

THE IMPACT OF STATE FUNDING ON DUAL ENROLLMENT PARTICIPATION IN CTAE PROGRAMS



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INTRODUCTION

Georgia Piedmont Technical College (GPTC), a two-year public college in the southeastern United States, is a member of an open-access, public college system. With 22 technical colleges and 85 campuses located statewide, these public institutions reach nearly all of the counties in the state. Primary to its mission, GPTC provides opportunities for students to enroll in academic courses to transfer into the state's university system or in occupational courses designed to prepare students to be workforce ready.

A significant portion of the college-wide population is high school students participating in dual enrollment, a program for eligible students to take college classes that will count toward both a high school and a postsecondary credential. The population of dual enrollment students enrolled through GPTC tripled within a five-year period and, as of 2022, accounts for more than 20 percent of the overall college-wide enrollment. This growth can be attributed, in part, to the availability of state funding for dual enrollment. GPTC has also dedicated staff, as well as leadership at the state level, through system-wide initiatives to support postsecondary opportunities for high school students to encourage growth in these programs.

The exponential growth of dual enrollment created a strain on state budgeting in Georgia. As a result, House Bill (H.B.) 444 was introduced in 2020 to curtail spending. Under the changed legislation, dual enrollment funding covers only 30 credits for eligible students in 10th to 12th grade. Students who take more than the 30 credits, or who lose funding due to increased restrictions on eligibility, can pay for courses.

Under a provision in H.B. 444, students in high-demand career, technical and agricultural education (CTAE) programs can access another funding source called the HOPE Career Grant. This program is available to any Georgia resident and is a funding initiative to promote targeted, high-demand career pathways. Students must apply for these grants, and eligibility depends on meeting and maintaining academic requirements. This expanded funding is part of a statewide strategy to increase enrollment in high-demand fields and aligns with a nationwide trend to promote postsecondary attainment and workforce readiness through dual enrollment (Zinth & Barnett, 2018). Despite this focus, only about 30 percent of dual enrollment students participate in CTAE programs.

Financial barriers can prevent students, particularly those from traditionally under-represented populations (Roughton, 2016), from participating and persisting in the program. As one of the primary providers of dual enrollment and CTAE in the college's region, GPTC looks to understand the current population to strategize ways to reach a broader population of students who have otherwise not enrolled in CTAE programs through dual enrollment. I will focus on identifying and

understanding the recent enrollment and persistence trends at GPTC to promote increased participation, specifically among those traditionally under-represented in CTAE programs.

LITERATURE REVIEW

There are several different acceleration models for students to gain college credits while still in high school. One of the most prominent options is through dual enrollment, which enables students to enroll in a college while in high school. The classes they take count toward both high school and college requirements and can accelerate time to graduation. In this model, participation has grown nationwide. More than 1.4 million high school students participate in dual enrollment programs, with more than 80 percent of high schools represented (Marken et al., 2013). Students participating are typically White, female and academically high achieving. Recent emphasis has been placed on expanding access to dual enrollment programs, and 23 states have enacted legislation to do just that (Williams & Perry, 2020). Advocates for this expansion focus on the academic and psychological benefits for students who participate, especially those who are traditionally under-represented (Taylor, 2015).

This increase in access allows more students to benefit from the program. Dual enrollment provides challenging coursework to participating students, who have higher grade point averages and are less likely to need remediation when enrolling in college (An, 2015). This model can especially benefit high school seniors, reducing the likelihood of the “senior slump” and keeping them engaged in their studies (Brophy & Johnson, 2007). Advocates also point to increased exposure for students who may otherwise not have had access to college (Bailey & Karp, 2005). Research indicates that dual enrollment programs can offer a bridge for students to college (Pierce, 2017) and can be a tool for families who do not have college experience to guide their children themselves (Roughton, 2016).

Access to dual enrollment programs can also mitigate financial barriers to college. While there are a number of funding models nationwide, in most models costs to the student are reduced or eliminated completely (Pierce, 2017). States that have made efforts to remove financial barriers see a larger proportion of minority and low-income students participate (Zinth, 2015). Research suggests that students who are of a low-socioeconomic background benefit more from dual enrollment than those who are of a higher socioeconomic background (An, 2013). One reason can be due to a “warming-up effect,” where students who otherwise have not had exposure to college are able to participate (Taylor, 2015). This exposure can be an encouragement to students and their families to pursue college enrollment.

CONCEPTUAL FRAMEWORK

This study uses elements of Laura Perna's (2006) conceptual model of student college choice as a frame. Though Perna created this model with a traditional student in mind, understanding the dual enrollment student within this context can assist with understanding their motivations for participating. It can further support identifying any barriers these students may encounter that would discourage participation or persistence.

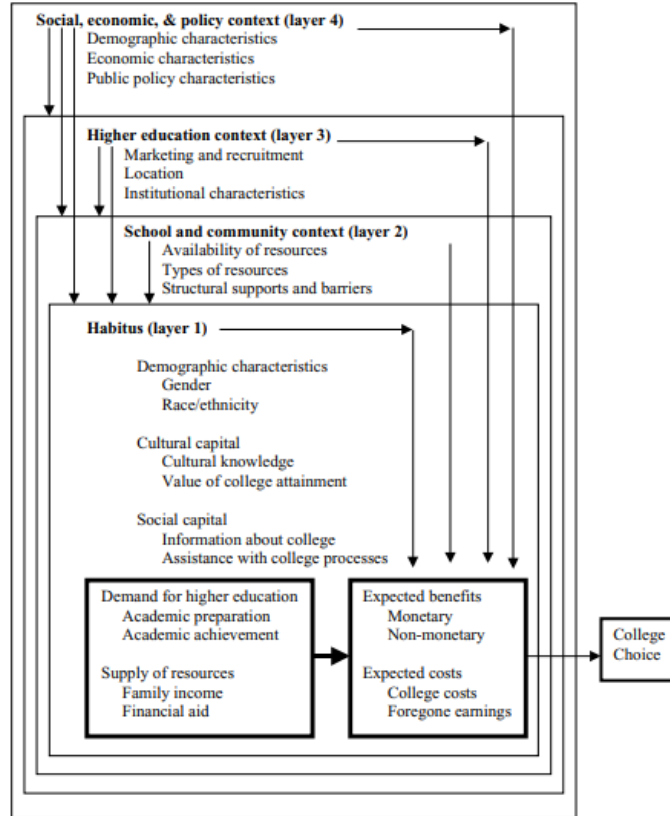
The first layer, *habitus*, is an internal examination of the student and focuses on the student's demographic, social, and economic background. This snapshot of the student contributes to the understanding of why they are motivated to enroll. This first layer is central to the student experience. As the model expands from layer two through four, Perna's framework focuses on external factors.

Layer two is the social and community context, which Perna identifies as the organizational construct. This layer can either promote or prevent college choice. For the dual enrollment student, this structure is created by both the high school and the college staff working with the family. This relationship is critical, as both students and parents can be encouraged or discouraged based on these relationships (Pierce, 2017). Support from a teacher or mentor, even more than their own self-efficacy, can be a determining factor for a student to pursue a challenging curriculum, especially for women (Stearns et al., 2016). That connection between a parent and school staff members can be just as important. Parents who identify with the school professional are more likely to advocate for their child to take advanced coursework (Grissom et al., 2015).

Layer three focuses on the higher education context. This layer can include the outreach and marketing efforts the colleges make. Perna also emphasizes the institution and location of learning. Especially for the dual enrollment student, this awareness of a college, and access to it, is critical to their ability to participate. Some high schools offer dual enrollment courses on their campus as part of the school day and may contribute to the idea of a college-going culture. Understanding the role of the college in how it engages with, and is available to, the high school student is an important aspect of participation in the dual enrollment program.

The fourth, and outermost, layer focuses on the policies that influence college choice. For the dual enrollment student, those policies include the state funding that may be available, which can drive participation. However, other policy elements beyond financial rules can affect a student's decision to enroll. At the state and/or local level, requirements can be put in place that determine eligibility. These requirements can be age, grade, and academic metrics, just to identify a few. These regulations ultimately determine who can participate in dual enrollment.

This study will use the layers outlined in Perna’s model as a guide to understand the high school student within the capacity of their engagement with their school, college, and state dual enrollment stakeholders and how this forms their perception on enrolling. Reviewing these dynamics within the context of the GPTC dual enrollment initiatives will support their focus on how to expand participation.



Adapted from “Studying college access and choice: A proposed conceptual model,” by L. Perna, 2006, Higher Education: Handbook of Theory and Research, XXI

[Figure 1. Student College Choice Conceptual Framework](#)

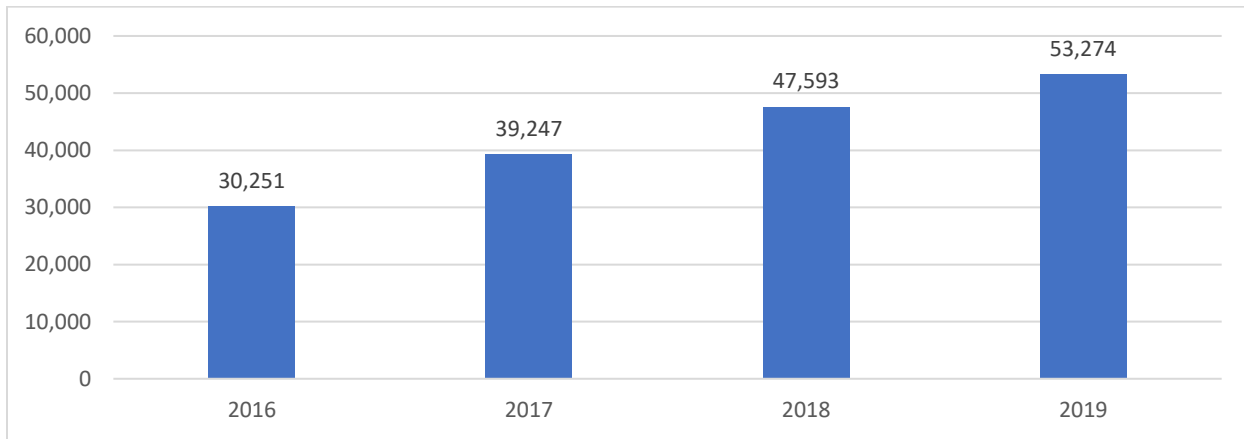
ORGANIZATIONAL CONTEXT

GPTC is a member of TCSG, part of a collection of colleges in an open-access, public college system. With 22 technical colleges, 85 campuses, and a network of college and career academies (CCAs) operated in partnership with the local K-12 systems, TCSG institutions reach communities

statewide. Each year, more than 130,000 students enroll, and of those, more than 20 percent are dual enrollment students.

In 2009, the Georgia Legislature passed the Move On When Ready Act establishing dual enrollment as a statewide mandate. The act was reaffirmed in 2015, increasing funding and expanding access to a broader student population. Under the 2015 law, students in 9th through 12th grade are able to take academic core classes that apply toward a four-year degree or occupational courses focused on preparing students for a high-demand career field. Statewide articulation agreements guarantee ease of transfer between colleges, encouraging students to continue with Georgia colleges even after their high school graduation (Lee, 2019). Students are able to take classes at a college campus, online, or at a participating high school through concurrent enrollment. Many school systems also have CCAs — public high schools designed in partnership with TCSG and the local technical college in the district. Across the state, CCAs have become model schools, equipping students with the technical and soft skills needed to join a highly trained workforce in fields vital to Georgia’s economy.

Dual enrollment has grown exponentially since the 2015 legislation. In 2019, more than 53,000 students enrolled in a participating college (Figure 2). Of that number, nearly 32,000 enrolled in a technical college (Figure 3).



[Figure 2. Program Growth in Georgia, Student Headcount](#) (Lee, 2019)



[Figure 3. Program Enrollment Through TCSG Colleges](#) (TCSG System Scorecard, n.d.)

The dual enrollment program is funded through the governor’s budget and regulated by the Georgia Student Finance Commission. In FY 2016, the cost was \$49 million. By FY 2019, the spending rose to \$105 million (Lee, 2019). Despite this increase, dual enrollment remains approximately 1 percent of the state spending on public K-12 and higher education in Georgia (Lee, 2019). Though nearly 60 percent of students who participated in dual enrollment classes enrolled through a TCSG college, this enrollment accounted for only 49 percent of the state funds due to the lower costs of tuition.

PROBLEM OF PRACTICE

In Georgia, dual enrollment has been one of the state’s most popular education initiatives, allowing eligible high school students an opportunity to take college classes without paying the cost of tuition. Students are able to take both academic and occupational courses that count toward high school and college degrees. The program growth has led to an increased cost for the state budget. In spring 2020, H.B. 444 was introduced to limit the number of credits for which students can receive funding and restrict student eligibility to participate in the program. These limitations were part of a cost-saving measure and effort to balance the state budget. The restrictions apply to students enrolled at Georgia public universities, private colleges, and the 22 member colleges of TCSG. As a result, GPTC looks to have a better understanding of the impact that this legislative change will continue to have on dual enrollment participation in CTAE programs, specifically for those populations that are traditionally under-represented.

PROBLEM STATEMENT

With the restrictions implemented by H.B. 444 in 2020 that changed the dual enrollment funding model in Georgia, the state is balancing the financial implications needs of opportunity and access for high school students to participate in the program. With this in mind, GPTC looks to have a fuller understanding of the dual enrollment students who have been most affected by the change, specifically as it relates to enrollment in CTAE programs. This understanding will inform future recruitment and retention efforts specifically for under-represented student populations.

RESEARCH QUESTIONS

1. How has H.B. 444 affected student enrollment?
 - a. How has the funding cap affected subgroups of students, specifically by socioeconomic status, race, gender and region?
 - b. What CTAE fields of study have been most affected?

DATA COLLECTION AND ANALYSIS

I collected institutional data dating back to 2017 from GPTC's Office of Institutional Effectiveness. To receive the data, I followed the college's Institutional Review Board (IRB) protocols. The student information was deidentified to ensure the anonymity of the student. The fields that were in the data set included:

Gender, race, college attended, term enrollment, placement test mechanism, placement test score, credits attempted, credits earned, course enrolled, letter grade, course modality, location of learning, and zip code.

This information provided by the college created a student profile of participation and persistence, both before and after the legislative change that limited the number of funding hours for dual enrollment students. Absent from the data set was student-level data related to household income and educational attainment. This demographic information is not tracked by GPTC. Research suggests that family background is a predictor of student success. To create a fuller profile of the student, I used the student's zip code to make predictions about the family background. Pulling data from the American Community Survey's zip code tabulation areas, I accessed tables related to household income and educational attainment. I used the R Project for Statistical Computing to conduct all quantitative analysis.

Additionally, I used publicly available data from TCSG to identify system-wide enrollment, persistence and graduation trends for dual enrollment students over the past five years.

FINDINGS

In addition to headcount dropping in the time period after the legislative change, student-level course enrollment also decreased. On average, students were taking nearly 13 credits pre-legislative change. In the time period after the change, student participation dropped to 10 credits.

Students enrolled in the GPTC program are disproportionately from households that are below the median income for the region (Figure 4). Similarly, students who participated came from households that had some college, with course attempts rising in correlation to level of family academic attainment.

All fields of CTAE study have been affected. In the combined period of summer 2020 to spring 2022, students disproportionately identified as being on a general academic studies track, while in the previous years, students enrolled in a fairly equal measure as general studies or technical studies. Of the subject areas that were most affected, courses within the business programs saw the steepest decline in participation. In the period prior to the legislative change, student participation in courses under the business programs umbrella accounted for nearly 40 percent of class-level enrollment. In the period beginning summer 2020, that participation dropped to approximately 14 percent. Looking at student-level participation, those who took a business course prior to 2020 were often doing so as elective credit to complement a general academic studies track. With the change limiting the number of credits students were eligible to receive funding for, these students were less likely to take elective courses that would not transfer into the university system. Programs that have been identified as high demand saw little enrollment change, proportionate to overall CTAE enrollment.

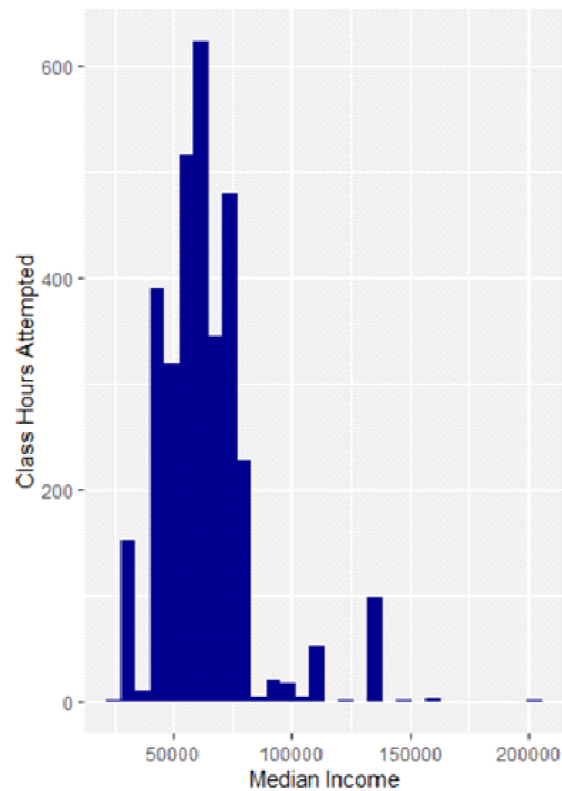


Figure 4. Student Enrollment By Median Income

RECOMMENDATIONS

As GPTC navigates this changing funding model, some internal strategies will better target student enrollment and retention in CTAE programs.

Focus on recruiting students who are diverse and who are from lower socioeconomic backgrounds by strengthening partnerships between the colleges and the local school systems so they can advise students on the availability of dual enrollment and funding for the courses

The schools within the GPTC service district that have the highest participation in dual enrollment are part of a partnership and collaborate on recruitment and retention. Within the student college choice conceptual framework, layer two focuses on the social and community context. With the dual enrollment student, this context can be directly tied to high school support and intervention. Layer three focuses on the outreach and marketing efforts, as well as institutional qualities. From the perspective of the dual enrollment student, this marketing can be in the form of recruiting and outreach, but the high school counselor or school designee also has a role in promoting opportunities to the student. GPTC can create recruitment materials that include students who are demographically reflective of the community that the local college serves and focus on programs that are relevant to the local economy. Colleges and school systems can partner for information sessions that present the dual enrollment benefits to parents as stakeholders, citing reduced college costs and other tangible benefits.

Dual enrollment participation is also driven by a college-going expectation from high schools, families and peers, as much as it is self-driven by the student. Targeting efforts in the schools that have lower participation and success rates and tailoring recruitment and retention efforts to the specific population that is served can improve enrollment and persistence. This recruitment can be for general enrollment, but a more tailored approach to programs of study and courses that are applicable to student needs can increase participation. Dual enrollment is promoted as a way to maximize the academic experience and shorten time to degree. By outlining the path for a student to complete a college credential, students can become more knowledgeable about the process and see the benefits for themselves. GPTC can create specific materials, focused on the additional grant available for CTAE. It can create these materials in partnership with the school systems to promote the in-demand fields that are available to students and describe how they can enter the workforce with a high-paying job, which can increase participation when they otherwise might not have enrolled and contribute to increased levels of academic success (Hughes et al., 2012).

Additional recommendations are for implementation at the state level. Dual enrollment is a popular program nationwide with states adopting a variety of funding models. However, only nine states have implemented restrictions that put a credit hour cap on eligibility similar to what was enacted in H.B. 444 (Zinth, 2019). Other states have been able to put into place program regulations that control spending while still creating opportunities for enrollment.

Re-examine the amount of tuition allocated by learning location

When establishing the tuition rates, consider different fee structures by location of learning. One example would be establishing rates of tuition for classes taken at a college campus or online that are different from a course taken at a high school during the student's school day. As an example, Indiana authorizes the Commission for Higher Education to identify a set of concurrent enrollment courses (taught by an approved high school instructor at the high school) to receive state funding and has set a rate of \$25 per credit hour (Zinth, 2019). Florida waives all tuition and fees for students taking concurrent enrollment classes. States such as Indiana and Florida implement these initiatives because the student is taking part in the class taught by a high school teacher during regular school hours. Essentially, funding has already been provided from the state through district full-time equivalent charges (Zinth, 2019). In FY 2019, approximately 14 percent of students took at least one class on the high school campus, and 5 percent of the dual enrollment population took classes exclusively through their high school (Lee, 2019). Reallocation of those funds to an on-site or online class could help offset spending. These reduced tuition rates can support the budget to allow for more students to participate in dual enrollment and extend the life of the program.

Allow access to HOPE Grant and Career Grant programs

HOPE Grant and HOPE Career Grant programs are state scholarships available for eligible students enrolled in a diploma or technical certificate of credit (TCC). These scholarships provide 80 percent to 100 percent of tuition funding for programs in career areas that have been deemed high-demand fields. Allowing students an opportunity to access these funds while still in high school will accelerate student learning and bridge the financial gap a student may experience once they have exhausted their dual enrollment funding allotment.

Having access to state scholarships while still in high school can support learning, especially for those in financial need who cannot afford to pay out of pocket. The Georgia State Board of Education (2020) allows students to graduate from high school if they have earned a technical credential in targeted fields, without having to follow a traditional path. Granting access to scholarship funds for students to pursue these college credentials may promote increased high school graduation rates. Increasing this rate is especially important in the rural communities of Georgia, where 19 percent of residents do not have a high school diploma — higher than the 12 percent of urban areas (State Office of Rural Health Program, n.d.). This education disparity contributes to income inequality, with more than 20 percent of Georgia rural county residents living in poverty (State Office of Rural Health Program, n.d.). An educated and highly trained individual can help change their own life and that of their family. Access to the HOPE Grant can create the opportunity for these students.

Expand HOPE Grant funding to include more programs of study

Under the current program regulations, the HOPE Grant and HOPE Career Grant programs support only TCCs and diplomas in technical programs. The purpose is to promote programs that have a shorter time to completion for in-demand fields. However, GPTC and other colleges in the state system offer hundreds of different associate of science and associate of applied science degrees that can be completed in two years, often matching the program lengths of diploma plans (TCSG, n.d.). These degrees are also designed to have TCCs and diplomas embedded in them, meaning the career-focused education is virtually identical. Often the only difference in the requirements are that associate of science and associate of applied science degrees have higher level general education requirements (TCSG, n.d.). The benefit to the student of earning a degree is an expanded job pool for employment that may require that level of education. Associate degrees are also designed to be transferrable; students can pursue education beyond the two-year credential to continue to learn *and* earn.

CONCLUSION AND FUTURE ANALYSIS

This project was designed to better understand the impact on students at GPTC of the legislative change limiting dual enrollment funding. As an open-access institution providing both academic and career-focused courses, dual enrollment remains a popular option for students and their families, though participation rates are lower. Overall dual enrollment dropped significantly in the two-year period after the 2020 legislative change. This change also occurred in the midst of a global pandemic, which may have affected student participation in these programs. As GPTC looks forward, it needs to do so with purposeful recruiting and support services in place to encourage enrollment and retention in the dual enrollment program.

REFERENCES

- An, B. (2013). The impact of dual enrollment on college degree attainment: Do low-SES students benefit? *Educational Evaluation and Policy Analysis*, 35(1), 57–75. <https://doi.org/10.3102/0162373712461933>
- An, B. (2015). The role of academic motivation and engagement on the relationship between dual enrollment and academic performance. *The Journal of Higher Education*, 86(1), 98–126. <https://doi.org/10.1080/00221546.2015.11777358>
- Bailey, T., & Karp, M. M. (2005). Expanding the reach of dual-enrollment programs. *Community College Journal*, 75(3), 8–11. Retrieved from <https://search-proquest-com.proxy.library.vanderbilt.edu/docview/61800892?accountid=14816>
- Brophy, M., & Johnson, T. (2007). Dual enrollment at the community college and high school: Where do students hear about it? *Journal of Applied Research in the Community College*, 15(1), 47–55. Retrieved from <https://search-proquest-com.proxy.library.vanderbilt.edu/docview/762468560?accountid=14816>
- Georgia Department of Education. (2020). *Eligibility chart*. <https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Curriculum-and-Instruction/Pages/Eligibility-Chart.aspx>
- Grissom, J. A., Kern, E. C., & Rodriguez, L. A. (2015). The “representative bureaucracy” in education: Educator workforce diversity, policy outputs, and outcomes for disadvantaged students. *Educational Researcher*, 44(3), 185–192.
- Kanny, M. A. (2015). Dual enrollment participation from the student perspective. *New Directions for Community Colleges*, (169), 59–70. doi:<http://dx.doi.org.proxy.library.vanderbilt.edu/10.1002/cc.20133>
- Lee, J. (2019, February 26). *Dual enrollment explained*. Georgia Budget and Policy Institute. <https://gbpi.org/dual-enrollment-explained>
- Hughes, K. L., Rodriguez, O., Edwards, L., & Belfield, C. (2012). *Broadening the benefits of dual enrollment: Reaching underachieving and underrepresented students with career-focused programs. insight*. (). James Irvine Foundation, 575 Market Street Suite 3400, San Francisco, CA 94105. Retrieved from ERIC <https://www-proquest-com.proxy.library.vanderbilt.edu/reports/broadening-benefits-dual-enrollment-reaching/docview/1037906193/se-2?accountid=14816>

- Marken, S., Gray, L., & Lewis, L. (2013). *Dual enrollment programs and courses for high school students at postsecondary institutions: 2010-11. first look. NCES 2013-002*. National Center for Education Statistics.
- Nelson, S. L., & Waltz, S. J. (2019). Dual enrollment programs: Litigation and equity. *Educational Policy*, 33(2), 386–417.
doi:<http://dx.doi.org.proxy.library.vanderbilt.edu/10.1177/0895904817691845>
- Perna, L. W. (2006). Studying college access and choice: A proposed conceptual model. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. XXI, pp. 99–157). Dordrecht, Netherlands: Springer.
- Pierce, D. (2017). The rise of dual enrollment. *Community College Journal*, 87(5), 16–18, 20–24. Retrieved from <https://search-proquest-com.proxy.library.vanderbilt.edu/docview/1934949099?accountid=14816>
- Roughton, D. (2016). Addressing college access and success gaps in traditionally underrepresented populations: The North Carolina early college high school model. *Higher Education Politics & Economics*, 2(1), 82–93. Retrieved from <https://search-proquest-com.proxy.library.vanderbilt.edu/docview/2228686818?accountid=14816>
- State Office of Rural Health Program. (n.d.). *Georgia Rural Health*.
<https://www.ruralhealthinfo.org/states/georgia>
- Stearns, E., Bottía, M. C., Davalos, E., Mickelson, R. A., Moller, S., & Valentino, L. (2016). Demographic characteristics of high school math and science teachers and girls' success in STEM. *Social Problems*, 63(1), 87.
- Taylor, J. L. (2015). Accelerating pathways to college: The (in)equitable effects of community college dual credit. *Community College Review*, 43(4), 355–379.
doi:<http://dx.doi.org.proxy.library.vanderbilt.edu/10.1177/0091552115594880>
- TCSG. (n.d.). *Resources and Links*. Retrieved from <https://www.tcsg.edu/dualenrollment/resources-and-links/>
- TCSG. (n.d.) *System Scorecard*. Retrieved from <https://tcsg.edu/about-tcsg/system-office-services/information-technology-data-resources/system-scorecard/>
- Williams, A., & Perry, A. (2020). *Prioritizing equity in dual enrollment. Policy brief: Equitable transitions through pandemic disruptions*. Education Commission of the States.
Retrieved from <https://search-proquest-com.proxy.library.vanderbilt.edu/docview/2458996675?accountid=14816>

Zinth, J. (2015). *State approaches to funding dual enrollment. ECS education policy analysis*. Education Commission of the States. Retrieved from <https://search-proquest-com.proxy.library.vanderbilt.edu/docview/1697497369?accountid=14816>

Zinth, J. (2019, October). *Funding for equity: Designing state dual enrollment funding models to close equity gaps*. College in the High School Alliance. <https://www.collegeinhighschool.org/finance>

Zinth, J., & Barnett, E. (2018). *Rethinking dual enrollment to reach more students: Promising practices*. Education Commission of the States. Retrieved from <https://search-proquest-com.proxy.library.vanderbilt.edu/docview/2101371569?accountid=14816>