-value</td>
</tr>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>3.49</td>
<td>0.16</td>
<td>-1.99</td>
<td>0.36</td>
</tr>
<tr>
<td>Cohort 2</td>
<td>1.28</td>
<td>0.25</td>
<td>1.55</td>
<td>0.15</td>
</tr>
<tr>
<td>Cohort 3</td>
<td>-1.44</td>
<td>0.48</td>
<td>-2.35*</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: *p<0.1; **p<0.05. This table excludes some cohort-institutions based on the quality or presence of an available comparison. Cohort 3 was excluded for Tougaloo College due to a lack of comparison group. Cohorts 2 and 3 were excluded from Washington State University, Tri-Cities due to the lack of an appropriate comparison group. Cohort 1 for Tougaloo College was not available for analysis. For Fort Valley State University, Cohort 3 was unavailable along with course passing rates for Cohorts 1 and 2 in 2016-17. NA indicates that this cohort has not been observed long enough to be included in this analysis.

As Table 6.2 shows, during their first year in college, the combined average estimates of AHE participation on course passing rates for 2-year colleges was relatively small and positive for Cohort 1 (+2.50 percentage points) and Cohort 3 (+2.45 percentage points), and small and negative for Cohort 2 (-3.11 percentage points).41

Again, as students are further removed from the time of the AHE intervention in the freshman year of college, the relationship between AHE participation and passing rates weakens and becomes less consistent. For Year 2 course passing rates, the combined average estimates of AHE participation on course passing rates for 2-year colleges was modest and negative for each cohort (Cohort 1 was -0.78 percentage points, Cohort 2 was -2.66 percentage points, and Cohort 3 was -2.48 percentage points).

41 The -3.11 percentage point difference was statistically significant at the 0.10 level.
Table 6.2. – Two-Year Institutions, Random Effects Meta-Analysis of Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Two-Year Institution Course Passing Rates</th>
<th>Estimate</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td></td>
<td>2.50</td>
<td>0.29</td>
</tr>
<tr>
<td>Cohort 2</td>
<td></td>
<td>-3.11+</td>
<td>0.09</td>
</tr>
<tr>
<td>Cohort 3</td>
<td></td>
<td>2.45</td>
<td>0.45</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td></td>
<td>-0.78</td>
<td>0.87</td>
</tr>
<tr>
<td>Cohort 2</td>
<td></td>
<td>-2.66</td>
<td>0.22</td>
</tr>
<tr>
<td>Cohort 3</td>
<td></td>
<td>-2.48</td>
<td>0.67</td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: Note: +p<0.1; * p<0.05; ** p<0.01. Cohort 1 was unavailable for analysis for Butler Community College. NA indicates that this cohort has not been observed long enough to be included in this year’s report.

Identification of Institutions with Positive Course Passing Rate Outcomes

The relationship between AHE participation and course passing rates was certainly weaker for institutions across the board; however, one of the 4-year colleges (Texas Wesleyan University) which posted the most promising program effects on persistence, also demonstrated the most consistently positive program effects on course passing rates.

High Performing Institutions

Texas Wesleyan University
A description of the Texas Wesleyan University AHE program can be found in Section 5 of this report. The design of the Texas Wesleyan University AHE program emphasized the use of active and collaborative instruction in their AVID-based FYE course, but also placed a strong emphasis on developing academic (e.g., note-taking and inquiry-based critical thinking skills) and non-academic skills (e.g., time management).

Freshman year course passing rates for the first two cohorts of AVID students were significantly higher than their non-AVID peers. For Cohort 1 students, 2014-15 freshman course passing rates for AVID-students were 9.1 percentage points higher than non-AVID students. For Cohort 2 students, their 2015-16 freshman course passing rates were 8.1 percentage points higher than their non-AVID counterparts. Both of these differences are significantly different at the .05 level.

Sophomor year course passing rates for AVID students at Texas Wesleyan were also consistently higher for AVID students than non-AVID (+1.2 percentage points for Cohort 1, +3.1 percentage points for Cohort 2, and +0.01 percentage points for Cohort 3; however none of these differences reached statistical
significance. Junior and senior year course passing rate differences were more mixed as students moved further away from the freshman year AHE intervention. (Figure 6.2)

Figure 6.2. – Texas Wesleyan College, Propensity Matched, Regression-Adjusted AHE Program Effect on Course Passing Rates

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: The freshman year course passing rate differences of +9.1 percentage points for Cohort 1 and +8.1 percentage points for Cohort 2 were statistically significant at the .05 level.

None of the 2-year colleges participating in the AVID College Completion Project posted consistent results related to the effect of AHE participation on student course passing rates.
7 - Relationship between Taking an AVID Elective in High School and Student Outcomes

Key Findings:

Students who took AVID in high school tended to be at higher risk of academic failure in college that students who did not have AVID in high school, and these students were more likely to be enrolled in AHE during their freshman year in college.

There is some descriptive evidence to suggest that students who took AVID in high school had higher college freshman course passing rates and freshman fall-to-spring persistence than their non-AVID counterparts, but little evidence to suggest that taking AVID in high school may be related to longer-term freshman-to-sophomore persistence.

- A higher proportion of students who took an AVID elective course in high school were first generation college students (55% vs. 33%), were more often economically disadvantaged and recipients of a federal Pell grant (47% vs. 28%) than students who did not participate in AVID during high school.

- A higher proportion of students who took an AVID elective course in high school had lower high school GPA (3.30 vs. 3.43) and lower SAT reading and math composite scores (936 vs. 1048), and worked during the fall semester of their freshman year of college (50% vs. 40%) than students who did not participate in AVID during high school. These findings are not surprising because the high school AVID elective targets these students because they are more academically at risk.

- Students who took AVID in high school were more likely to be enrolled in an AVID-infused freshman college course than the students who did not take AVID in high school (65% vs. 49%).

- Little differences in freshman fall-to-spring and freshman-to-sophomore year persistence rates were observed between students who took AVID in high school and those who didn’t; however high school AVID students passed a higher percentage of their freshman courses than non-AVID students.

After controlling for differences in student characteristics, only one significant finding emerged – students who took AVID in high schools persisted from fall-to-spring of their freshman year in college at higher rates that students who did not have AVID in high school. These findings are in line with a recent National Student Clearinghouse study (AVID, 2015).\(^{42}\)

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\(^{42}\) A study using National Student Clearinghouse data found that high school graduates who participated in the AVID program persisted through their freshman and sophomore years of college at a higher rate than their peers who were not in the program. While 87 percent of AVID students enrolled in a second year of college, 77 percent of students did overall (Adams, 2014).
In this section, we address the following primary research question:

Research Question 5: What is the relationship between a student participating in the AVID program in high school and academic outcomes in college?
   a) Are there demographic differences in the students who indicated that they participated in AVID in high school and those who did not?
   b) Did students who indicated that they participated in AVID in high school have different postsecondary outcomes (e.g., persistence and course passing rates) than students who did not participate in AVID in high school?
   c) After adjusting for demographic differences between groups, are there differences in postsecondary outcomes between students who did and did not participate in AVID during high school and AHE in college?

This exploratory analysis include three student postsecondary outcomes: fall-to-spring persistence, freshman to sophomore persistence, and the percentage of courses passed in the first school year with a grade of C or better.

Sample Description

This analysis was conducted for Cohort 3 students (who began college in fall 2016) for whom we were able to match their fall 2016 survey data with their administrative records at four-year institutions (Texas Wesleyan University, CSU-San Marcos, and UNC Asheville).

The matching algorithm required exact matches for course section and birth date, and additionally considered the student’s race and gender. Across the three schools used for this analysis, surveys for a total of 899 students (91.8%) were matched to administrative records. It is important to note that AVID participation in high school is based on self-reported data from a fall 2016 survey administered to college freshmen enrolled at three universities participating in the AHE program. The depth of student involvement in the high school AVID program is not known to the evaluation team. Therefore, a student may have taken an AVID elective course in one or more years between Grades 9 and 12, or may have been fully immersed in the program through school-wide AVID implementation or by taking AVID courses in each year of their high school career.

Table 7.1 provides the number of AVID participants and non-participants in the sample. The sample includes 979 students from three institutions – 233 of which took AVID in high school (23.8%) and 746 students (76.2%) who did not take AVID in high school.

The sample includes 148 students who took AVID in high school and participated in AHE in college (15.1%), 85 students who took AVID in high school but did not participate in AHE in college (8.7%), 368 students

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43 Included four-year institutions are Texas Wesleyan University, CSU-San Marcos, and UNC-Asheville. Other four-year institutions were excluded because they lacked a comparison group for the fall 2016 AVID cohort.
who did not take AVID in high school but did participate in AHE in college (37.6%), and 378 students who did not take AVID in high school and did not participate in AHE in college either (38.6%).

Table 7.1 – Number of AVID and Non-AVID Students Whose Surveys Matched to Administrative Records at 4-year Institutions, Cohort 3, 2016-17 School Year

<table>
<thead>
<tr>
<th></th>
<th>Took AVID in High School</th>
<th>Did not take AVID in High School</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Took AVID in College</td>
<td>148 (15.1%)</td>
<td>368 (37.6%)</td>
<td>516</td>
</tr>
<tr>
<td>Did not take AVID in college</td>
<td>85 (8.7%)</td>
<td>378 (38.6%)</td>
<td>463</td>
</tr>
<tr>
<td>Total Sample</td>
<td>233</td>
<td>746</td>
<td>979</td>
</tr>
</tbody>
</table>

Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course and Administrative Data Collected from Participating Institutions

Research Question 5a: Are there demographic differences in the students who indicated that they participated in AVID in high school and those who did not?

Table 7.2 provides the demographic backgrounds of students who participated in AVID compared to the students who did not participate in AVID during high school. The students who took AVID in high school were more likely to identify as Hispanic than the students who did not take AVID in high school.

Students in the analytic sample who participated in AVID during high school were more at risk in a variety of academic and economic measures. A higher proportion of students who took an AVID elective course in high school were first generation college students, received a Pell Grant, and worked during the fall semester of their freshman year of college than students who did not participate in AVID during high school. Additionally, students in the analytic sample who participated in AVID during high school had lower high school GPA and lower SAT scores than students who were not in AVID. When they entered college, students who took AVID in high school were more likely to be in an AVID-infused freshman college course than the students who did not take AVID in high school. (Table 5.2)

It is important to note that these results are not surprising since the AVID high school program targets educationally disadvantaged students.
Table 7.2. – Student Characteristics By Participation In AVID In High School, Cohort 3, 2016-17 School Year

<table>
<thead>
<tr>
<th></th>
<th>Took AVID in High School</th>
<th>Did not take AVID in High School</th>
<th>Difference</th>
<th>T-Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18.16</td>
<td>18.13</td>
<td>0.03</td>
<td>-0.70</td>
<td>0.48</td>
</tr>
<tr>
<td>Female</td>
<td>64.7%</td>
<td>63.9%</td>
<td>0.8%</td>
<td>-0.20</td>
<td>0.84</td>
</tr>
<tr>
<td>Black</td>
<td>3.3%</td>
<td>6.1%</td>
<td>-2.9%</td>
<td>1.63</td>
<td>0.10</td>
</tr>
<tr>
<td>Hispanic</td>
<td>62.3%</td>
<td>24.3%</td>
<td>38.1%</td>
<td>-10.98</td>
<td>0.00</td>
</tr>
<tr>
<td>White</td>
<td>15.8%</td>
<td>46.1%</td>
<td>-30.2%</td>
<td>8.22</td>
<td>0.00</td>
</tr>
<tr>
<td>Other Race</td>
<td>18.6%</td>
<td>23.5%</td>
<td>-4.9%</td>
<td>1.51</td>
<td>0.13</td>
</tr>
<tr>
<td>First Generation Student</td>
<td>55.3%</td>
<td>33.0%</td>
<td>22.3%</td>
<td>-5.98</td>
<td>0.00</td>
</tr>
<tr>
<td>Received Pell</td>
<td>46.5%</td>
<td>28.2%</td>
<td>18.3%</td>
<td>-5.06</td>
<td>0.00</td>
</tr>
<tr>
<td>Working in First College Semester</td>
<td>49.8%</td>
<td>39.6%</td>
<td>10.1%</td>
<td>-2.64</td>
<td>0.01</td>
</tr>
<tr>
<td>High School GPA</td>
<td>3.30</td>
<td>3.43</td>
<td>-0.13</td>
<td>4.20</td>
<td>0.00</td>
</tr>
<tr>
<td>SAT score</td>
<td>936</td>
<td>1048</td>
<td>-112</td>
<td>10.08</td>
<td>0.00</td>
</tr>
<tr>
<td>Took AVID in College</td>
<td>65.1%</td>
<td>49.1%</td>
<td>16.0%</td>
<td>-4.13</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course and Administrative Data Collected from Participating Institutions

Research Question 5b: Did students who indicated that they participated in AVID in high school have different postsecondary outcomes (e.g., persistence and course passing rates) than students who did not participate in AVID in high school?

It may be expected that students who participated in the AVID program during high school would benefit from the AHE program in college and therefore have better outcomes in college. This could include being more likely to persist in college or performing better in their courses. Alternatively, given that the AHE program provides services to students who are at risk of not persisting in college, it may be expected that selection into the AHE program would lead to students who participated in an AVID program during high school having worse outcomes in college. This analysis includes three postsecondary outcomes:

1) Freshman fall-to-spring persistence
2) Freshman-to-sophomore year persistence
3) Freshman course passing rate

Below are the operational definitions and comparisons of the unadjusted means of students who did or did not participate in AVID in high school.

**Persistence Rates**

Figure 7.1 and 7.2 illustrate that only minor differences in freshman fall-to-spring and freshman-to-sophomore year persistence rates, which did not reach statistical significance, were observed between students who took AVID in high school and those who did not. Combining the presence of AVID
participation in high school with AHE participation in college also did not produce significant differences between the groups of students.\textsuperscript{44}

**Figure 7.1. – Freshman Fall-to-Spring Persistence based on High School and College AVID Participation**

![Bar chart showing Freshman Fall-to-Spring Persistence based on AVID and AHE participation in high school and college.](chart)

*Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course and Administrative Data Collected from Participating Institutions.*

*Note: None of the differences between students groups were statistically significant.*

\textsuperscript{44} See Appendix F for more detailed statistical tables.
Figure 7.2. – Freshman-to-Sophomore Year Persistence Rates based on High School and College AVID Participation

![Persistence Rates Chart]

Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course and Administrative Data Collected from Participating Institutions.

Note: None of the differences between students groups were statistically significant.

Course Passing Rates

The outcome for the course passing rate measure is the percentage of credit-bearing courses of three credits or more in which a student earned a C or better (or, for some courses without letter grades, earned a satisfactory or passing score).

Figure 7.3 shows that, despite having lower incoming SAT/ACT scores, students in this analysis who took AVID in High School and College had significantly higher freshman year course passing rates in college than students who did not have AVID in high school but did participate in the AHE program in college. Overall students who took AVID in high school passed 86.2% of their freshman college classes compared to 82.9% for student who did not take AVID in high school. Both of these differences are statistically significant.45

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45 See Appendix F for more detailed statistical tables.
Research Question 5c: After adjusting for demographic differences between groups, are there differences in postsecondary outcomes between students who did and did not participate in AVID during high school and AHE in college?

To describe the relationship between student outcomes and their participation in AVID, regression analyses compared outcomes for the same four groups of students identified above:

1) Students who did not participate in the AVID program during high school or enroll in an AVID-infused course during their freshman year of college.
2) Students who did not participate in the AVID program during high school, but enrolled in AVID-infused course during their freshman year of college.
3) Students who participated in the AVID program during high school, but did not enroll in AVID-infused course during their freshman year of college.
4) Students who participated in the AVID program during high school and enrolled in AVID-infused course during their freshman year of college.

Given that there are demographic differences between the students who participated in AVID and those who did not, there may be concern that the lack of a relationship between college outcomes and AVID participation in high school is due to differences in the student background. To address this concern, the regression models, described in Appendix C, adjust for differences in the demographic backgrounds of
students who participated in AVID and those who did not. In order to understand the relationship between AVID participation in high school and postsecondary outcomes, the regressions included indicators for AVID participation in high school and college as well as the interaction term to estimate the difference in outcomes between treatment and comparison students.46

After adjusting for demographics and students’ prior academic performance, students who reported that they participated in AVID during high school experienced higher freshman fall-to-spring persistence rates than their nonparticipating peers. However, there were no significant differences in freshman-to-sophomore year persistence rates or freshman year college course passing rates between students who participated in an AVID high school program and those who did not. Similarly, differences in college persistence and freshman course passing rates between students who participated in AVID in high school and AHE in college and those students who did not were not statistically significant.47

This analysis does not provide strong evidence for a relationship between AVID participation in high school and postsecondary outcomes. Although the regression models include controls for high school GPA and SAT scores, the controls may not adequately explain the differences between students who participated in AVID and those who did not.48

46 The results from these regressions are exploratory and should not be interpreted as causal effects. Instead, these relationships should be considered descriptive evidence of the difference in outcomes between students who did and did not participate in AVID during high school and college.

47 Regression tables are presented in Appendix F.

48 A randomized trial that included both high school and college conditions would eliminate this bias.
8 – References.


Appendix A – Student Survey Instruments, Student Survey and PD Participant Survey Response Rates, and Respondent Profiles

This appendix includes the three student survey instruments for the fall 2014, 2015 and 2016 survey administrations. It also provides student and PD participant survey response rates for each of the nine colleges and universities participating in the AVID College Completion Project, as well as respondent profiles for the surveys.

Student Survey Instruments

Fall 2014 Student Survey

This survey is designed to learn about your experiences in this course and how the material covered may be impacting your first year in college. Please carefully consider your responses, as the results will be used to make important decisions about future course content and instructional approaches for this course at your school. Your responses are confidential and will not be connected to you in any way. Your participation in this survey is voluntary.

Course Andragogy and Skill-based content

1. Please rate the extent to which you agree or disagree with the following statements about your Freshman Seminar course (Strongly Disagree, Disagree, Agree, Strongly Agree):
   a. We do hands-on activities in this course every week.
   b. We do small group activities in this course every week.
   c. I am encouraged to visit the college’s tutoring center(s) in this course.
   d. This course includes activities which connect me to campus events and activities.
   e. Effective time management strategies are taught in this course.
   f. Note-taking strategies (e.g., Cornell notes) are emphasized in this course.
   g. I am familiar with AVID strategies (e.g., Think-Pair-Share, Costa’s Levels of Questioning, Quick Writes, Re-reading the text, Marking the text, etc.) because of this course.
   h. Test-taking strategies are taught in this course.
   i. Effective reading strategies are emphasized in this course.
   j. This course emphasizes critical thinking and inquiry.
   k. I receive useful advice from my instructor about college planning in this course.

Impact of Course on Students’ Skills and Confidence

a. This course will help me be successful in college.
   b. I have made friends with other students in this course.
   c. This course has helped me to better plan for college so I can graduate on time.
   d. This course has helped to make me a better problem solver.
   e. This course has helped to make me think more critically about issues.
f. This course has made me a more confident college student.
g. This course has made me less anxious about taking college exams.
h. This course has helped to improve my note-taking skills.
i. The note-taking strategies I learned in this course has positively impacted the way I take notes in other classes.

Impact of Course on Students' Connection to University Resources

a. This course has increased my awareness of how to access college resources available to me.
b. Because of this course, I am more likely to utilize college resources.
c. Because of this course, I am more likely to seek assistance from a college advisor or counselor.
d. This course motivated me to seek assistance at one of the college’s tutoring centers.
e. This course has made me more comfortable visiting professors during scheduled office hours.
f. I feel comfortable calling on my instructor in the future for assistance or advice.
g. I increased my level of involvement in campus events due to this course.
h. Because of this course, I am more likely to participate in group study sessions.
i. Because of this course, I am more likely to organize study groups with other students.

Background Information

3. Are you:
   a. Male
   b. Female

4. Are you Hispanic?
   a. Yes
   b. No

5. What is your ethnicity? (select all that apply)
   a. White
   b. African American
   c. Asian/Pacific Islander
   d. Native American
   e. Other
6. What is the highest level of education that either of your parents completed? (select only one option)
   a. Did not graduate from high school
   b. Graduated from high school or received GED
   c. Attended college, but did not graduate
   d. Graduated from a two-year college
   e. Graduated from a four-year college
   f. Obtained a graduate or professional degree (e.g., master’s degree, law degree, medical degree, doctorate degree, etc.)
   g. Don’t know/Not sure

7. Did you take an AVID elective class in high school?
   a. Yes
   b. No
   c. Don’t know/Not sure

8. Are you currently attending college:
   a. As a full time student (at least 12 credit hours)
   b. As a part-time student (less than 12 credit hours)

9. How many hours per week do you work at a paid job or at an internship position?
   a. None
   b. 10 or fewer
   c. Between 10 and 20
   d. Between 20 and 30
   e. Between 30 and 40
   f. More than 40

10. On average, how many hours per week do you volunteer your time?
    a. None
    b. 1 to 2 hours
    c. 3 to 5 hours
    d. 5 to 7 hours
    e. 8 to 10 hours
    f. More than 10 hours
Fall 2015 Student Survey

This survey is designed to learn about your experiences in this course and how the material covered may be impacting your first year in college. Please carefully consider your responses, as the results will be used to make important decisions about future course content and instructional approaches for this course at your school. Your responses are confidential and will not be connected to you in any way. **Your participation in this survey is voluntary.**

**Andragogy and Skill-based Course Content**

1. Please rate the extent to which you agree or disagree with the following statements about your Freshman Seminar course (Strongly Disagree, Disagree, Agree, Strongly Agree):
   
   a. We do hands-on activities in this course every week.
   b. We do small group activities in this course every week.
   c. I am encouraged to visit the college’s tutoring center(s) in this course.
   d. This course includes activities which connect me to campus events and activities.
   e. Effective time management strategies are taught in this course.
   f. Note-taking strategies (e.g., Cornell notes) are emphasized in this course.
   g. I am familiar with AVID strategies (e.g., Think-Pair-Share, Costa’s Levels of Questioning, Quick Writes, Re-reading the text, Marking the text, etc.) because of this course.
   h. Test-taking strategies are taught in this course.
   i. Effective reading strategies are emphasized in this course.
   j. This course emphasizes critical thinking and inquiry.
   k. I receive useful advice from my instructor about college planning in this course.

**Impact of Course on Students’ Skills and Confidence**

2. Please rate the extent to which you agree or disagree with the following statements about your Freshman Seminar course (Strongly Disagree, Disagree, Agree, Strongly Agree):
   
   a. This course will help me be successful in college.
   b. I have made friends with other students in this course.
   c. This course has helped me to better plan for college so I can graduate on time.
   d. This course has helped to make me a better problem solver.
   e. This course has helped to make me think more critically about issues.
   f. This course has made me a more confident college student.
   g. This course has made me less anxious about taking college exams.
   h. This course has helped to improve my note-taking skills.
   i. The note-taking strategies I learned in this course has positively impacted the way I take notes in other classes.
Impact of Course on Students’ Connection to University Resources

3. Please rate the extent to which you agree or disagree with the following statements about your Freshman Seminar course (Strongly Disagree, Disagree, Agree, Strongly Agree):
   a. This course has increased my awareness of how to access college resources available to me.
   b. Because of this course, I am more likely to utilize college resources.
   c. Because of this course, I am more likely to seek assistance from a college advisor or counselor.
   d. This course motivated me to seek assistance at one of the college’s tutoring centers.
   e. Because of this course, I am more comfortable visiting professors during scheduled office hours.
   f. I feel comfortable calling on my instructor in the future for assistance or advice.
   g. I increased my level of involvement in campus events due to this course.
   h. Because of this course, I am more likely to participate in group study sessions.
   i. Because of this course, I am more likely to organize study groups with other students.

Background Information

4. Are you:
   a. Male
   b. Female

5. Are you Hispanic?
   a. Yes
   b. No

6. What is your ethnicity? (select all that apply)
   a. White
   b. African American
   c. Asian/Pacific Islander
   d. Native American
   e. Other

7. What is the highest level of education that either of your parents completed? (select only one option)
   a. Did not graduate from high school
   b. Graduated from high school or received GED
   c. Attended college, but did not graduate
   d. Graduated from a two-year college
   e. Graduated from a four-year college
f. Obtained a graduate or professional degree (e.g., master’s degree, law degree, medical degree, doctorate degree, etc.)
g. Don’t know/Not sure

8. Did you take an AVID elective class in high school?
   a. Yes
   b. No
   c. Don’t know/Not sure

9. Which of the following best describes the high school grades you tended to earn?
   a. Mostly As
   b. As and Bs
   c. Mostly Bs
   d. Bs and Cs
   e. Mostly Cs
   f. Cs and Ds

10. Which of the following best describes what college course grades you will make this semester?
    a. Mostly As
    b. As and Bs
    c. Mostly Bs
    d. Bs and Cs
    e. Mostly Cs
    f. Cs and Ds

11. Are you currently attending college:
    a. As a full time student (at least 12 credit hours)
    b. As a part-time student (less than 12 credit hours)

12. Did you receive a Pell Grant for the 2015-16 academic year?
    a. Yes
    b. No
    c. Don’t know/ Not sure

13. How many hours per week do you work at a paid job or at an internship position?
    a. None
    b. 10 or fewer
    c. Between 10 and 20
    d. Between 20 and 30
    e. Between 30 and 40
    f. More than 40
14. On average, how many hours per week do you volunteer your time?
   a. None
   b. 1 to 2 hours
   c. 3 to 5 hours
   d. 5 to 7 hours
   e. 8 to 10 hours
   f. More than 10 hours
Fall 2016 Student Survey

This survey is designed to learn about your experiences in this course and how the material covered may be impacting your first year in college. Please carefully consider your responses, as the results will be used to make important decisions about future course content and instructional approaches for this course at your school. Your responses are confidential and will not be connected to you in any way. Your participation in this survey is voluntary.

Andragogy and Skill-based Course Content

1. Please rate the extent to which you agree or disagree with the following statements about your Freshman Seminar course (Strongly Disagree, Disagree, Agree, Strongly Agree):
   a. We do hands-on activities in this course every week.
   b. We do small group activities in this course every week.
   c. I am encouraged to visit the college’s tutoring center(s) in this course.
   d. This course includes activities which connect me to campus events and activities.
   e. Effective time management strategies are taught in this course.
   f. Note-taking strategies (e.g., Cornell notes) are emphasized in this course.
   g. I am familiar with AVID strategies (e.g., Think-Pair-Share, Costa’s Levels of Questioning, QuickWrites, Re-reading the text, Marking the text, etc.) because of this course.
   h. Test-taking strategies are taught in this course.
   i. Effective reading strategies are emphasized in this course.
   j. This course emphasizes critical thinking and inquiry.
   k. I receive useful advice from my instructor about college planning in this course.

Impact of Course on Students’ Skills and Confidence

2. Please rate the extent to which you agree or disagree with the following statements about your Freshman Seminar course (Strongly Disagree, Disagree, Agree, Strongly Agree):
   a. This course will help me be successful in college.
   b. I have made friends with other students in this course.
   c. This course has helped me to better plan for college so I can graduate on time.
   d. This course has helped to make me a better problem solver.
   e. This course has helped to make me think more critically about issues.
   f. This course has made me a more confident college student.
   g. This course has made me less anxious about taking college exams.
   h. This course has helped to improve my note-taking skills.
   i. The note-taking strategies I learned in this course has positively impacted the way I take notes in other classes.
Impact of Course on Students’ Connection to University Resources

3. Please rate the extent to which you agree or disagree with the following statements about your Freshman Seminar course (Strongly Disagree, Disagree, Agree, Strongly Agree):

   a. This course has increased my awareness of how to access college resources available to me.
   b. Because of this course, I am more likely to utilize college resources.
   c. Because of this course, I am more likely to seek assistance from a college advisor or counselor.
   d. This course motivated me to seek assistance at one of the college’s tutoring centers.
   e. Because of this course, I am more comfortable visiting professors during scheduled office hours.
   f. I feel comfortable calling on my instructor in the future for assistance or advice.
   g. I increased my level of involvement in campus events due to this course.
   h. Because of this course, I am more likely to participate in group study sessions.
   i. Because of this course, I am more likely to organize study groups with other students.

Background Information

4. What is your date of birth?
   a. Month
   b. Day
   c. Year

5. Are you:
   a. Male
   b. Female

6. Are you Hispanic?
   a. Yes
   b. No

7. What is your ethnicity? (select all that apply)
   a. White
   b. African American
   c. Asian/Pacific Islander
   d. Native American
   e. Other
8. What is the highest level of education that either of your parents completed? (select only one option)
   a. Did not graduate from high school
   b. Graduated from high school or received GED
   c. Attended college, but did not graduate
   d. Graduated from a two-year college
   e. Graduated from a four-year college
   f. Obtained a graduate or professional degree (e.g., master’s degree, law degree, medical degree, doctorate degree, etc.)
   g. Don’t know/Not sure

9. Did you take an AVID elective class in high school?
   a. Yes
   b. No
   c. Don’t know/Not sure

10. Which of the following best describes the high school grades you tended to earn?
    a. Mostly As
    b. As and Bs
    c. Mostly Bs
    d. Bs and Cs
    e. Mostly Cs
    f. Cs and Ds

11. Which of the following best describes what college course grades you will make this semester?
    a. Mostly As
    b. As and Bs
    c. Mostly Bs
    d. Bs and Cs
    e. Mostly Cs
    f. Cs and Ds

12. Are you currently attending college:
    a. As a full time student (at least 12 credit hours)
    b. As a part-time student (less than 12 credit hours)

13. Did you receive a Pell Grant for the 2015-16 academic year?
    a. Yes
    b. No
    c. Don’t know/Not sure
14. How many hours per week do you work at a paid job or at an internship position?
   a. None
   b. 10 or fewer
   c. Between 10 and 20
   d. Between 20 and 30
   e. Between 30 and 40
   f. More than 40

15. On average, how many hours per week do you volunteer your time?
   a. None
   b. 1 to 2 hours
   c. 3 to 5 hours
   d. 5 to 7 hours
   e. 8 to 10 hours
   f. More than 10 hours

Note: Copies of the online AVID professional development participant survey administered in spring 2015, spring 2016, and spring 2017 are available upon request.
Student Survey Response Rates by Institution

Fall 2014 student survey response rates for AVID course sections ranged from a high of 88% to a low of 55%. Response rates for non-AVID sections were somewhat lower, ranging from a high of 87% to a low of 31%. (Table A.1).

Table A.1. – Fall 2014 Student Survey Response Rates

<table>
<thead>
<tr>
<th>Institution</th>
<th>Responding Sample</th>
<th>Target Sample</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVID</td>
<td>Non-AVID</td>
<td>AVID</td>
</tr>
<tr>
<td>Atlanta Technical College</td>
<td>78</td>
<td>74</td>
<td>122</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>40</td>
<td>60</td>
<td>63</td>
</tr>
<tr>
<td>CSU-San Marcos</td>
<td>182</td>
<td>228</td>
<td>215</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>97</td>
<td>50</td>
<td>203</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>77</td>
<td>144</td>
<td>97</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>78</td>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>46</td>
<td>66</td>
<td>83</td>
</tr>
<tr>
<td>UNC Asheville</td>
<td>136</td>
<td>253</td>
<td>155</td>
</tr>
<tr>
<td>WSU Tri-Cities</td>
<td>110</td>
<td>33</td>
<td>144</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td><strong>1,022</strong></td>
<td><strong>1,232</strong></td>
<td><strong>1,419</strong></td>
</tr>
</tbody>
</table>


Fall 2015 student survey response rates for AVID course sections ranged from a high of 100% to a low of 35%. Response rates for non-AVID sections were somewhat lower, ranging from a high of 75% to a low of 17%. (Table A.2).

Table A.2. – Fall 2015 Student Survey Response Rates

<table>
<thead>
<tr>
<th>Institution</th>
<th>Responding Sample</th>
<th>Target Sample</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVID</td>
<td>Non-AVID</td>
<td>AVID</td>
</tr>
<tr>
<td>Atlanta Technical College</td>
<td>68</td>
<td>87</td>
<td>132</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>41</td>
<td>70</td>
<td>65</td>
</tr>
<tr>
<td>CSU-San Marcos</td>
<td>237</td>
<td>214</td>
<td>291</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>59</td>
<td>33</td>
<td>167</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>85</td>
<td>84</td>
<td>119</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>98</td>
<td>71</td>
<td>131</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>38</td>
<td>88</td>
<td>77</td>
</tr>
<tr>
<td>UNC Asheville</td>
<td>70</td>
<td>82</td>
<td>87</td>
</tr>
<tr>
<td>WSU, Tri-Cities</td>
<td>110</td>
<td>32</td>
<td>110</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td><strong>806</strong></td>
<td><strong>761</strong></td>
<td><strong>1,174</strong></td>
</tr>
</tbody>
</table>


Fall 2016 response rates for AVID course sections ranged from a high of 89% to a low of 33%. Response rates for non-AVID sections ranged from a high of 91% to a low of 50%. Those cells marked N/A are for institutions which did not have an appropriate comparison group, non-AVID course section to survey.
Unlike the fall 2014 and fall 2015 survey administrations, response rates were higher for non-AVID sections than for AVID sections. This may be a function of nonparticipation in surveys by Fort Valley State University in Fall 2016 combined with the unavailability of control group sections at Atlanta Technical College, Tougaloo College, and WSU Tri-Cities. (Table A.3).

### Table A.3. – Fall 2016 Student Survey Response Rates

<table>
<thead>
<tr>
<th>Institution</th>
<th>Responding Sample</th>
<th>Target Sample</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVID</td>
<td>Non-AVID</td>
<td>AVID</td>
</tr>
<tr>
<td>Atlanta Technical College</td>
<td>128</td>
<td>N/A</td>
<td>385</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>83</td>
<td>63</td>
<td>103</td>
</tr>
<tr>
<td>CSU-San Marcos</td>
<td>383</td>
<td>205</td>
<td>566</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>55</td>
<td>104</td>
<td>62</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>106</td>
<td>138</td>
<td>127</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>146</td>
<td>N/A</td>
<td>197</td>
</tr>
<tr>
<td>UNC Asheville</td>
<td>67</td>
<td>149</td>
<td>172</td>
</tr>
<tr>
<td>WSU Tri-Cities</td>
<td>107</td>
<td>N/A</td>
<td>122</td>
</tr>
<tr>
<td><strong>Total Sample</strong></td>
<td><strong>1,075</strong></td>
<td><strong>659</strong></td>
<td><strong>1,734</strong></td>
</tr>
</tbody>
</table>

*Source: Fall 2016 AHE Student Survey, Gibson Consulting Group, 2017.*

*Note: No student surveys were administered at Fort Valley State University in Fall 2016.*

### Student Survey: Characteristics of Students in AVID and Non-AVID Freshman Course Sections

First, we provide a summary of the characteristics of the 844 AVID students and 968 non-AVID students surveyed in fall 2014, 49 the 806 AVID students and 761 non-AVID students surveyed in fall 2015, and the 1,075 AVID students and 659 non-AVID students surveyed in fall 2016. In fall 2014, 2015, and 2016, a smaller proportion of students in AVID course sections were white than in non-AVID sections of targeted courses. In the fall 2016, a somewhat smaller proportion of students in AVID course sections were male than in non-AVID course sections. In the previous falls, differences in the mix of students in AVID and non-AVID course sections by gender were negligible (Table A.4).

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49 This report includes the surveys from the nine institutions that participated in the AHE program for the 2014-15 school year, the 2015-16 school year, and the 2016-17 school year. San Bernardino was included in previous reports but is excluded from this report because they ended participation after the 2014-15 school year.

50 Overall response rates, as well as institution-level response rates for the fall 2014 and 2015 student surveys are presented in Tables 1.3 and 1.4 in Chapter 1 of this report.
Table A.4 – Student Characteristics by AVID Course Enrollment Status, Cohorts 1 - 3

<table>
<thead>
<tr>
<th></th>
<th>AVID Fall 2014</th>
<th>Non-AVID Fall 2014</th>
<th>AVID Fall 2015</th>
<th>Non-AVID Fall 2015</th>
<th>AVID Fall 2016</th>
<th>Non-AVID Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>30%</td>
<td>44%</td>
<td>30%</td>
<td>33%</td>
<td>28%</td>
<td>46%</td>
</tr>
<tr>
<td>African-American</td>
<td>24%</td>
<td>19%</td>
<td>20%</td>
<td>25%</td>
<td>24%</td>
<td>6%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>31%</td>
<td>19%</td>
<td>31%</td>
<td>22%</td>
<td>30%</td>
<td>32%</td>
</tr>
<tr>
<td>Other</td>
<td>15%</td>
<td>19%</td>
<td>18%</td>
<td>20%</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>40%</td>
<td>43%</td>
<td>39%</td>
<td>39%</td>
<td>35%</td>
<td>42%</td>
</tr>
<tr>
<td>Female</td>
<td>60%</td>
<td>57%</td>
<td>61%</td>
<td>61%</td>
<td>65%</td>
<td>58%</td>
</tr>
<tr>
<td><strong>Parent Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No College Experience</td>
<td>42%</td>
<td>34%</td>
<td>47%</td>
<td>39%</td>
<td>43%</td>
<td>35%</td>
</tr>
<tr>
<td>Attended Some College/</td>
<td>15%</td>
<td>14%</td>
<td>11%</td>
<td>13%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>No Degree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earned College Degree</td>
<td>39%</td>
<td>48%</td>
<td>38%</td>
<td>45%</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Pell Grant Recipient</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
<td>41%</td>
<td>40%</td>
<td>40%</td>
<td>27%</td>
</tr>
<tr>
<td>No</td>
<td>NA</td>
<td>NA</td>
<td>36%</td>
<td>38%</td>
<td>38%</td>
<td>49%</td>
</tr>
<tr>
<td>Don’t Know/Not Sure</td>
<td>NA</td>
<td>NA</td>
<td>24%</td>
<td>23%</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Work Hours</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>52%</td>
<td>58%</td>
<td>51%</td>
<td>52%</td>
<td>46%</td>
<td>57%</td>
</tr>
<tr>
<td>Less Than 20 Hours</td>
<td>23%</td>
<td>21%</td>
<td>25%</td>
<td>22%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>20 or More Hours</td>
<td>25%</td>
<td>22%</td>
<td>24%</td>
<td>26%</td>
<td>28%</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Enrollment in AVID High School Elective Class</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>17%</td>
<td>12%</td>
<td>19%</td>
<td>14%</td>
<td>21%</td>
<td>18%</td>
</tr>
<tr>
<td>No/Not Sure</td>
<td>83%</td>
<td>88%</td>
<td>81%</td>
<td>86%</td>
<td>79%</td>
<td>82%</td>
</tr>
</tbody>
</table>


For each cohort, a higher percentage of AVID students indicated that neither of their parents had attended college (42% in 2014, 47% in 2015, and 43% in 2016) than their non-AVID counterparts (34% in 2014, 39% in 2015, and 35% in 2016). It is important to note that a higher percentage of students in Cohort 2, entering college in fall 2015, were first generation college students. As Table 2.3 shows, the 2015 cohort did not have large differences in the share of students in AVID sections who received Pell Grants compared to those in non-AVID sections. However, in the fall 2016 cohort a larger percentage of students in the AVID sections received a Pell Grant than for the non-AVID sections. This may have important implications for the student outcome analyses. This is particularly relevant for colleges who did not provide student-level Pell Grant recipient data that could be used to control for differences between AVID cohort and matched comparison group students.

Because the amount of time a student works at a job may impact their academic outcomes, we asked students about the number of hours they work per week on average. In the fall 2014 and fall 2016 cohorts,
AVID students were more likely to indicate they had a job during their first semester of college than non-AVID students. In the fall 2016, 28% of AVID students indicated they worked for 20 or more hours a week compared to 19% of non-AVID students. Lastly, we wanted to know whether students enrolled in AVID and non-AVID sections had taken an AVID elective class while in high school. As Table A.5 shows, students enrolled in AVID sections of targeted freshman college courses were somewhat more likely to have had some exposure to the AVID program in high school (17% in 2014, 19% in 2015, and 21% in 2016) than non-AVID college students (12% in 2014, 14% in 2015, and 18% in 2016).

Table A.5. – Student Characteristics, Parent Education, Pell Grant Recipient Status, Work Hours, and Prior High School AVID Experience, by AVID Course Enrollment Status

<table>
<thead>
<tr>
<th></th>
<th>AVID Fall 2014</th>
<th>Non-AVID Fall 2014</th>
<th>AVID Fall 2015</th>
<th>Non-AVID Fall 2015</th>
<th>AVID Fall 2016</th>
<th>Non-AVID Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parent Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No College Experience</td>
<td>42%</td>
<td>34%</td>
<td>47%</td>
<td>39%</td>
<td>43%</td>
<td>35%</td>
</tr>
<tr>
<td>Attended Some College/No Degree</td>
<td>15%</td>
<td>14%</td>
<td>11%</td>
<td>13%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>Earned College Degree</td>
<td>39%</td>
<td>48%</td>
<td>38%</td>
<td>45%</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Pell Grant Recipient</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
<td>41%</td>
<td>40%</td>
<td>40%</td>
<td>27%</td>
</tr>
<tr>
<td>No</td>
<td>NA</td>
<td>NA</td>
<td>36%</td>
<td>38%</td>
<td>38%</td>
<td>49%</td>
</tr>
<tr>
<td>Don’t Know/Not Sure</td>
<td>NA</td>
<td>NA</td>
<td>24%</td>
<td>23%</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Work Hours</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>52%</td>
<td>58%</td>
<td>51%</td>
<td>52%</td>
<td>46%</td>
<td>57%</td>
</tr>
<tr>
<td>Less Than 20 Hours</td>
<td>23%</td>
<td>21%</td>
<td>25%</td>
<td>22%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>20 or More Hours</td>
<td>25%</td>
<td>22%</td>
<td>24%</td>
<td>26%</td>
<td>28%</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Enrollment in AVID High School Elective Class</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>17%</td>
<td>12%</td>
<td>19%</td>
<td>14%</td>
<td>21%</td>
<td>18%</td>
</tr>
<tr>
<td>No/Not Sure</td>
<td>83%</td>
<td>88%</td>
<td>81%</td>
<td>86%</td>
<td>79%</td>
<td>82%</td>
</tr>
</tbody>
</table>


Note: Students were not asked about whether or not they received a Pell Grant on the fall 2014 survey. Percentages may not total to 100% due to rounding.

PD Participant Survey Response Rates and Respondent Characteristics

Professional Development (PD) participant surveys were administered in the spring of the 2014-15, 2015-16, and 2016-17 academic years to assess the degree to which college administrators, faculty, staff, and peer tutors felt the training impacted their work with students. Survey response rates ranged from 18 to 27 percent across the three survey administrations. (Table A.6)
Table A.6. – Professional Development Participant Survey Response Rates, Spring 2015, 2016 and 2017

<table>
<thead>
<tr>
<th>Institution</th>
<th>Spring 2015 Received</th>
<th>Spring 2015 Rate</th>
<th>Spring 2016 Received</th>
<th>Spring 2016 Rate</th>
<th>Spring 2017 Received</th>
<th>Spring 2017 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>23</td>
<td>23.7%</td>
<td>32</td>
<td>28.1%</td>
<td>22</td>
<td>21.1%</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>28</td>
<td>20.4%</td>
<td>60</td>
<td>34.9%</td>
<td>41</td>
<td>24.7%</td>
</tr>
<tr>
<td>California State University – San Bernardino</td>
<td>8</td>
<td>16.0%</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>8</td>
<td>27.6%</td>
<td>18</td>
<td>30.5%</td>
<td>10</td>
<td>15.4%</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>7</td>
<td>13.7%</td>
<td>13</td>
<td>21.7%</td>
<td>6</td>
<td>13.3%</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>23</td>
<td>31.5%</td>
<td>37</td>
<td>24.5%</td>
<td>42</td>
<td>24.7%</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>1</td>
<td>2.3%</td>
<td>13</td>
<td>28.3%</td>
<td>13</td>
<td>19.7%</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>10</td>
<td>35.7%</td>
<td>21</td>
<td>18.8%</td>
<td>11</td>
<td>13.8%</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>9</td>
<td>12.5%</td>
<td>17</td>
<td>13.0%</td>
<td>17</td>
<td>11.9%</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>17</td>
<td>28.8%</td>
<td>14</td>
<td>15.1%</td>
<td>8</td>
<td>9.1%</td>
</tr>
<tr>
<td>Total Sample</td>
<td>134</td>
<td>21.0%</td>
<td>225</td>
<td>26.8%</td>
<td>170</td>
<td>18.4%</td>
</tr>
</tbody>
</table>


Note: CSU-San Bernardino dropped out of the project after the 2014-15 academic year; however their survey responses have been included in the results for Cohort 1.

The majority of the survey respondents in each years identified themselves as instructors (69.4% in 2014-15, 70.6% in 2015-16, and 67.6% in 2016-17), while smaller percentages indicated that they were student advisors or counselors (29.6% in 2014-15, 20.1% in 2015-16, 17.6% in 2016-17), a college administrator in either the student affairs (7.5% in 2014-15, 7.4% in 2015-16, 6.5% in 2016-17) or the academic affairs (15.7% in 2014-15, 10.8% in 2015-16, 9.4% in 2016-17) departments, or peer tutors (9.0% in 2014-15, 12.3% in 2015-16, 18.2% in 2016-17).

Among instructors, the most commonly noted content areas were:

- First year experience or study skills (35.9% in 2014-15, 23.9% in 2015-16, 21.7% in 2016-17);
- English and composition (18.5% in 2014-15, 16.4% in 2015-16, 17.0% in 2016-17);
- Sciences (9.8% in 2014-15, 11.9% in 2015-16, 17.9% in 2016-17); and
- Math/statistics (6.5% in 2014-15, 9.7% in 2015-16, 6.6% in 2016-17).

In the 2015-16 and 2016-17 academic years, a large proportion of professional development participants reported teaching other courses not listed (42.5% in 2015-16 and 41.5% in 2016-17), indicating that PD offerings may have been expanded to a wider range of faculty across participating colleges and universities.
Appendix B – Methodological Approach to Estimating Relationships between Student Survey Constructs

This appendix includes research methods and complete regression tables for the analysis of student survey data related to the following research question:

Research Question 3: How is the usage of active and collaborative learning strategies and skill-based content in freshman courses related to student perceptions of how their academic and non-academic skills and confidence have changed, and their willingness to utilize university resources, attend campus events, and organize/participate in student study groups?

a) What is the relationship between the use of student-centered instructional methods and skill-based content and students’ perceptions of their improved skills and competency to be successful in college?

b) What is the relationship between the use of student-centered instructional methods and skill-based content and students’ willingness to utilize university resources?

c) What is the relationship between students’ perceptions of their improved skills and competency to be successful in college and their willingness to utilize university resources?

Research Methods

The regression specification used in the analysis took on the following form:

\[ y = \beta_1 \text{Skills} + \beta_2 \text{Resources} + \beta_3 \text{Skills} \times \text{Resources} + \beta_4 \text{AVID} + \beta_d X_d + \beta_i S_i + \epsilon \quad \text{Equation 1} \]

where \( Y \) is the predicted perception of student-centered instructional methods and skill-based content; \( \text{Skills} \) represents the student’s perception of their skills and competency to complete college, \( \text{Resources} \) represents the student’s reported willingness to utilize university resources, \( \text{Skills} \times \text{Resources} \) represents the interaction of resources and skills, and \( \text{AVID} \) represents a student taking an AHE infused course; \( \beta_d X_d \) is a vector of control variables including cohort, gender, ethnicity, parent’s education, whether a student is part-time, whether a student works, and whether a student volunteers and a vector of coefficients associated with those variables; \( \beta_i S_i \) represents the college fixed effects, and \( \epsilon \) represents the error term.

Results

The following tables report the coefficients from Equation 1 to estimate the relationship between student-centered andragogy & skill-based content, student’s perceptions of how the course has impacted their skills and confidence, and students’ perceptions of how the course has impacted their willingness to access university resources. Discussion of these results is available in Chapter 7 of this report.
### Table B.1 – Relationships between student-centered andragogy & skill-based content, student’ skills and confidence, and students’ willingness to access university resources

<table>
<thead>
<tr>
<th></th>
<th>(1) Skills and Confidence</th>
<th>(2) University Resources</th>
<th>(3) Andragogy &amp; Skill-based Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andragogy &amp; skill-based content construct score</td>
<td>0.548***</td>
<td>0.233**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.002)</td>
<td></td>
</tr>
<tr>
<td>Skills and confidence construct score</td>
<td>0.473***</td>
<td>0.343***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td></td>
</tr>
<tr>
<td>University resources construct score</td>
<td>0.552***</td>
<td>0.153**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.001)</td>
<td></td>
</tr>
<tr>
<td>Skills and confidence * University resources</td>
<td>0.0287*</td>
<td></td>
<td>0.049</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andragogy &amp; skill-based content * University resources</td>
<td>-0.0101</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.545)</td>
</tr>
<tr>
<td>Andragogy &amp; skill-based content * Skills and confidence</td>
<td></td>
<td>0.0187</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.407)</td>
</tr>
<tr>
<td>AVID</td>
<td>-0.0389</td>
<td>-0.0287</td>
<td>0.122***</td>
</tr>
<tr>
<td></td>
<td>(0.220)</td>
<td>(0.444)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.699</td>
<td>0.638</td>
<td>0.628</td>
</tr>
<tr>
<td>Observations</td>
<td>4,786</td>
<td>4,786</td>
<td>4,786</td>
</tr>
</tbody>
</table>

Source: Student survey from participating institutions, 2014-2016.

Note: Regression model includes controls for cohort, gender, ethnicity, parent’s education, whether a student is part-time, whether a student had a job, whether a student volunteered. P-values in parentheses. * p<0.05; ** p<0.01; *** p<0.001.
Appendix C – Methodological Approach to Deriving AHE Participation Effect Estimate

Design Rationale

Neither students nor instructors were randomly assigned to participate in the AHE intervention. For instance, academically low-performing students may have elected to participate, or students at risk of not persisting may have been urged to participate in the program to improve their chances of remaining enrolled in college and performing well in their courses. This type of intentional assignment based on student characteristics that are linked to academic performance may distort the relationship between AHE program participation and the outcomes of interest. The evaluation team observed outcomes for students who elected to participate, and those who did not; we did not observe the outcomes for each student for each condition: their performance if they participated in AHE and if they had not participated in AVID. Because of this non-random assignment, a quasi-experimental design using a potential outcomes framework was used to compare differences in outcomes between participating and non-participating students who resembled, based on observable characteristics, participating students.

Construction of the Propensity Score and Implementation of the Regression Reweighting Scheme

To identify observably similar non-participating students, the evaluation team used a propensity score reweighting method, where a student’s likelihood of being a member of the treatment group, however defined, is conditioned on a number of pre-treatment student covariates $X^C$ (Nichols, 2007). The conditional probability $\hat{\lambda}$ of being in the treatment group derived from this model is then used to calculate a weight based on the odds $\hat{\lambda}/(1 - \hat{\lambda})$. Because evaluators had different control conditions (e.g., Cohort 2, Cohort 1, and Cohort 1 compared to Cohort 0) each control group was reweighted based on the conditional probability of being a member of the treatment group based on separate propensity score models.

After fitting the propensity score model, a multivariate regression model with double-robust estimators that incorporate covariates used in the propensity score model, as well as others hypothesized to be related to the outcome of interest, was fit (Lunceford & Davidian, 2004). Below, we provide a detailed description of the approach used to estimate the association between AHE participation and student outcomes:

1. Restrict population of students to full-time first-time freshmen at four-year institutions$^{51}$
2. Fit propensity score model estimating the conditional probability of treatment using a logistic regression for three control conditions:

$^{51}$ This rule was modified for two-year institutions given the different student population served by these institutions. Both part-time and full-time students were retained, and the population of treatment students was restricted to those enrolled in a targeted freshman course taught by an AVID-trained faculty member.
a. Cohort 1 participants compared to Cohort 0 non-participants
b. Cohort 1 participants compared to Cohort 1 non-participants
c. Cohort 2 participants compared to Cohort 2 non-participants
d. Cohort 3 participants compared to Cohort 3 non-participants

3. Vector of student covariates included in the propensity score model included:\(^52\):
   a. High school grade point average
   b. Sex
   c. Age
   d. Race
   e. SAT/ACT scores\(^53\)
   f. Indicator of whether student received Pell funds
   g. Disability status
   h. Math and English remediation needs
   i. Incoming credits
   j. First generation student status\(^54\)
   k. Whether the student was a resident of Butler County\(^55\)
   l. Whether the student played college football\(^56\)

4. Calculate the conditional odds of being in the treatment group using the formula: \(\hat{\lambda}/(1 - \hat{\lambda})\)

5. Assign a weight of 1 to all students in the treatment condition, and a weight equal to \(\hat{\lambda}/(1 - \hat{\lambda})\) for all students in the comparison group

6. Fit regressions for the response variable (e.g., fall-to-fall persistence, percentage of courses passed) on the AHE participation indicator applying the following restrictions, weights, and covariates:

Restrict analytic sample to only students in the region of common support based on the propensity score model

---

\(^{52}\) Not all variables were able to be used for each cohort/institution. Table B.1 outlines exactly which variables were used for each institution and cohort comparison.

\(^{53}\) SAT/ACT data were not available for students at two-year IHEs. At four-year IHEs, SAT/ACT and HS GPA were missing for a non-trivial number of students at each institution. Following the guidance provided by Stuart (2011), the evaluation team used single variable imputation to populate missing SAT/ACT scores, created missing value indicators for observations that were imputed, and included the imputed values and dummy variables flagging the imputed values in the propensity score model. As Stuart (2011) posits, this procedure matches on both the missing data patterns and the observed values of the variables with missing data.

\(^{54}\) This variable was included for all cohorts for Washington State University, Tri-Cities

\(^{55}\) This variable was included in the Cohort 3 models for Butler Community College to account for students who were local to the institution.

\(^{56}\) This variable was included in the Cohort 3 model for Texas Wesleyan University
i. This is defined, according to Leuven and Sianesi (2003), as cases where the propensity score of the control cases is within the range (minimum and maximum) of the propensity score of the treatment cases.

b. Include all covariates included in the functional form for estimating the propensity score in addition to covariates hypothesized to be correlated with the response variable to achieve double-robustness

c. Apply probability weights using the weight calculated for the respective treatment measures

Table C.1. – Matching and Control Variables included in 2016-17 Analysis

<table>
<thead>
<tr>
<th>Cohort</th>
<th>College</th>
<th>HS GPA</th>
<th>HS GPA Imputed Credits</th>
<th>Incoming Credits</th>
<th>English Lerner</th>
<th>Pell Eligibility</th>
<th>Pell Recipient</th>
<th>Student Age</th>
<th>Gender</th>
<th>Race/Ethnicity</th>
<th>Disability Status</th>
<th>Math Remediation</th>
<th>English Remediation</th>
<th>Any Remediation</th>
<th>SAT/ACT Scores</th>
<th>SAT/ACT Scores Imputed</th>
<th>First Generation Student</th>
<th>Butler County Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>California State University</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1</td>
<td>California State University</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>California State University</td>
<td>X</td>
<td>X</td>
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Source: Gibson Consulting Group, 2017.

Table C.2. – Matching and Control Variables Included in 2017-18 Analysis
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Source: Gibson Consulting Group, 2018.

### Average Treatment Effect on the Treated

The effect estimated produced from the technique described above is referred to as the average treatment effect on the treated (ATET), which is distinct from the average treatment effect (ATE). Briefly, the ATET estimate is derived from the comparison between participating students and non-participating students that were reweighted based on their similarity (or dissimilarity) to AVID students. That is, non-participating students were reweighted so that students with the highest likelihood of participating in the AHE program, but who did not participate, received a larger weight than non-participating students who had a low likelihood of participating. These potential outcome comparisons were restricted only to participating students: that is, non-participating students were not also reweighted to resemble participating students.

This has important interpretative implications. The scope of the inference of effect estimate is restricted to only students who were recruited, and enrolled, in the AVID-infused FYE course, and their non-treated counterparts. This is an intentionally conservative choice, since the counterfactual outcome for non-participating students (that is, their outcome if they had participated) is not incorporated into the calculation of the effect estimate. Put less abstractly, at most institutions, students were recruited to participate in the AHE program based on specific characteristics (e.g., students were eligible for Pell...
funds). The ATET estimate reflects the impact of AVID participation among students who were recruited for participation in the program and not all first-time freshmen enrolled at the respective school.

Creation of the Combined Effect Estimate

Institution-level effect estimates were combined into an overall measure of the relationship between AHE participation and the response variable using random effects meta-analysis (Borenstein, Hedges, and Rothstein, 2007). Each study was assigned the weight $W_i^* = \frac{1}{V_i^*}$, where $V_i^*$ is given by $V_i^* = V_i + T^2$. In this equation, $V_i$ represents the within-study variance and $T^2$ represents the between-study variance. With these terms, the combined weighted mean $\bar{T}$ for each outcome was computed using the formula below, which represents the sum of the effect sizes multiplied by the weights divided by the sum of the weights.

$$\bar{T} = \frac{\sum_{i=1}^{k} W_i^* T_i}{\sum_{i=1}^{k} W_i^*}$$

This method incorporates two sources of variance in the construction of the weights to compute the combined effect estimate. The random effects model was chosen since it does not assume a single, ‘true’ effect for the program but, rather, there is a distribution of potential effects and those that are included in the study are sampled from a larger population of other potential effect estimates. Put another way, this approach acknowledges that the effect estimates for the program may not be homogenous, and may vary across institutions for a variety of reasons.\(^{57}\) Because this method integrates the between-study variance in the computation for the combined effect estimates, this moderates the influence of large institutions in the combined effect estimate, since even though larger institutions effect estimates are more precise, the effect is not assumed to be the same for all institutions.\(^{58}\)

\(^{57}\) This acknowledgement is particularly relevant for this study due to the plethora of institution-specific conditions and idiosyncrasies that may contribute to effect heterogeneity. For instance, institutions varied widely in both the quality, and the amount, of data they could provide the research team for this study. In addition, and as discussed in the implementation section of this report, the program was not implemented uniformly across all institutions. Rather, institutions were granted some discretion in designing some features of the program, and the fidelity of implementation of essential program features was inconsistent.

\(^{58}\) This is true when the between-study variance is greater than zero and the total variance is larger than the expected total variance (which is the degrees of freedom). Otherwise, the random and fixed effects estimate will be identical.
Appendix D – Complete Detailed Propensity Score Weighted, Regression-Adjusted Student Outcome Results

This appendix contains detailed statistical results from the student outcomes models.

Four-Year Institutions

Cohort 1 Persistence Rates

Table D.1. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Persistence Rate and Average Treatment Effect of AVID Participation on Freshman Fall-to-Spring Persistence, by Institution, Within-Year Cohort 1 and Cohort 1 vs. Cohort 0 Analyses

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<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
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<td>91.92</td>
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<td>0.03</td>
<td>587</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>95.45</td>
<td>89.71</td>
<td>5.74</td>
<td>0.21</td>
<td>170</td>
<td>95.45</td>
<td>88.29</td>
<td>7.16*</td>
<td>0.05</td>
<td>235</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td>2.26</td>
<td>0.35</td>
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<td></td>
<td></td>
<td>1.79</td>
<td>0.37</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2013-2015.

Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College was not able to be included in the Cohort 1 outcomes analysis for 2014-15 due to insufficient or untimely submission of data.
Table D.2. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First Year to Second Year Persistence, by Institution, Within-Year Cohort 1 and Cohort 1 vs. Cohort 0 Analyses

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>80.59</td>
<td>82.45</td>
<td>-1.86</td>
<td>0.38</td>
<td>1,703</td>
<td>80.59</td>
<td>84.15</td>
<td>-3.56</td>
<td>0.07</td>
<td>2,570</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>79.44</td>
<td>77.12</td>
<td>2.32</td>
<td>0.69</td>
<td>211</td>
<td>79.44</td>
<td>58.77</td>
<td>20.67**</td>
<td>0.00</td>
<td>618</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>78.41</td>
<td>67.15</td>
<td>11.26+</td>
<td>0.08</td>
<td>299</td>
<td>78.41</td>
<td>61.18</td>
<td>17.23**</td>
<td>0.01</td>
<td>353</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>80.46</td>
<td>75.09</td>
<td>5.37</td>
<td>0.36</td>
<td>533</td>
<td>80.46</td>
<td>73.53</td>
<td>6.93</td>
<td>0.20</td>
<td>587</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>75.45</td>
<td>73.59</td>
<td>1.86</td>
<td>0.79</td>
<td>170</td>
<td>75.45</td>
<td>65.24</td>
<td>10.21+</td>
<td>0.09</td>
<td>235</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td>1.52</td>
<td>0.51</td>
<td></td>
<td></td>
<td></td>
<td>9.88+</td>
<td>0.09</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2013-2015.

Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College was not able to be included in the Cohort 1 outcomes analysis for 2014-15 due to insufficient or untimely submission of data.

Table D.3. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First Year to Third Year Persistence, by Institution, Within-Year Cohort 1 and Cohort 1 vs. Cohort 0 Analyses

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>64.14</td>
<td>67.04</td>
<td>-2.90</td>
<td>0.28</td>
<td>1,703</td>
<td>64.14</td>
<td>64.59</td>
<td>-0.45</td>
<td>0.85</td>
<td>2,570</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>60.75</td>
<td>43.47</td>
<td>17.27**</td>
<td>0.01</td>
<td>211</td>
<td>60.75</td>
<td>49.10</td>
<td>11.65*</td>
<td>0.02</td>
<td>617</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>61.36</td>
<td>57.57</td>
<td>3.79</td>
<td>0.61</td>
<td>281</td>
<td>61.36</td>
<td>47.50</td>
<td>13.87+</td>
<td>0.08</td>
<td>263</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>66.67</td>
<td>65.02</td>
<td>1.64</td>
<td>0.81</td>
<td>533</td>
<td>66.67</td>
<td>62.05</td>
<td>4.62</td>
<td>0.44</td>
<td>587</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>68.18</td>
<td>57.94</td>
<td>10.24</td>
<td>0.19</td>
<td>169</td>
<td>68.18</td>
<td>54.86</td>
<td>13.32*</td>
<td>0.04</td>
<td>235</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td>4.80</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
<td>7.11*</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014-2016.

Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College was not able to be included in the Cohort 1 outcomes analysis for 2015-16 due to insufficient or untimely submission of data.
Table D.4. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First Year to Fourth Year Persistence, by Institution, Within-Year Cohort 1 and Cohort 1 vs. Cohort 0 Analyses

<table>
<thead>
<tr>
<th>College Name</th>
<th>Cohort 1 Analysis</th>
<th>Cohort 1 vs. Cohort 0 Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVID</td>
<td>Non-AVID</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>57.89</td>
<td>56.97</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>57.01</td>
<td>48.28</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>55.06</td>
<td>52.49</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>64.65</td>
<td>64.25</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>53.78</td>
<td>56.93</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td>1.93</td>
<td>0.38</td>
</tr>
</tbody>
</table>


Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College was not able to be included in the Cohort 1 outcomes analysis for 2016-17 due to insufficient or untimely submission of data.

Table D.5. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First Year to Fifth Year Persistence, by Institution, Within-Year Cohort 1

<table>
<thead>
<tr>
<th>College Name</th>
<th>First-to-Fifth Year Persistence Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVID</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>60.61</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>48.00</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>47.06</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>51.69</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td>3.27</td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2017-2018.

Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College were not able to be included in the Cohort 1 outcomes analysis for 2017-18 due to insufficient or untimely submission of data.
## Cohort 1 Course Passing Rates

Table D.6. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First Year Course Passing Rates, by Institution, Within-Year Cohort 1 and Cohort 1 vs. Cohort 0 Analyses

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>84.38</td>
<td>86.64</td>
<td>-2.25+</td>
<td>0.09</td>
<td>1,703</td>
<td>84.38</td>
<td>87.16</td>
<td>-2.78*</td>
<td>0.03</td>
<td>2,570</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>72.98</td>
<td>68.09</td>
<td>4.90</td>
<td>0.11</td>
<td>211</td>
<td>72.98</td>
<td>63.45</td>
<td>9.54**</td>
<td>0.00</td>
<td>618</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>77.33</td>
<td>68.14</td>
<td>9.19*</td>
<td>0.02</td>
<td>299</td>
<td>77.33</td>
<td>63.62</td>
<td>13.71**</td>
<td>0.00</td>
<td>353</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>86.25</td>
<td>82.00</td>
<td>4.25</td>
<td>0.23</td>
<td>533</td>
<td>86.25</td>
<td>83.76</td>
<td>2.49</td>
<td>0.40</td>
<td>587</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>82.48</td>
<td>77.53</td>
<td>4.94</td>
<td>0.32</td>
<td>170</td>
<td>82.48</td>
<td>79.01</td>
<td>3.46</td>
<td>0.34</td>
<td>235</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td>3.49</td>
<td>0.16</td>
<td></td>
<td></td>
<td></td>
<td>5.06</td>
<td>0.13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014 and 2015.

Notes: *p<0.1; * p<0.05; ** p<0.01. Tougaloo College was not able to be included in the Cohort 1 outcomes analysis for 2014-15 due to insufficient or untimely submission of data.

## Cohort 2 Course Passing Rates

Table D.7. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Second Year Course Passing Rates, by Institution, Within-Year Cohort 1 and Cohort 1 vs. Cohort 0 Analyses

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>85.71</td>
<td>86.11</td>
<td>-0.40</td>
<td>0.80</td>
<td>1,319</td>
<td>85.71</td>
<td>85.34</td>
<td>-0.37</td>
<td>0.78</td>
<td>2,095</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>71.36</td>
<td>67.02</td>
<td>4.34</td>
<td>0.34</td>
<td>166</td>
<td>71.36</td>
<td>77.76</td>
<td>-6.40*</td>
<td>0.05</td>
<td>379</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>63.01</td>
<td>61.82</td>
<td>1.19</td>
<td>0.86</td>
<td>181</td>
<td>63.01</td>
<td>66.22</td>
<td>-3.21</td>
<td>0.59</td>
<td>178</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>85.00</td>
<td>90.29</td>
<td>-5.30</td>
<td>0.19</td>
<td>425</td>
<td>85.00</td>
<td>81.21</td>
<td>3.78</td>
<td>0.33</td>
<td>460</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>78.24</td>
<td>88.31</td>
<td>-10.08*</td>
<td>0.03</td>
<td>135</td>
<td>78.24</td>
<td>89.45</td>
<td>-11.21**</td>
<td>0.01</td>
<td>173</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td>-1.99</td>
<td>0.36</td>
<td></td>
<td></td>
<td></td>
<td>-2.97</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016. Notes: *p<0.1; * p<0.05; ** p<0.01. Tougaloo College was not able to be included in the Cohort 1 outcomes analysis for 2015-16 due to insufficient or untimely submission of data.
Table D.8. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Third Year Course Passing Rates, by Institution, Within-Year Cohort 1 and Cohort 1 vs. Cohort 0 Analyses

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
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</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>88.27</td>
<td>88.94</td>
<td>-0.66</td>
<td>0.66</td>
<td>1,084</td>
<td>88.27</td>
<td>90.91</td>
<td>-2.63*</td>
<td>0.04</td>
<td>1,526</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>77.08</td>
<td>72.91</td>
<td>4.17</td>
<td>0.48</td>
<td>132</td>
<td>77.08</td>
<td>82.56</td>
<td>-5.48</td>
<td>0.43</td>
<td>146</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>91.36</td>
<td>90.99</td>
<td>0.37</td>
<td>0.88</td>
<td>434</td>
<td>91.36</td>
<td>86.37</td>
<td>4.99</td>
<td>0.43</td>
<td>146</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>86.82</td>
<td>84.59</td>
<td>2.23</td>
<td>0.63</td>
<td>122</td>
<td>86.82</td>
<td>90.26</td>
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<td>0.38</td>
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</tbody>
</table>

**Combined average effect size**

<p>| | | | | | | | | | | |</p>
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</thead>
<tbody>
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<td>AVID</td>
<td>Non-AVID</td>
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</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.

Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College and Fort Valley State University were not able to be included in the Cohort 1 outcomes analysis for 2016-17 due to insufficient or untimely submission of data.

Table D.9. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Fourth Year Course Passing Rates, by Institution, Within-Year Cohort 1

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of North Carolina – Asheville</td>
<td>89.63</td>
<td>92.35</td>
<td>-2.72</td>
<td>0.43</td>
<td>394</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>90.03</td>
<td>90.09</td>
<td>-0.06</td>
<td>0.97</td>
<td>1,016</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>92.60</td>
<td>88.86</td>
<td>3.74</td>
<td>0.55</td>
<td>94</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>82.68</td>
<td>84.35</td>
<td>1.68</td>
<td>0.68</td>
<td>114</td>
</tr>
</tbody>
</table>

**Combined average effect size**

<p>| | | | | | | | | | |</p>
<table>
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<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVID</td>
<td>Non-AVID</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2017 and 2018.

Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College and Fort Valley State University were not able to be included in the Cohort 1 outcomes analysis for 2017-18 due to insufficient or untimely submission of data.
Cohort 2 Persistence Rates

Table D.10. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Freshman Fall-to-Spring Persistence, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>96.10</td>
<td>95.58</td>
<td>0.53</td>
<td>0.60</td>
<td>2,051</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>94.27</td>
<td>96.82</td>
<td>-2.55</td>
<td>0.23</td>
<td>407</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>84.92</td>
<td>78.83</td>
<td>6.09</td>
<td>0.25</td>
<td>365</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>88.37</td>
<td>90.58</td>
<td>-2.21</td>
<td>0.71</td>
<td>117</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>94.69</td>
<td>90.99</td>
<td>3.70</td>
<td>0.24</td>
<td>624</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td>-0.05</td>
<td>0.96</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016.
Notes: +p<0.1; * p<0.05; ** p<0.01.

Table D.11. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First to Second Year Persistence, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>85.16</td>
<td>81.61</td>
<td>3.55*</td>
<td>0.05</td>
<td>2,051</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>72.61</td>
<td>80.50</td>
<td>-7.89+</td>
<td>0.07</td>
<td>407</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>61.90</td>
<td>54.89</td>
<td>7.01</td>
<td>0.27</td>
<td>365</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>65.12</td>
<td>75.64</td>
<td>-10.52</td>
<td>0.22</td>
<td>117</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>75.22</td>
<td>69.21</td>
<td>6.02</td>
<td>0.31</td>
<td>624</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td>-1.10</td>
<td>0.73</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016.
Notes: +p<0.1; * p<0.05; ** p<0.01.

Table D.12. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First to Third Year Persistence, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>70.32</td>
<td>67.58</td>
<td>2.73</td>
<td>0.24</td>
<td>2,051</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>61.78</td>
<td>67.15</td>
<td>-5.37</td>
<td>0.26</td>
<td>407</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>48.41</td>
<td>43.27</td>
<td>5.14</td>
<td>0.42</td>
<td>365</td>
</tr>
<tr>
<td>Tougaloo College</td>
<td>53.70</td>
<td>50.78</td>
<td>2.93</td>
<td>0.78</td>
<td>117</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>70.77</td>
<td>63.73</td>
<td>7.04</td>
<td>0.21</td>
<td>727</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td>2.22</td>
<td>0.23</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016-2017.
Notes: +p<0.1; * p<0.05; ** p<0.01.
Table D.13. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First to Fourth Year Persistence, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of North Carolina – Asheville</td>
<td>63.08</td>
<td>59.01</td>
<td>4.07</td>
<td>0.48</td>
<td>727</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>62.89</td>
<td>60.43</td>
<td>2.47</td>
<td>0.32</td>
<td>2,051</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>39.68</td>
<td>32.94</td>
<td>6.75</td>
<td>0.27</td>
<td>365</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>3.19</td>
<td>0.13</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2017-2018.

Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College and Fort Valley State University did not provide information for analysis and Washington State University did not have a usable comparison group.

Cohort 2 Course Passing Rates

Table D.14. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Year 1 Course Passing Rates, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>Year 1 Course Passing Rates (Freshman Year, 2015-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Name</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
</tr>
<tr>
<td>Fort Valley State University</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
</tr>
<tr>
<td>Tougaloo College</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
</tr>
<tr>
<td>Combined average effect size</td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016.

Notes: +p<0.1; * p<0.05; ** p<0.01.

Table D.15. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Year 2 Course Passing Rates, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>Year 2 Course Passing Rates (Sophomore Year, 2016-17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Name</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
</tr>
<tr>
<td>Tougaloo College</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
</tr>
<tr>
<td>Combined average effect size</td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.

Notes: +p<0.1; * p<0.05; ** p<0.01.
Table D.16. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of North Carolina – Asheville</td>
<td>87.61</td>
<td>84.95</td>
<td>2.66</td>
<td>0.61</td>
<td>490</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>89.27</td>
<td>88.71</td>
<td>0.56</td>
<td>0.67</td>
<td>1,328</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>89.73</td>
<td>91.23</td>
<td>-1.50</td>
<td>0.59</td>
<td>203</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>0.53</td>
<td>0.66</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2017-2018.
Notes: +p<0.1; * p<0.05; ** p<0.01. Tougaloo College and Fort Valley State University did not provide information for analysis and Washington State University did not have a usable comparison group.

Cohort 3 Persistence Rates

Table D.17. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Freshman Fall-to-Spring Persistence, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>97.19</td>
<td>96.21</td>
<td>0.97</td>
<td>0.24</td>
<td>2,049</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>81.60</td>
<td>85.26</td>
<td>-3.66</td>
<td>0.38</td>
<td>300</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>93.28</td>
<td>89.59</td>
<td>3.69</td>
<td>0.20</td>
<td>656</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>1.03</td>
<td>0.29</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.
Notes: +p<0.1; * p<0.05; ** p<0.01.

Table D.18. – Four-Year Institutions: Propensity Score Reweighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First to Second Year Persistence, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>76.25</td>
<td>81.48</td>
<td>-5.23**</td>
<td>0.01</td>
<td>2049</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>60.00</td>
<td>63.16</td>
<td>-3.16</td>
<td>0.58</td>
<td>300</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>76.87</td>
<td>66.99</td>
<td>9.87+</td>
<td>0.06</td>
<td>656</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>-0.16</td>
<td>0.97</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.
Notes: +p<0.1; * p<0.05; ** p<0.01.
Table D.19. – Four-Year Institutions: Propensity Score Rewighted and Regression-Adjusted Average Treatment Effect of AVID Participation on First to Third Year Persistence, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of North Carolina – Asheville</td>
<td>65.67</td>
<td>54.61</td>
<td>11.06*</td>
<td>0.04</td>
<td>656</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>61.09</td>
<td>66.20</td>
<td>-5.11*</td>
<td>0.03</td>
<td>2,049</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>42.40</td>
<td>34.53</td>
<td>7.87</td>
<td>0.15</td>
<td>300</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>3.76</strong></td>
<td>0.52</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2017 and 2018.
Notes: +p<0.1; * p<0.05; ** p<0.01.

Cohort 3 Course Passing Rates

Table D.20. – Four-Year Institutions: Propensity Score Rewighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Year 1 Course Passing Rates, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>California State University – San Marcos</td>
<td>82.96</td>
<td>85.59</td>
<td>-2.63*</td>
<td>0.03</td>
<td>2,049</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>64.06</td>
<td>68.54</td>
<td>-4.48</td>
<td>0.15</td>
<td>300</td>
</tr>
<tr>
<td>University of North Carolina – Asheville</td>
<td>83.66</td>
<td>80.11</td>
<td>3.55</td>
<td>0.22</td>
<td>656</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>-1.44</strong></td>
<td>0.48</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.
Notes: +p<0.1; * p<0.05; ** p<0.01.

Table D.21. – Four-Year Institutions: Propensity Score Rewighted and Regression-Adjusted Average Treatment Effect of AVID Participation on Year 2 Course Passing Rates, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of North Carolina – Asheville</td>
<td>87.27</td>
<td>89.62</td>
<td>-2.35</td>
<td>0.34</td>
<td>484</td>
</tr>
<tr>
<td>California State University – San Marcos</td>
<td>85.22</td>
<td>87.70</td>
<td>-2.48*</td>
<td>0.04</td>
<td>1,535</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>60.86</td>
<td>60.85</td>
<td>0.01</td>
<td>1.00</td>
<td>200</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>-2.35</strong></td>
<td>0.03</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2017 and 2018.
Notes: +p<0.1; * p<0.05; ** p<0.01.
Two Year Institutions

Fall to Spring Persistence Rates

Table D.22. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Freshman Fall-to-Spring Persistence, by Institution, Cohort 1 Analysis (2014-15)

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>86.82</td>
<td>76.37</td>
<td>10.45**</td>
<td>0.00</td>
<td>908</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>85.84</td>
<td>88.75</td>
<td>-2.91</td>
<td>0.43</td>
<td>649</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>3.86</strong></td>
<td>0.56</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014 and 2015.

Notes: + p<0.1; * p<0.05; ** p<0.01. Butler Community College was not able to be included in the Cohort 1 outcomes analysis for 2014-15 due to insufficient or untimely submission of data. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution. NA refers to instances where usable data were not available from the participating institution.

Table D.23. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Freshman Fall-to-Spring Persistence, by Institution, Cohort 2 Analyses (2015-16)

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>74.55</td>
<td>74.15</td>
<td>0.39</td>
<td>0.94</td>
<td>357</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>77.78</td>
<td>77.11</td>
<td>0.67</td>
<td>0.94</td>
<td>117</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>94.98</td>
<td>85.88</td>
<td>9.10**</td>
<td>&lt;0.01</td>
<td>1,393</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>5.59</strong></td>
<td>0.09</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016.

Notes: + p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution.

Table D.24. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Freshman Fall-to-Spring Persistence, by Institution, Cohort 3 Analyses (2016-17)

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>72.73</td>
<td>67.89</td>
<td>4.83</td>
<td>0.41</td>
<td>534</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>90.59</td>
<td>76.89</td>
<td>13.70*</td>
<td>0.04</td>
<td>170</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>91.52</td>
<td>83.78</td>
<td>7.74**</td>
<td>&lt;0.01</td>
<td>2,371</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>7.83</strong></td>
<td>&lt;0.01</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.

Notes: + p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution.
# First to Second Year Persistence Rates

Table D.25. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Freshman-to-Sophomore Persistence, by Institution, Cohort 1

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>49.61</td>
<td>43.99</td>
<td>5.62</td>
<td>0.23</td>
<td>908</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>73.45</td>
<td>68.00</td>
<td>5.46</td>
<td>0.25</td>
<td>649</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td><strong>5.54</strong></td>
<td><strong>5.0</strong></td>
<td><strong>0.10</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014 and 2015.

Notes: +p<0.1; * p<0.05; ** p<0.01. Butler Community College was not able to be included in the Cohort 1 outcomes analysis for 2014-15 due to insufficient or untimely submission of data. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution. NA refers to instances where usable data were not available from the participating institution. For Saddleback College, the fall 2014 AVID group included only students in AVID-infused sections of the Counseling 140 (FYE) course in fall 2014. For Atlanta Technical College, the Cohort 1 AVID group consistent of student in AVID-infused sections of Medical Terminology and Introduction to Computers courses.

Table D.26. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Freshman-to-Sophomore Persistence, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>41.82</td>
<td>42.72</td>
<td>-0.90</td>
<td>0.87</td>
<td>357</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>61.11</td>
<td>44.38</td>
<td>16.73*</td>
<td>0.09</td>
<td>117</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>80.77</td>
<td>70.98</td>
<td>9.79**</td>
<td>&lt;0.01</td>
<td>1,393</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td><strong>7.38</strong></td>
<td><strong>7.0</strong></td>
<td><strong>0.08</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution. For Saddleback College the fall 2015 AVID group included all students who was enrolled in an AVID-infused courses in fall 2015. The AHE program was expanded substantially at Saddleback College in 2015-16. For Atlanta Technical College in fall 2015, the Cohort 2 AVID group consisted of students in AVID sections of a broad array of courses, including English Composition, Financial Accounting, Medical terminology, and developmental courses in English and Math.
Table D.27. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Freshman-to-Sophomore Persistence, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>40.26</td>
<td>39.30</td>
<td>0.96</td>
<td>0.880</td>
<td>534</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>51.76</td>
<td>45.94</td>
<td>5.82</td>
<td>0.492</td>
<td>170</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>75.38</td>
<td>63.95</td>
<td>11.43**</td>
<td>&lt;0.01</td>
<td>2,371</td>
</tr>
</tbody>
</table>

Combined average effect size

8.68** <0.01

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution.

Year 1 Course Passing Rates

Table D.28. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates, by Institution, Cohort 1

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>65.72</td>
<td>61.07</td>
<td>4.65</td>
<td>0.16</td>
<td>719</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>50.42</td>
<td>50.11</td>
<td>0.32</td>
<td>0.93</td>
<td>1,099</td>
</tr>
</tbody>
</table>

Combined average effect size

2.50 0.29

Source: Administrative Data Collected from Participating Institutions, 2014 and 2015.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution. NA refers to instances where usable data were not available from the participating institution. For Saddleback College, the fall 2014 AVID group included only students in AVID-infused sections of the Counseling 140 (FYE) course. For Atlanta Technical College, the Cohort 1 AVID group consisted of student in AVID-infused sections of Medical Terminology and Introduction to Computers courses.
Table D.29. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>49.12</td>
<td>54.63</td>
<td>-5.51</td>
<td>0.20</td>
<td>357</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>48.17</td>
<td>53.74</td>
<td>-5.57</td>
<td>0.44</td>
<td>177</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>59.23</td>
<td>61.58</td>
<td>-2.35</td>
<td>0.26</td>
<td>1,393</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>-3.11+</td>
<td>0.09</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution. For Saddleback College, the fall 2015 AVID group included all students who was enrolled in an AVID-infused courses in fall 2015. The AHE program was expanded substantially at Saddleback College in 2015-16. For Atlanta Technical College in fall 2015, the Cohort 2 AVID group consisted of students in AVID sections of a broad array of courses, including English Composition, Financial Accounting, Medical terminology, and developmental courses in English and Math.

Table D.30. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>52.39</td>
<td>56.70</td>
<td>-4.31</td>
<td>0.37</td>
<td>534</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>74.87</td>
<td>63.80</td>
<td>11.06</td>
<td>0.05</td>
<td>170</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>53.15</td>
<td>50.87</td>
<td>2.28</td>
<td>0.11</td>
<td>2,371</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>2.45</td>
<td>0.46</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution.

Year 2 Course Passing Rates

Table D.31. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates, by Institution, Cohort 1

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>68.67</td>
<td>66.07</td>
<td>2.60</td>
<td>0.76</td>
<td>149</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>55.69</td>
<td>58.14%</td>
<td>-2.45%</td>
<td>0.67</td>
<td>177</td>
</tr>
<tr>
<td>Combined average effect size</td>
<td></td>
<td></td>
<td>-0.78</td>
<td>0.87</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2015 and 2016.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution. NA refers to instances where usable data were not available from the participating institution. For Saddleback College, the fall 2014 AVID group included only students in AVID-infused sections of the Counseling 140 (FYE) course in fall 2014. For Atlanta Technical College, the Cohort 1 AVID group consistent of student in AVID-infused sections of Medical Terminology and Introduction to Computers courses.
Table D.32. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates, by Institution, Cohort 2

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>64.54</td>
<td>71.01</td>
<td>-6.47</td>
<td>0.300</td>
<td>142</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>62.21</td>
<td>66.37</td>
<td>-4.16</td>
<td>0.653</td>
<td>56</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>58.50%</td>
<td>60.52%</td>
<td>-2.02%</td>
<td>0.393</td>
<td>1103</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>-2.66</strong></td>
<td><strong>0.216</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2016 and 2017.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution. NA refers to instances where usable data were not available from the participating institution. For Saddleback College, the fall 2015 AVID group included all students who was enrolled in an AVID-infused courses in fall 2015. The AHE program was expanded substantially at Saddleback College in 2015-16. For Atlanta Technical College, the Cohort 2 AVID group consisted of students in AVID sections of a broad array of courses, including English Composition, Financial Accounting, Medical terminology, and developmental courses in English and Math.

Table D.33. – Two-Year Institutions: Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Course Passing Rates, by Institution, Cohort 3

<table>
<thead>
<tr>
<th>College Name</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P-value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saddleback College</td>
<td>54.32</td>
<td>52.9</td>
<td>1.39</td>
<td>0.39</td>
<td>1,673</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>72.72</td>
<td>83.81</td>
<td>-11.09</td>
<td>0.16</td>
<td>86</td>
</tr>
<tr>
<td><strong>Combined average effect size</strong></td>
<td></td>
<td></td>
<td><strong>-2.48</strong></td>
<td><strong>0.67</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2017 and 2018.

Notes: +p<0.1; * p<0.05; ** p<0.01. Due to limited covariates included in the statistical models, results of two-year institution should be viewed with caution.
### Table D.34. – Four-Year Institutions, Random Effects Meta-Analysis of Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Persistence Rate

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Four-Year Institution Persistence Rates</th>
<th>Estimate</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Fall to Spring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>2.26</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>Cohort 2</td>
<td>-0.12</td>
<td>0.92</td>
<td></td>
</tr>
<tr>
<td>Cohort 3</td>
<td>1.03</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>Year 1 to Year 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>1.52</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>Cohort 2</td>
<td>0.39</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>Cohort 3</td>
<td>-0.16</td>
<td>0.97</td>
<td></td>
</tr>
<tr>
<td>Year 1 to Year 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>4.80</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>Cohort 2</td>
<td>2.22</td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td>Cohort 3</td>
<td>3.76</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Year 1 to Year 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>1.93</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>Cohort 2</td>
<td>3.19</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>Cohort 3</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Year 1 to Year 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>3.27</td>
<td>0.42</td>
<td></td>
</tr>
<tr>
<td>Cohort 2</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Cohort 3</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: +p<0.1; *p<0.05; **p<0.01. This table excludes some cohort-institutions based on the quality or presence of an available comparison. Cohort 3 was excluded for Tougaloo College due to a lack of comparison group. Cohorts 2 and 3 were excluded from Washington State University, Tri-Cities due to the lack of an appropriate comparison group. Cohort 1 for Tougaloo College was not available for analysis, and Cohort 3 for Fort Valley State University was also unavailable. NA indicates that this cohort has not been observed long enough to be included in this year’s report.
Table D.35. – Two-Year Institutions, Random Effects Meta-Analysis of Propensity Score Reweighted and Regression Adjusted Average Treatment Effect of AVID Participation on Persistence Rates

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Estimate</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman Fall to Spring</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>3.86</td>
<td>0.56</td>
</tr>
<tr>
<td>Cohort 2</td>
<td>5.59+</td>
<td>0.09</td>
</tr>
<tr>
<td>Cohort 3</td>
<td>7.83**</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td><strong>Year 1 to Year 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 1</td>
<td>5.54+</td>
<td>0.10</td>
</tr>
<tr>
<td>Cohort 2</td>
<td>7.38+</td>
<td>0.08</td>
</tr>
<tr>
<td>Cohort 3</td>
<td>8.68**</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: +p<0.1; * p<0.05; ** p<0.01. Cohort 1 was unavailable for analysis for Butler Community College.
Appendix E – Propensity Score Reweighted, Regression-Adjusted Student Persistence and Course Passing Rate Results by Institution

First, this appendix includes a description of the nine participating colleges and universities and presents student outcome results by institutions. This includes detail on the various persistence rates (i.e., freshman fall-to-spring, year 1-to-year 2, year 1-to-year 3, year 1 to-year 4, and year 1-to-year 5/graduate) and course passing rates (e.g., Year 1, Year 2, Year 3, and Year 4) calculated for the project, degree attainment and graduation rates, and transfer rates for 2-year institutions.

Sample Description

Table E.1 provides the number of students enrolled in AHE course sections participants and non-participants from Cohorts 1-3 (fall 2014, fall 2015, and fall 2016) at each participating institution. The following four-year institutions are included in the student outcome analyses presented in this report section:

- California State University, San Marcos (CSU-San Marcos);
- Fort Valley State University;
- Texas Wesleyan University;
- Tougaloo College;
- University of North Carolina, Asheville (UNC Asheville); and
- Washington State University, Tri-Cities (WSU Tri-Cities).

The following two-year institutions are included in the student outcome analyses presented in this report section:

- Atlanta Technical College;
- Butler Community College; and
- Saddleback College.

Table E.1 shows the number of AVID and non-AVID students included in the student outcomes analysis conducted by Gibson. A total of 1,222 AVID students and 3,337 matched non-AVID students from seven institutions were included in the persistence analyses for Cohort 1; 2,297 AVID students and 3,351 matched non-AVID students were included for Cohort 2; and 2,093 AVID students and 4,288 matched non-AVID students were included for Cohort 3.\(^59\) For Cohorts 1-3, CSU-San Marcos served by far the largest number of students in the four-year institution analysis through their AHE program (475 in 2014, 539 in

\(^{59}\) Only students who persisted into their second year of college were included in the sophomore year course-passing rate analyses.
2015, and 640 in 2016). This is important when interpreting the meta-analysis, since CSU-San Marcos will receive somewhat larger weights in the random effects meta-analysis approach than institutions with fewer students included in the analyses.

Table E.1. – Number of AVID and Non-AVID Students Included in Cohort 1, 2, and 3 Student Outcomes Analyses

<table>
<thead>
<tr>
<th>College Name</th>
<th>Number of AVID Students Fall 2014</th>
<th>Number of Non-AVID Students Fall 2014</th>
<th>Number of AVID Students Fall 2015</th>
<th>Number of Non-AVID Students Fall 2015</th>
<th>Number of AVID Students Fall 2016</th>
<th>Number of Non-AVID Students Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>127</td>
<td>747</td>
<td>110</td>
<td>247</td>
<td>77</td>
<td>457</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>NA</td>
<td>NA</td>
<td>36</td>
<td>81</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td>California State University, San Marcos</td>
<td>475</td>
<td>1,238</td>
<td>539</td>
<td>1,512</td>
<td>640</td>
<td>1,409</td>
</tr>
<tr>
<td>Fort Valley State University</td>
<td>107</td>
<td>104</td>
<td>157</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Saddleback College</td>
<td>206</td>
<td>437</td>
<td>1,039</td>
<td>360</td>
<td>731</td>
<td>1,640</td>
</tr>
<tr>
<td>Texas Wesleyan University</td>
<td>89</td>
<td>221</td>
<td>126</td>
<td>239</td>
<td>125</td>
<td>175</td>
</tr>
<tr>
<td>Tugaloo College</td>
<td>74</td>
<td>71</td>
<td>54</td>
<td>65</td>
<td>184</td>
<td>NA</td>
</tr>
<tr>
<td>University of North Carolina, Asheville</td>
<td>99</td>
<td>529</td>
<td>130</td>
<td>597</td>
<td>134</td>
<td>522</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
<td>119</td>
<td>61</td>
<td>106</td>
<td>NA</td>
<td>117</td>
<td>NA</td>
</tr>
<tr>
<td>Total</td>
<td>1,222</td>
<td>3,337</td>
<td>2,297</td>
<td>3,351</td>
<td>2,093</td>
<td>4,288</td>
</tr>
</tbody>
</table>


Notes: Two-year institutions are italicized. Counts reflect the number of students included in the statistical models used to estimate the effect of AVID College Completion Project participation. Two institutions participating in AHE (Tugaloo College and Butler Community College) were not able to be included in the Cohort 1 outcomes analysis for 2014-15 due to insufficient or untimely submission of data; however, they are included in the Cohort 2 analysis included in this report for 2015-16. For Saddleback College, the Fall 2014 AVID group included only students in AVID-infused sections of the Counseling 140 (FYE) course in fall 2014, while the Fall 2015 and 2016 AVID groups included all students who was enrolled in an AVID-infused courses in fall 2015 and 2016, respectively. The AHE program was expanded substantially at Saddleback College in 2015-16.

Institutions were encouraged to target students eligible for the Federal Pell Grant program for the AVID College Completion Project. Students who are eligible for this grant must have met the financial need requirements established by the program, which is based on the expected financial contribution from students’ families. Table F.2 describes the percentage of AVID and non-AVID students from Cohorts 1, 2 and 3 who were eligible to receive, and in almost all cases did receive, Federal Pell Grants in the 2014-15.

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60 Participation counts were derived from the records provided by each institution’s institutional research office and may differ from those reported by AVID liaisons. The method for determining whether a student was a participant varied across participating institutions. For instance, although the research team requested a data element that contained a flag indicating whether a student was in the targeted freshman course, some institutions were unable to provide this variable. Consequently, participating students at these institutions were identified by their course enrollment records. Furthermore, at two-year institutions non-participants were restricted to students who enrolled in the equivalent non-AVID-infused introductory course.
2015-16, and 2016-17 academic years. The largest differences in the percentage of AVID and non-AVID students eligible for Pell Grant assistance were observed at UNC-Asheville and Texas Wesleyan University in Cohorts 1 and 2. Unfortunately, while the research team requested financial data from each participating school, these data were not consistently provided and, thus, we were not able to include this covariate in the propensity score reweighting procedures and regression models.

Table E.2. – Percentage of Students in Cohorts 1, 2, and 3 Who Were Eligible to Receive Pell Funds during their Freshman Year, by AVID Participation Status

<table>
<thead>
<tr>
<th>College Name</th>
<th>Percent of AVID Students Fall 2014</th>
<th>Percent of Non-AVID Students Fall 2014</th>
<th>Percent of AVID Students Fall 2015</th>
<th>Percent of Non-AVID Students Fall 2015</th>
<th>Percent of AVID Students Fall 2016</th>
<th>Percent of Non-AVID Students Fall 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta Technical College</td>
<td>NA</td>
<td>NA</td>
<td>87.3</td>
<td>87.9</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Butler Community College</td>
<td>NA</td>
<td>NA</td>
<td>58.3</td>
<td>57.7</td>
<td>49.2</td>
<td>45.8</td>
</tr>
<tr>
<td>California State University, San Marcos</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
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<td>86.0</td>
<td>85.6</td>
<td>81.5</td>
<td>84.0</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Saddleback College</td>
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<td>NA</td>
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<td>NA</td>
</tr>
<tr>
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<td>17.6</td>
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<td>53.1</td>
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<tr>
<td>Tougaloo College</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>University of North Carolina, Asheville</td>
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<td>53.1</td>
<td>28.0</td>
<td>53.7</td>
<td>25.7</td>
</tr>
<tr>
<td>Washington State University, Tri-Cities</td>
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<td>39.3</td>
<td>52.8</td>
<td>NA</td>
<td>46.2</td>
<td>NA</td>
</tr>
</tbody>
</table>


Note: Only institutions that provided financial aid data are shown. For institutions with missing financial aid information, Pell eligibility could not be included as a control variable in the statistical models to control for differences in the compositions of the AVID and non-AVID groups. NA refers to instances where usable data were not available from the participating institution; Cohort 3 at Tougaloo College does not have a non-AVID comparison group.

Institution-level Results

California State University-San Marcos

CSU-San Marcos had the largest AVID cohort included in the study, with 475 students enrolled in AVID-infused FYE course sections in fall 2014, 539 enrolled in fall 2015, and 640 enrolled in fall 2016. The vast majority of incoming freshmen enroll in the FYE course at CSU-San Marcos and their results are compared to students enrolled in non-AVID sections of the FYE course. Students are generally not aware of whether the FYE section they enroll in is being taught by an AVID-trained faculty member. It is important to note that prior to implementing AHE, CSU-San Marcos engaged in a major redesign of their FYE course which included the use of active and collaborative learning strategies. Because of the recent course redesign,

61 The research team requested students’ Pell eligibility and whether students received a Pell grant. However, most institutions only submitted the amount of Pell funds awarded to each student.
differences in teaching and learning in AVID and non-AVID FYE course sections, and corresponding student outcomes, may be modest.

CSU-San Marcos Persistence Rates

Figure E.1. – CSU-San Marcos, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 1, Fall 2014 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 475 AVID students and 1,238 non-AVID students were included in these Cohort 1 analyses.
Figure E.2. – CSU-San Marcos, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 2, Fall 2015 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2015-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 539 AVID students and 1,512 non-AVID students were included in these Cohort 2 analyses.

Figure E.3. – CSU-San Marcos, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 3, Fall 2016 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2016-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 640 AVID students and 1,409 non-AVID students were included in these Cohort 3 analyses.
CSU- San Marcos Course Passing Rates

Figure E.4. – CSU-San Marcos, Propensity Score Reweighted and Regression-Adjusted Cohort 1 Course Passing Rates, 2014-15 to 2017-18

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 475 AVID students and 1,238 non-AVID students were included in these Cohort 1 analyses.

Figure E.5. – CSU-San Marcos, Propensity Score Reweighted and Regression-Adjusted Cohort 2 Course Passing Rates, 2015-16 to 2017-18

Source: Administrative Data Collected from Participating Institutions, 2015-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 539 AVID students and 1,512 non-AVID students were included in these Cohort 2 analyses.
Figure E.6 – CSU-San Marcos, Propensity Score Reweighted and Regression-Adjusted Cohort 3 Course Passing Rates, 2016-17 and 2017-18

Source: Administrative Data Collected from Participating Institutions, 2016-2017.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 640 AVID students and 1,409 non-AVID students were included in these Cohort 3 analyses.

Fort Valley State University

As part of the AHE program at Fort Valley State University (FVSU), a FYE course was designed and approximately half of the course sections were taught by faculty who participated in AVID professional development related to the use of active and collaborative learning strategies intended to improve student engagement in the learning process. Students “blindly” enrolled in AVID and non-AVID sections of the FYE course during their first semester in college. A total of 107 students were enrolled in AVID sections in fall 2014 and 157 were enrolled in AVID sections in fall 2015. The evaluation team received course completion and enrollment data for the first cohort of students for the 2014-15 and 2015-16 academic years, and enrollment data for fall 2017; however, student-level enrollment and course completion data were not received for the 2016-17 academic year. Therefore, some of the analyses for FVSU are incomplete.
Fort Valley State University Persistence Rates

Figure E.7. – Fort Valley State University, Propensity Score Reweighted and Regression-Adjusted Cohort 1 Persistence Rates, Fall 2014 to Fall 2017


Note: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 107 AVID students and 104 non-AVID students were included in these Cohort 1 analyses.

Figure E.8. – Fort Valley State University, Propensity Score Reweighted and Regression-Adjusted Cohort 2 Persistence Rates, Fall 2015 to Fall 2017


Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 157 AVID students and 250 non-AVID students were included in these Cohort 2 analyses.
Fort Valley State University Course Passing Rates

Figure E.9. – Fort Valley State University, Propensity Score Reweighted and Regression-Adjusted Cohort 1 Course Passing Rates, 2014-15 to 2015-16

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 107 AVID students and 104 non-AVID students were included in these Cohort 1 analyses.

Figure E.10. – Fort Valley State University, Propensity Score Reweighted and Regression-Adjusted Cohort 2 Course Passing Rates, 2015-16

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 157 AVID students and 250 non-AVID students were included in these Cohort 2 analyses. FVSU did not submit 2016-17 course-level data, so Year2 course passing rate analyses could not be conducted.
Texas Wesleyan University

Texas Wesleyan University implemented FYE courses, which were offered to incoming freshman students in their first semester in college. Students enrolled in FYE course sections without knowing whether the course was taught by AVID-trained faculty or faculty who did not participate in AVID-related professional development. A total of 89 students were enrolled in AVID-infused course sections in the fall 2014, 126 in fall 2015, and 125 in fall 2016. Cohort 1 and Cohort 2 included a higher proportion of Pell eligible students in AVID sections (69.2% and 50.8% for AVID students and 21.7% and 17.6% for non-AVID students, respectively). However, Cohort 3, entering college in fall 2016, had comparable rates of Pell eligibility for AVID (56.0%) and non-AVID students (53.1%).

Texas Wesleyan Persistence Rates

Figure E.11. – Texas Wesleyan, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 1, Fall 2014 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 89 AVID students and 221 non-AVID students were included in these Cohort 1 analyses.
Figure E.12. – Texas Wesleyan, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 2, Fall 2015 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2015-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 126 AVID students and 239 non-AVID students were included in these Cohort 2 analyses.

Figure E.13. – Texas Wesleyan, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 3, Fall 2016 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2016-2018.

Note: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 125 AVID students and 175 non-AVID students were included in these Cohort 3 analyses.
Texas Wesleyan Course Passing Rates

Figure E.14. – Texas Wesleyan, Propensity Score Reweighted and Regression-Adjusted Cohort 1 Course Passing Rates, 2014-15 to 2017-18

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 89 AVID students and 221 non-AVID students were included in these Cohort 1 analyses.

Figure E.15. – Texas Wesleyan, Propensity Score Reweighted and Regression-Adjusted Cohort 2 Course Passing Rates, 2015-16 to 2017-18

Source: Administrative Data Collected from Participating Institutions, 2015-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 126 AVID students and 239 non-AVID students were included in these Cohort 2 analyses.
Figure E.16. – Texas Wesleyan, Propensity Score Reweighted and Regression-Adjusted Cohort 3 Course Passing Rates, 2016-17 and 2017-18

Source: Administrative Data Collected from Participating Institutions, 2016-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 125 AVID students and 175 non-AVID students were included in these Cohort 3 analyses.
Tougaloo College

Tougaloo College offered a FYE course for incoming freshmen students with some sections taught by AVID-trained faculty and others taught by faculty who did not participate in AVID-related professional development. Tougaloo also implemented student learning communities in each year, where groups of students took FYE and other freshman courses with a common set of students. By Cohort 3 (fall 2016), Tougaloo had expanded the AVID program such that all incoming students were included in an AVID-infused FYE course.

Insufficient data were reported for Cohort 1 (fall 2014) for that cohort to be included in any of the outcomes analyses. Cohort 2 (fall 2015) included 54 AVID students and 65 non-AVID students and all 184 Cohort 3 students (who began college in fall 2016) participated in AVID-infused FYE courses. Only two covariates (gender and ACT/SAT score) were available for propensity score reweighting and inclusion in regression models. Thus, the results for Tougaloo should be viewed with some caution. Further, since Tougaloo College expanded the AVID FYE course for Cohort 3 such that all students were enrolled in AVID FYE course, no comparison group was available. In lieu of the propensity score models, descriptive results are presented for Cohort 3.

Tougaloo College Persistence Rates

Figure E.17. – Tougaloo College, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 2, Fall 2015 to Fall 2017

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 54 AVID students and 65 non-AVID students were included in these Cohort 2 Analyses.
Figure E.18. – Tougaloo College, Persistence Rates for Cohort 3, Fall 2016 to Fall 2017

Source: Administrative Data Collected from Participating Institutions, 2016-2017. All Cohort 3 students took AVID FYE courses, a total of 184, which means that these figures were not propensity score reweighted or regression adjusted.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 54 AVID students and 65 non-AVID students were included in these Cohort 2 analyses. Since there is no control group for Cohort 3, the rates reported in this figure numbers are not propensity score re-weighted or regression adjusted.

Tougaloo College Course Passing Rates

Figure E.19. – Tougaloo College, Propensity Score Reweighted and Regression-Adjusted Cohort 2 Course Passing Rates, 2015-16 and 2016-17


Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level.
Figure E.20. – Tougaloo College, Propensity Score Reweighted and Regression-Adjusted Cohort 3 Course Passing Rates, 2016-17

Source: Administrative Data Collected from Participating Institutions, 2016-2017.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. All Cohort 3 students took AVID FYE courses, a total of 184, which means that these figures were not propensity score reweighted or regression adjusted.
UNC-Asheville FYE courses were offered through a variety of departments, such as English, economics, business, education, biology, fine arts, history, political science and chemistry, among others. The subject matter of the course followed the discipline of the faculty member teaching the course, but was taught with active or collaborative learning methods. For the fall 2014 student cohort (Cohort 1), AVID students participated in living learning communities, which also included a separate study skills component that was taught in a separate course offered only to students in the AVID living learning community in 2014-15.

The living learning community requirement was dropped for cohorts 2 (fall 2015) and 3 (fall 2016). For these cohorts, AVID students were enrolled in first year experience courses taught by an AVID-trained faculty member and the course was co-taught by a staff member from the student success department. Cohort 1 (fall 2014) included 99 AVID students, Cohort 2 (fall 2015) had 130 AVID students and Cohort 3 (fall 2016) consisted of 134 AVID students. Although the difference decreased after Cohort 1, students in AVID sections were more likely in each cohort to be eligible for Pell Grants (79.8% for AVID and 15.9% for non-AVID in Cohort 1, 53.7% for AVID and 25.7% for non-AVID in Cohort 3), and the mean SAT scores for AVID students in cohorts 2 and 3 was substantially lower than it was for students in Cohort 1.

**UNC-Asheville Persistence Rates**

**Figure E.21. – UNC-Asheville, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 1, Fall 2014 to Fall 2018**

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 99 AVID students and 529 non-AVID students were included in these Cohort 1 analyses.
Figure E.22. – UNC-Asheville, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 2, Fall 2015 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2015-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 130 AVID students and 597 non-AVID students were included in these Cohort 2 analyses.

Figure E.23. – UNC-Asheville, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 3, Fall 2016 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2016-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 134 AVID students and 522 non-AVID students were included in these Cohort 3 analyses.
UNC-Asheville Course Passing Rates

Figure E.24. –, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 1, 2014-15 to 2017-18

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 99 AVID students and 529 non-AVID students were included in these Cohort 1 analyses.

Figure E.25. – UNC-Asheville, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 2, 2015-16 to 2017-18

Source: Administrative Data Collected from Participating Institutions, 2015-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 130 AVID students and 597 non-AVID students were included in these Cohort 2 analyses.
Figure E.26. – UNC-Asheville, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 3, 2016-17 and 2017-18

Source: Administrative Data Collected from Participating Institutions, 2016-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 134 AVID students and 522 non-AVID students were included in these Cohort 3 analyses.
Washington State University, Tri-Cities

During the first year of the AHE program at WSU, Tri-Cities (2014-15 academic year), AVID was implemented in freshman history with the majority of sections taught by AVID-trained faculty and one section taught by a faculty member who did not participate in AVID professional development. For Cohort 2 (i.e., students who began college in fall 2015), the program was again implemented in freshman history, but also included a learning community for a subset of students. The learning community consisted of students taking common sections of freshman English, anthropology, and psychology (with all of these faculty members having participated in AVID professional development). Cohort 3 students were enrolled in AVID-infused sections of a newly developed first year experience course.

All students who began college at WSU, Tri-Cities in fall 2015 (Cohort 2) and fall 2016 (Cohort 3) were taught by AVID-trained faculty and comparison group students were not available at the university. The research team at Gibson, in consultation with WSU, Tri-Cities institutional research and program attempted to use first-time, full-time students at WSU, Vancouver as a comparison group. However, because it was not possible to control for institution-level effects associated with attending school at WSU, Vancouver for Cohorts 2 and 3 only descriptive comparisons of Cohort 2 and 3 AVID students are included in this report.

WSU, Tri-Cities Persistence Rates

**Figure E.27. – WSU, Tri-Cities, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 1, Fall 2014 to Fall 2018**

![Persistence Rates图表](image)

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 119 AVID students and 61 non-AVID students were included in these Cohort 1 analyses.
Figure E.28. – WSU, Tri-Cities, Cohorts 2 and 3 Persistence Rates, Fall 2015 to Fall 2018

Source: Administrative Data Collected from Participating Institutions, 2015-2018.

Note: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 106 Cohort 2 students and 117 Cohort 3 students were included in this figure.

WSU, Tri-Cities Course Passing Rates

Figure E.29. – WSU, Tri-Cities, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 1, Fall 2014 to Spring 2018

Source: Administrative Data Collected from Participating Institutions, 2014-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 119 AVID students and 61 non-AVID students were included in these Cohort 1 analyses.
Figure E.30. – WSU, Tri-Cities, Cohorts 2 and 3 Course Passing Rates, Fall 2015 to Spring 2018

Source: Administrative Data Collected from Participating Institutions, 2015-2018.
Note: + indicates a statistically significant difference at the 0.1 level,* indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 106 Cohort 2 students and 117 Cohort 3 students were included in this figure.

Four-Year Institutions: Bachelor's Degree Achievement Rates

In addition to the persistence and course passing rates presented in this section, bachelor’s degree achievement rates for Cohort 1 students were analyzed. Data were not available to conduct these analyses for all institutions.

Figure E.31. – Four-Year Institutions, Propensity Score Reweighted and Regression Adjusted Bachelor’s Degree Rates (Attained in Four Years) for Cohort 1

<table>
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<th>Bachelor’s Degree</th>
<th>College</th>
<th>AVID</th>
<th>Non-AVID</th>
<th>Estimate</th>
<th>P Value</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>University of North Carolina</td>
<td>41.4</td>
<td>41.5</td>
<td>-0.1</td>
<td>0.988</td>
<td>628</td>
</tr>
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<td></td>
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<td>0.751</td>
<td>1,713</td>
</tr>
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<td>180</td>
</tr>
<tr>
<td></td>
<td>Texas Wesleyan University</td>
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<td>0.165</td>
<td>310</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>0.576</td>
<td></td>
</tr>
</tbody>
</table>

Source: Administrative Data Collected from Participating Institutions, 2014-2018.
Notes: +p<0.1; * p<0.05; ** p<0.01.
Atlanta Technical College

For Atlanta Technical College, the Cohort 1 AVID group consisted of students in AVID-infused sections of Medical Terminology and Introduction to Computers courses; however, in fall 2015, the AVID program was expanded to include courses taught by AVID-trained faculty in a broader domain of disciplines. Cohort 2 AVID group consisted of students in AVID sections of a broader array of courses, including English Composition, Financial Accounting, Medical Terminology, and developmental courses in English and Math. For Cohort 3, Atlanta Technical College began to offer FYE courses, all of which were taught by faculty who had participated in AVID-based professional development. Thus, for Cohort 3, the comparison group consists of students who were not enrolled in an FYE course section at all. These analyses include 127 AVID students in Cohort 1 (fall 2014), 110 AVID students in Cohort 2 (fall 2015) and 77 AVID students in Cohort 3 (fall 2016) who were enrolled in an FYE course.

Atlanta Technical College Persistence Rates

Figure E.32. – Atlanta Technical College, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 1, Fall 2014 to Fall 2015

Source: Administrative Data Collected from Participating Institutions, 2014-2015.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 127 AVID students and 747 non-AVID students were included in these Cohort 1 analyses.
Figure E.33. – Atlanta Technical College, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 2, Fall 2015 to Fall 2016

Source: Administrative Data Collected from Participating Institutions, 2015-2016.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 110 AVID students and 247 non-AVID students were included in these Cohort 2 analyses.

Figure E.34. – Atlanta Technical College, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 3, Fall 2016 to Fall 2017

Source: Administrative Data Collected from Participating Institutions, 2016-2017.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 77 AVID students and 457 non-AVID students were included in these Cohort 3 analyses.
Atlanta Technical College Course Passing Rates

Figure E.35. – Atlanta Technical College, Cohort 1 Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for 2014-15 and 2015-16

Source: Administrative Data Collected from Participating Institutions, 2014-2016.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 127 AVID students and 747 non-AVID students were included in these Cohort 1 analyses.

Figure E.36. – Atlanta Technical College, Cohort 2 Propensity Score Reweighted and Regression-Adjusted Course Passing Rates, 2015-16 and 2016-17

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 110 AVID students and 247 non-AVID students were included in these Cohort 2 analyses.
Figure E.37. – Atlanta Technical College, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 3, 2016-17

Source: Administrative Data Collected from Participating Institutions, 2016-2017.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 77 AVID students and 457 non-AVID students were included in these Cohort 3 analyses.
Butler Community College

In fall of 2014, 2015, and 2016, Butler Community College offered students first year experience courses, with some sections taught by AVID-trained faculty and others taught by non-participating faculty. Usable Cohort 1 data were provided by Butler Community College; however, relatively small cohorts of 36 AVID students in Cohort 2 (fall 2015) and 85 AVID students in Cohort 3 (fall 2016) were included in the analysis. Due to the low number of students enrolled in AVID-infused courses and limited control variables available for use in the analysis for Butler Community College, results should be interpreted with caution. The availability of few control variables did not allow the research team to account for potential differences among students in the AVID cohort and control groups, particularly academic and socioeconomic differences, when comparing persistence and course passing rate outcomes.

Butler Community College Persistence Rates

Figure E.38. – Butler Community College, Cohort 2 Propensity Score Reweighted and Regression-Adjusted Persistence Rates, Fall 2015 to Fall 2016

Source: Administrative Data Collected from Participating Institutions, 2015-2016.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 36 AVID students and 81 non-AVID students were included in these Cohort 2 analyses.

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62 One course section of AVID students was removed from the analysis because it consisted of high school students enrolled in a dual credit course, which was taught by an AVID-trained faculty member. This further reduced the already limited AVID sample at Butler Community College.
Figure E.39. – Butler Community College, Cohort 3 Propensity Score Reweighted and Regression-Adjusted Persistence Rates, Fall 2016 to Fall 2017

Source: Administrative Data Collected from Participating Institutions, 2016-2017.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 81 AVID students and 85 non-AVID students were included in these Cohort 3 analyses.

Butler Community College Course Passing Rates

Figure E.40. – Butler Community College, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 2, 2015-16 to 2016-17

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 36 AVID students and 81 non-AVID students were included in these Cohort 2 analyses.
Figure E.41. – Butler Community College, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 3, 2016-17 and 2017-18

Source: Administrative Data Collected from Participating Institutions, 2016-2018.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 81 AVID students and 85 non-AVID students were included in these Cohort 3 analyses.
Saddleback College

At Saddleback College, the fall 2014 AVID group included only students enrolled in AVID-infused sections of the Counseling 140 (FYE) course in fall 2014, which emphasized study skills and college/career planning, and their results were compared to students in non-AVID sections of that course. In fall 2015 and fall 2016, the AHE program was expanded substantially at Saddleback College with AVID-trained faculty teaching a wide array of courses that were designated as “AVID Courses” promoted in course registration information. These AVID courses included sections taught by faculty who had attended AVID professional development or were part of the college’s teaching practicum. Thus, students were aware of the AVID course status prior to enrolling in the course section. In fall 2015 (Cohort 2) and fall 2016 (Cohort 3), the AVID cohort included all students who were enrolled in an AVID-infused course, regardless of discipline, during the first semester of that respective academic year. The persistence and course passing outcomes for these students are compared to those for a matched comparison group of students who did not take an AVID-infused course during each of these fall semesters. A total of 206 Cohort 1 students participated in the AVID Counseling 140 (i.e., FYE) course in the fall of 2014. A total of 1,039 Cohort 2 students and 731 Cohort 3 students were enrolled in an AVID-infused course in fall 2015 and fall 2016, respectively.

Saddleback College Persistence Rates

Figure E.42. – Saddleback College, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 1, Fall 2014 to Fall 2015

Source: Administrative Data Collected from Participating Institutions, 2014-2015.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 206 AVID students and 437 non-AVID students were included in these Cohort 1 analyses.
Figure E.43. – Saddleback College, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 2, Fall 2015 to Fall 2016

Source: Administrative Data Collected from Participating Institutions, 2015-2016.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 1,039 AVID students and 360 non-AVID students were included in these Cohort 2 analyses.

Figure E.44. – Saddleback College, Propensity Score Reweighted and Regression-Adjusted Persistence Rates for Cohort 3, Fall 2016 to Fall 2017

Source: Administrative Data Collected from Participating Institutions, 2016-2017.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 731 AVID students and 1,640 non-AVID students were included in these Cohort 3 analyses.
Saddleback College Course Passing Rates

Figure E.45. – Saddleback College, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 1, 2014-15 to 2015-16

Source: Administrative Data Collected from Participating Institutions, 2014-2016.

Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 206 AVID students and 437 non-AVID students were included in these Cohort 1 analyses.

Figure E.46. – Saddleback College, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 2, 2015-16 to 2016-17


Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 1,039 AVID students and 360 non-AVID students were included in these Cohort 2 analyses.
Figure E.47 – Saddleback College, Propensity Score Reweighted and Regression-Adjusted Course Passing Rates for Cohort 3, 2016-17 and 2017-18

Source: Administrative Data Collected from Participating Institutions, 2016-2018.
Notes: + indicates a statistically significant difference at the 0.1 level, * indicates a statistically significant difference at the 0.05 level, and ** indicates a statistically significant difference at the 0.01 level. A total of 731 AVID students and 1,640 non-AVID students were included in these Cohort 3 analyses.
Appendix F – Methodological Approach to Estimating Relationships between AVID Participation in High School and College Outcomes

Design Rationale

Neither students nor instructors were randomly assigned to participate in the AVID FYE intervention during college. For instance, academically low-performing students may have elected to participate, or students at risk of not persisting may have been urged to participate in the program to improve their chances of remaining enrolled in college and performing well in their courses. Similarly, participation in AVID in high school is not randomly assigned and may affect a student’s decision to enroll in AVID during college.

This type of intentional assignment based on student characteristics that are linked to academic performance may distort the relationship between AVID program participation and the outcomes of interest. The evaluation team observed outcomes for students who elected to participate, and those who did not; we did not observe the outcomes for each student for each condition: their performance if they participated in AVID and if they had not participated in AVID.

The evaluation team does not have sufficient information to estimate propensity scores that estimate the likelihood of a student participating in AVID during high school. Because these analyses do not have random assignment, the analyses should not be interpreted as causal results. The results may be interpreted as descriptive differences between the students who participated in AVID and those who did not.

Method

To test whether treatment effects differ across the subgroup of students who took AVID in high school, we estimated a model that included the interaction between taking AVID in college and taking AVID in high school:

The regression specification used in the analysis took on the following form:

\[ y = \beta_1 \text{AvidCollege} + \beta_2 \text{AvidHighSchool} + \beta_3 \text{AvidBoth( College + HS) + \beta_dX_d + \beta_iS_i + \epsilon} \]

where \( Y \) is a continuous student outcome (the percentage of courses passed in the first school year with a grade of C or better); AVIDCollege represents an indicator variable that the student participated in AHE in college; AVIDHighSchool represents an indicator variable that the student participated in AVID in high school; and AVIDBoth represents the interaction of a student taking AVID in both high school and AHE in college; \( \beta_dX_d \) is a vector of control variables including age, gender, ethnicity, high school GPA, and parent’s education and a vector of the associated coefficients; \( \beta_iS_i \) represents the college fixed
effect, $\varepsilon$ represents the error term.\footnote{Dichotomous dummy indicator variables denoting school (Texas Wesleyan=1, UNC Asheville=2, and CSU-San Marcos serves as the omitted reference group).} For binary outcomes (fall-to-spring persistence and freshman to sophomore persistence), a logistical regression was used instead of the linear probability model.

**Descriptive Results**

Table F.1 reports the freshman-to-sophomore year persistence based on student AVID participation in high school and college.

**Table F.1. – Freshman Fall-to-Spring Persistence Rates by Student High School and College AVID Participation**

<table>
<thead>
<tr>
<th>Took AVID in College</th>
<th>Did not take AVID in High school</th>
<th>Difference</th>
<th>T-statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Took AHE in College</td>
<td>95.2%</td>
<td>97.1%</td>
<td>-1.9%</td>
<td>-0.94</td>
</tr>
<tr>
<td>Did not take AHE in College</td>
<td>94.3%</td>
<td>94.7%</td>
<td>-0.4%</td>
<td>-0.14</td>
</tr>
<tr>
<td>Total</td>
<td>94.7%</td>
<td>96.3%</td>
<td>-1.5%</td>
<td>-0.91</td>
</tr>
</tbody>
</table>

*Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course and Administrative Data Collected from Participating Institutions.*

Table F.2 reports the persistence rates between fall of the freshman year and fall of the sophomore year based on student AVID participation in high school and college.

**Table F.2. – Freshman-to-Sophomore Year Persistence Rates by Student High School and College AVID Participation**

<table>
<thead>
<tr>
<th>Took AVID in College</th>
<th>Did not take AVID in High school</th>
<th>Difference</th>
<th>T-statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Took AHE in College</td>
<td>78.6%</td>
<td>78.6%</td>
<td>0.0%</td>
<td>0.00</td>
</tr>
<tr>
<td>Did not take AHE in College</td>
<td>79.6%</td>
<td>82.7%</td>
<td>-3.1%</td>
<td>-0.60</td>
</tr>
<tr>
<td>Total</td>
<td>79.1%</td>
<td>80.0%</td>
<td>-0.9%</td>
<td>-0.29</td>
</tr>
</tbody>
</table>

*Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course and Administrative Data Collected from Participating Institutions.*

Table F.3 reports the freshman year course passing rates based on student AVID participation in high school and college.

**Table F.3. – Freshman Course Passing Rates by Student High School and College AVID Participation**

<table>
<thead>
<tr>
<th>Took AVID in College</th>
<th>Did not take AVID in High school</th>
<th>Difference</th>
<th>T-statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Took AHE in College</td>
<td>87.0%</td>
<td>81.3%</td>
<td>5.7%</td>
<td>2.49</td>
</tr>
<tr>
<td>Did not take AHE in College</td>
<td>85.4%</td>
<td>85.8%</td>
<td>-0.4%</td>
<td>-0.16</td>
</tr>
<tr>
<td>Total</td>
<td>86.2%</td>
<td>82.9%</td>
<td>3.3%</td>
<td>1.89</td>
</tr>
</tbody>
</table>

*Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course and Administrative Data Collected from Participating Institutions.*
Regression Results

The following tables report the coefficients from the regression models used to estimate the relationship between postsecondary outcomes and AVID participation in high school and college. When logistic regression was used for persistence analyses, the reported coefficients are odds ratios.

Table F.4. – Odds Ratios From Logistic Regression of Freshman Fall-To-Spring Persistence Rates on AVID Participation

<table>
<thead>
<tr>
<th></th>
<th>Odds ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Took AVID in High School</td>
<td>0.619**</td>
</tr>
<tr>
<td></td>
<td>(0.030)</td>
</tr>
<tr>
<td>Took AVID in College</td>
<td>0.759</td>
</tr>
<tr>
<td></td>
<td>(0.307)</td>
</tr>
<tr>
<td>Took AVID in Both High School and College</td>
<td>1.918</td>
</tr>
<tr>
<td></td>
<td>(0.881)</td>
</tr>
</tbody>
</table>

Source: Survey and administrative data collected from participating institutions, 2016.

Note: Logistic regression model includes controls for college attended, age, gender, ethnicity, high school GPA, First Generation College, Pell recipient, and whether a student had a job. Standard errors in parentheses. + p<0.1; * p<0.05; ** p<0.01. N=899.

Table F.5. – Odds Ratios From Logistic Regression of First to Second Year Persistence on AVID Participation

<table>
<thead>
<tr>
<th></th>
<th>Odds ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Took AVID in High School</td>
<td>0.989</td>
</tr>
<tr>
<td></td>
<td>(0.284)</td>
</tr>
<tr>
<td>Took AVID in College</td>
<td>0.706</td>
</tr>
<tr>
<td></td>
<td>(0.214)</td>
</tr>
<tr>
<td>Took AVID in Both High School and College</td>
<td>1.035</td>
</tr>
<tr>
<td></td>
<td>(0.454)</td>
</tr>
</tbody>
</table>

Source: Survey and administrative data collected from participating institutions, 2016.

Note: Logistic regression model includes controls for college attended, age, gender, ethnicity, high school GPA, First Generation College, Pell recipient, and whether a student had a job. Standard errors in parentheses. + p<0.1; * p<0.05; ** p<0.01. N=899.
Table F.6. – Regression Coefficients From Analysis of Course Passing Rates on AVID Participation

<table>
<thead>
<tr>
<th>Took AVID in High School</th>
<th>Regression Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Took AVID in High School</td>
<td>-0.793</td>
</tr>
<tr>
<td></td>
<td>(1.581)</td>
</tr>
<tr>
<td>Took AVID in College</td>
<td>0.168</td>
</tr>
<tr>
<td></td>
<td>(0.838)</td>
</tr>
<tr>
<td>Took AVID in Both High School and College</td>
<td>-4.556</td>
</tr>
<tr>
<td></td>
<td>(2.134)</td>
</tr>
</tbody>
</table>

Source: Survey and administrative data collected from participating institutions, 2016.

Note: Regression model includes controls for college attended, age, gender, ethnicity, high school GPA, First Generation College, Pell recipient, and whether a student had a job. Standard errors in parentheses. + p<0.1; * p<0.05; ** p<0.01. N=899.

Table F.7. – Student Demographics By Participation In AVID In High School For Students At Four-Year Colleges, Cohort 3, 2016-17 School Year

<table>
<thead>
<tr>
<th></th>
<th>Took AVID in High School</th>
<th>Did not take AVID in High School</th>
<th>Difference</th>
<th>T-statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>64.9%</td>
<td>64.0%</td>
<td>0.9%</td>
<td>-0.28</td>
<td>0.78</td>
</tr>
<tr>
<td>Black</td>
<td>11.2%</td>
<td>21.3%</td>
<td>-10.0%</td>
<td>3.83</td>
<td>0.00</td>
</tr>
<tr>
<td>Hispanic</td>
<td>63.2%</td>
<td>24.0%</td>
<td>39.1%</td>
<td>-13.27</td>
<td>0.00</td>
</tr>
<tr>
<td>White</td>
<td>31.6%</td>
<td>53.1%</td>
<td>-21.5%</td>
<td>6.51</td>
<td>0.00</td>
</tr>
<tr>
<td>Other race</td>
<td>40.0%</td>
<td>23.9%</td>
<td>16.1%</td>
<td>-5.43</td>
<td>0.00</td>
</tr>
<tr>
<td>First Generation Student</td>
<td>57.5%</td>
<td>36.3%</td>
<td>21.3%</td>
<td>-6.53</td>
<td>0.00</td>
</tr>
<tr>
<td>Received Pell</td>
<td>46.8%</td>
<td>31.9%</td>
<td>14.9%</td>
<td>-4.67</td>
<td>0.00</td>
</tr>
<tr>
<td>Working</td>
<td>49.8%</td>
<td>42.2%</td>
<td>7.6%</td>
<td>-2.29</td>
<td>0.02</td>
</tr>
<tr>
<td>Took AVID in College</td>
<td>67.7%</td>
<td>60.6%</td>
<td>7.1%</td>
<td>-2.18</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Source: Fall 2016 Survey of Students Regarding Targeted Freshman Course from Participating Institutions
Appendix G – AVID for Higher Education Classroom Observation Tool

<table>
<thead>
<tr>
<th>School Name</th>
<th>Date</th>
<th>Observer Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>______________________</td>
<td>____________</td>
<td>_________</td>
</tr>
</tbody>
</table>

Course Name: ____________________________________________________________

Instructor Name: _________________________________________________________

Time of Observation__________ to ________________

Total number of students present: ____________

Total number of tutors/mentors present: ____________

Description of Lesson:
________________________________________________________________________
________________________________________________________________________

INSTRUCTOR-FOCUSED OBSERVATIONS AND RATINGS

<table>
<thead>
<tr>
<th>Domain</th>
<th>Strategy</th>
<th>Observation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing</td>
<td>Instructor provides authentic writing opportunities (i.e., personal material, content of their actual lives)</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor provides opportunities for students to reflect on writing</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor provides opportunities for peer evaluation of writing</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td>Inquiry</td>
<td>Instructor asks open-ended questions</td>
<td>□ Absent</td>
<td>□ Present, but not common</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Common</td>
<td></td>
</tr>
<tr>
<td>Domain</td>
<td>Strategy</td>
<td>Observation</td>
<td>Comments</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>Feedback loops present</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prompt student thought process (students asked to explain thinking, students asked to extend responses/actions)</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaffolding</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expands and clarifies information</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor’s lecture includes 10 -2 timing where 10 minutes of lecture is followed by 2 minutes of student reflection</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourages student persistence and completion</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td>Provide opportunities for student group work</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td>Provide structures for peer sharing (e.g., World Café, Gallery Walks, Carousel Writing, Carousel Brainstorming, Jigsaw with Home Expert Groups, Table Talk, Pair-Shares, Socratic Seminars, Philosophic Chairs)</td>
<td>□ Observed at least once</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domain</td>
<td>Strategy</td>
<td>Observation</td>
<td>Comments</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Promote peer conversations</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide opportunities for students to articulate what was learned in groups</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide opportunities for students to engage in joint problem solving</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Instructor discusses or references the use of Cornell Notes and/or note-taking strategies for students, or students are observed using these strategies</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor discusses study skills and approaches with students (e.g., study space and time organizers)</td>
<td>□ Observed at least once</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>Instructor provides opportunities to promote vocabulary building</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summarizing</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor provides pre-, during-, and post-reading strategies with students (e.g., purposeful reading, marking the text, writing in the margins, reflection)</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
</tr>
<tr>
<td>Domain</td>
<td>Strategy</td>
<td>Observation</td>
<td>Comments</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>Instructor engages students in texts that are challenging and thought provoking</td>
<td>□ Yes  □ No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor provides opportunities for students to engage in student-centered dialogue in Socratic Seminar or structured debate if Philosophic Chairs</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor encourages students to create questions over challenging text and has questions prepared to lead the dialogue</td>
<td>□ Yes  □ No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor encourages sharing of student ideas and opinions (contributions)</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instructor utilizes Philosophic Chairs strategy in lesson</td>
<td>□ Yes  □ No</td>
<td></td>
</tr>
<tr>
<td>Socratic Seminar or Philosophic Chairs</td>
<td>Instructor connects content to student’s “real world” (real-world application/related to student’s lives/culturally relevant)</td>
<td>□ Absent □ Present, but not common □ Common</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>Most students are actively engaged in the learning process</td>
<td>□ Yes  □ No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Most students are engaged in the learning process by taking notes or participating until dismissed.</td>
<td>□ Yes  □ No</td>
<td></td>
</tr>
</tbody>
</table>
## Classroom Environment Observations and Ratings

<table>
<thead>
<tr>
<th></th>
<th>First Half of Class Session</th>
<th>Second Half of Class Session</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Engagement</strong></td>
<td>□ High (Almost all students are engaged, on-task, and actively participating for the majority of the observed session)</td>
<td>□ High (Almost all students are engaged, on-task, and actively participating for the majority of the observed session)</td>
</tr>
<tr>
<td></td>
<td>□ Medium (Either only half of the students are engaged, on-task and actively participating for the majority of the session, or students are sometimes engaged, sometimes not engaged)</td>
<td>□ Medium (Either only half of the students are engaged, on-task and actively participating for the majority of the session, or students are sometimes engaged, sometimes not engaged)</td>
</tr>
<tr>
<td></td>
<td>□ Low (Most students are not engaged, off-task, and/or not actively participating for the majority of the session)</td>
<td>□ Low (Most students are not engaged, off-task, and/or not actively participating for the majority of the session)</td>
</tr>
<tr>
<td><strong>Classroom Energy Level - Instructor</strong></td>
<td>□ High (For the majority of the session, the instructor’s energy level is high)</td>
<td>□ High (For the majority of the session, the instructor’s energy level is high)</td>
</tr>
<tr>
<td></td>
<td>□ Medium (The instructor’s energy level is sometimes high, sometimes not)</td>
<td>□ Medium (The instructor’s energy level is sometimes high, sometimes not)</td>
</tr>
<tr>
<td></td>
<td>□ Low (For the majority of the observed session, the instructor’s energy level is not high)</td>
<td>□ Low (For the majority of the observed session, the instructor’s energy level is not high)</td>
</tr>
<tr>
<td><strong>Classroom Energy Level - Students</strong></td>
<td>□ High (The majority of students have high energy levels for some to most of the observation period)</td>
<td>□ High (The majority of students have high energy levels for some to most of the observation period)</td>
</tr>
<tr>
<td></td>
<td>□ Medium (Some students have high energy level for at least part of the observation period)</td>
<td>□ Medium (Some students have high energy level for at least part of the observation period)</td>
</tr>
<tr>
<td></td>
<td>□ Low (Few students, if any, have high energy level during the observation period)</td>
<td>□ Low (Few students, if any, have high energy level during the observation period)</td>
</tr>
<tr>
<td><strong>Student Collaboration</strong></td>
<td>□ High (The majority of students are engaged in active discussion with peers and with the instructor)</td>
<td>□ High (The majority of students are engaged in active discussion with peers and with the instructor)</td>
</tr>
</tbody>
</table>
Other Notable Observations from Session:

Summary of AVID-Based Strategies observed:

Table G.1. – Frequently Used AVID Strategies by Faculty and Students in Class

<table>
<thead>
<tr>
<th>AVID-based Strategy</th>
<th>Observed</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think-Pair-Share</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socratic Seminar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KWLHW (Know, Will or Want, Learned, How, Where)</td>
<td></td>
<td></td>
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<tr>
<td>Critical Reading: Pausing to Connect Ideas</td>
<td></td>
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<tr>
<td>Critical Reading: Rereading the Text</td>
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<tr>
<td>Critical Reading: Charting the Text</td>
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<tr>
<td>Think Aloud</td>
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<td></td>
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<tr>
<td>Focused Note Taking: Cornell Notes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking Lot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summarizing the Text</td>
<td></td>
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<tr>
<td>Summary Reflections</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costa’s Levels of Thinking and Questioning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jigsaw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophical Chairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-2 Instructional Strategy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>