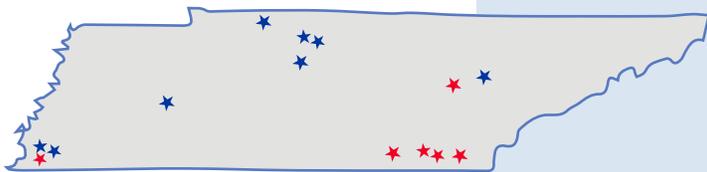


Early and Middle College High Schools

Early and Middle College High Schools as Models for Increasing Postsecondary Attainment



Tennessee has 14 early and middle colleges, 6 of which award high school diplomas and associate's degrees upon graduation.

Early and middle college high schools provide an alternative to traditional high school models and allow students to earn a high school diploma concurrently with college credit. These programs traditionally target underserved populations, including low-income, first-generation, and students of color. Definitions vary, but early college high schools are typically housed on a college campus and, upon graduation, students receive both a high school diploma and an associate's or technical degree.¹ Middle college high schools provide college credit alongside high school curriculum, but do not necessarily end in a postsecondary credential. Although most early and middle college high schools in Tennessee are referred to as "middle colleges," many provide opportunities for students to graduate with a postsecondary credential.

Relevance to Completion and the Drive to 55

Tennessee has committed to the goal of equipping 55 percent of Tennesseans with a degree or certificate by 2025. Successful early and middle college high school programs can contribute to this goal by increasing high school completion and college-going rates for historically underserved students.² Currently, Tennessee has 14 early or middle college high schools throughout the state. Each high school is connected to a technical college, community college, public university, or private university. The close connection to a postsecondary institution

provides exposure to college life as early as ninth grade and increases the likelihood of completing a postsecondary credential.³ Furthermore, students who graduate from high school with both a high school diploma and a postsecondary credential directly contribute to the Drive to 55 goal. Students who do not earn a postsecondary credential upon high school graduation, still earn college credit that is easily transferable to postsecondary institutions - minimizing the time to degree completion.

History and Design Intent of Early and Middle College High Schools

One of the first middle college high schools was established in 1974 at LaGuardia Community College in New York City. The program, which targeted students who were likely to drop out of high school, delivered a combination of high school and college curriculum along with robust student support services. Early and middle college programs tend to be small, provide an accelerated learning experience for students, and are typically located on a college campus.⁴ Benchmarks for successful programs include providing access and support to underserved students; ensuring college-level rigor; preparing students for high-skill, high-demand occupations; minimizing financial burdens to students; and solidifying transfer pathways to postsecondary institutions.⁵

How do early colleges differ from traditional dual enrollment programs?

Dual enrollment is a critical component of early college high schools, but distinct differences exist. A matrix developed by the Education Commission of the States articulates these differences (see Table 1).⁵

Table 1 - Taken from Early College High Schools: Model policy components.⁵

Early and Middle College High Schools vs. Dual Enrollment		
Program Characteristics	Middle & Early High School	Dual Enrollment
Location	School-within-a school, small stand-alone school or school located on a college campus	High school or college classroom, online, two-way videoconferencing or hybrid in-person and remotely delivered.
Student Grade Level	Students typically begin in ninth grade.	In some states, programs are limited to students in grades 11-12 or 10-12.
Eligibility Criteria	Students are typically not required to meet academic eligibility criteria to participate.	Students must demonstrate academic potential by state- or locally-set means, which may include high school grade point average, teacher recommendation, etc.
Target Population	Students from backgrounds underrepresented in higher education, irrespective of academic achievement.	Mid- to high-achieving students.
Curriculum/Course Selection	Cohesive curriculum integrating high school and college-level coursework into a single program.	Students select individual courses that potentially allow them to earn both high school and postsecondary credit.
Credit Accumulation	Students are expected to complete an associate degree or industry-recognized credential, or enough credits to enter a four-year institution as a junior.	May vary considerably, depending on the student and state policies. Some states set a cap on the number of postsecondary credits a student may earn.
Area of Program Focus	Postsecondary courses may be focused on a specific subject area, such as health sciences.	Students may take courses in core academic subjects or in career-technical education. Some states allow students to take courses in elective subject areas.
Guidance/Advising	All students receive guidance and support.	Students may receive little to no guidance from the high school or postsecondary institution.

Middle and Early College Students in the United States

93% of early college students graduate high school vs. the national rate of 78%

94% of early college graduates earn some college credit for free

23% of graduates earn an postsecondary credential along with their high school diploma

76% of graduates enroll in college vs. the national rate of 68 percent

77% of early college students are students of color

57% of early college students are from low-income families

45% will be the first in their immediate families to attend college

Source: Jobs for the Future⁶

Funding and Costs

Costs associated with early and middle college high schools include typical high school operational costs, but expand into postsecondary costs such as college tuition, books, and fees. An Early College High School Initiative (ECHSI) study estimated that early and middle college high schools need 5-12 percent more in funds than are available from public sources.⁷

There are several avenues that early and middle college high schools tend to explore for additional funding, including:⁸

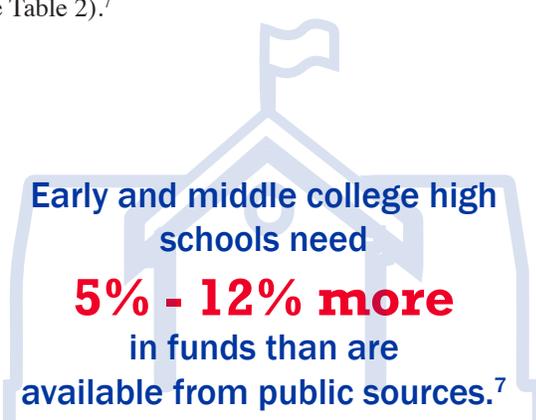
- Partnerships with community-based organizations
- Capital campaigns and other fundraising strategies
- Passing additional costs to the families and students enrolled
- Use of college and career funds such as Gear Up and Perkins programs

Jobs for the Future calculated per-student costs for middle and early college high school models, and determined the average cost is \$7,824 per student (see Table 2).⁷

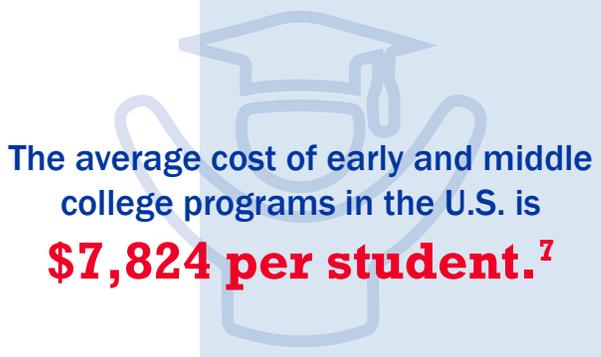
Table 2 - Projected costs for early and middle college high schools. Taken from What is the cost of planning and implementing early college high school.⁷

College, District & Other Projected Cost & Revenue Share by Early College High School Model, Based on First Year of Full Implementation & Maximum Planned Enrollment						
	ECHS in the High School	Middle College ECHS on Two-Year Campus, New	ECHS on Two-Year Campus, New	Middle College ECHS on Two-Year Campus, Conversion	ECHS on University Campus	Charter ECHS*
Student Enrollment	300	480	400	290	400	400
Projected Costs						
College Share of Projected Costs	\$193,050	\$1,130,404	\$889,475	\$1,027,965	\$2,319,642	\$25,000
School District Share of Projected Costs	\$1,282,344	\$2,937,395	\$1,334,694	\$1,079,136	\$2,569,549	\$2,138,721
Grant and other Share of Projected Costs		\$61,910	\$269,219			
Total Projected Costs	\$1,471,018	\$4,129,709	\$2,493,388	\$2,107,101	\$4,900,191	\$2,717,939
Total Projected Revenues	\$1,224,000	\$3,745,977	\$2,517,421	\$1,762,861	\$4,492,290	\$2,123,178
Projected Cost Per Student	\$4,903	\$8,604	\$7,124	\$72,266	\$12,250	\$6,795

*Charter School is classified as a school district.



Early and middle college high schools need **5% - 12% more** in funds than are available from public sources.⁷



The average cost of early and middle college programs in the U.S. is **\$7,824 per student.**⁷

Funding in Tennessee

According to Tennessee policy (Tennessee Public Chapter Number 459), students enrolled in middle college high schools are funded at the same level as students enrolled in traditional high schools. Furthermore, the policy states “if a program is funded through local, state or federal funds appropriated to an LEA, then no fee shall be charged by the LEA or a public postsecondary institution to any student participating in such program.”⁹

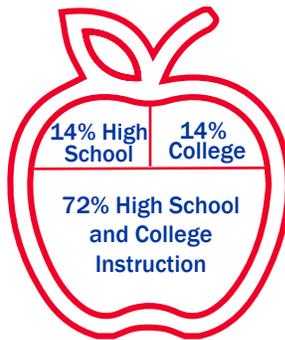
What are the additional cost considerations associated with an early or middle college high school?

- Administration: compensation for secondary and postsecondary leadership, guidance counselor(s), and student support staff
- Books: charges incurred for textbooks and other required supplies
- Instruction: costs associated with high school and college instructors, including professional development
- Physical Space: rent, utility, and maintenance costs associated with the physical location(s) of the school
- Transportation: costs associated with transporting students to either the high school or the postsecondary institution
- Tuition: charges for tuition and fees associated with enrollment in college courses

The following graphics provide insight into how these additional costs are distributed among postsecondary institutions, local education agencies (LEAs), and students at early and middle college high schools throughout Tennessee.

Cost Distribution at Tennessee Early and Middle College High Schools

The majority of early and middle college high school students receive instruction from both high school teachers and college professors.

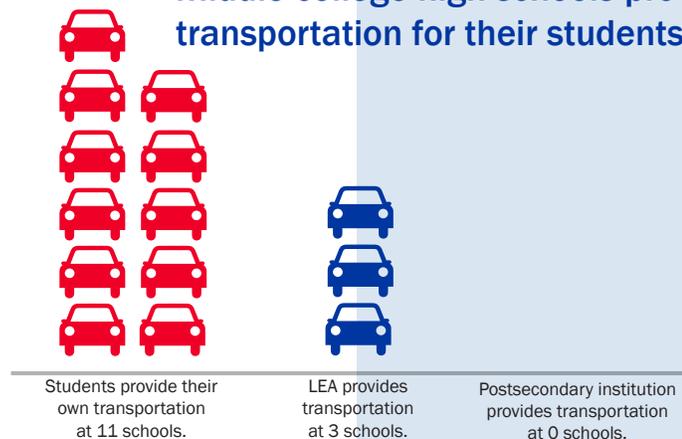


While more than half of early and middle college books are covered by Tennessee LEAs, a substantial number of students foot the bill at 5 schools.



100% of institutions with eligible students utilize the Tennessee Dual Enrollment Grant.

Less than 30% of Tennessee’s early and middle college high schools provide transportation for their students.



Source: Self-reported by institutions

Federal Policy

Federal policy does not regulate early and middle college high schools separately from general U.S. Department of Education guidelines for all schools. Policies that affect early and middle college high schools tend to be in the form of early postsecondary opportunity guidelines and funding policies.

- *Early Pell Experiment – 2016*: The U.S. Department of Education awarded Pell Grants to 10,000 high school students in 23 states to fund dual enrollment courses. Participating institutions in Tennessee included Northeast State Community College, Southwest Tennessee Community College, and William R. Moore College of Technology.¹⁰

- *Every Student Succeeds Act (ESSA)*: Encourages dual enrollment and early college high schools as key strategies to increase college attendance. Also, provides a federal definition of “early college high school” as a partnership between at least one local educational agency and one higher education institution that allows students to earn both a high school diploma and 12 or more college credits.¹¹

- *Making Education Affordable and Accessible Act (MEAA) of 2017*: Proposed federal legislation that would allow funding from the Fund of the Improvement of Postsecondary Education (FIPSE) to provide grants to colleges and universities for dual and concurrent enrollment programs, including early college high schools. Allocations could be utilized to pay for tuition, books, professional development for instructors, course design, program outreach, and student support services. The legislation was originally

introduced in 2016, but died in committee. It was reintroduced in March 2017 and has stalled in the House Committee on Education and the Workforce.¹²

- *Go to High School, Go to College Act of 2015*: Proposed bill to amend Title IV (Student Assistance) of the Higher Education Act of 1965 that would have allowed students enrolled full-time in early college high schools to access Early College Federal Pell Grants. The bill was introduced but not enacted.¹³

Tennessee Policy/Programming

- *Tennessee Code Annotated, Title 49, Chapter 15 – 2007 Amendment*: Authorized public postsecondary institutions and local education agencies (LEA) to establish cooperative innovative programs, including early and middle college high schools. The amendment also stated programs must further state and/or regional economic development; target students that would benefit from accelerated academic instruction or are at risk of dropping out; and, if they are funded through local, state, or federal funds appropriated to an LEA, they are prohibited from charging a fee to any student participating.¹⁴

- *Consortium for Cooperative Innovative Education – 2012*: Created by the Tennessee General Assembly to oversee dual credit programs and other early postsecondary opportunities, including early and middle college high schools. Members include the chancellor of the Tennessee Board of Regents, the president of the University of Tennessee system, the executive director of the Tennessee Higher Education Commission, the executive director of the State Board of Education, and the state education commissioner.¹⁵

Models to Watch

Bard Early Colleges

Bard College, a liberal arts school in upstate New York, operates seven public schools as satellite early college high schools in New York, New Jersey, Ohio, Louisiana, and Maryland. Students attend tuition-free and can earn up to an associate in arts degree concurrently with a high school diploma. Students enroll in the 9th grade and are taught both high school and college courses in the same building by college-credentialed faculty who teach high school coursework in the 9th and 10th grades and college courses in the 11th and 12th grades. Approximately 74 percent of students enrolled in Bard early college high schools are students of color and the majority qualify for free or reduced meals. The school was founded in 2001 as a partnership between the New York City Department of Education and Bard College and partially funded by the Bill and Melinda Gates Foundation.¹⁶

Pathways in Technology (P-Tech) Early College High School

P-TECH started as a collaboration between New York Public Schools, City University of New York (CUNY) and IBM. The program is designed to provide students the opportunity to earn a high school diploma and an associate’s degree in computer science or engineering over a six-year period while participating in IBM mentorships and internships. The model targets traditionally underserved populations, including low-income, first-generation, and students of color. Admission is determined by lottery; upon completion of the program, students are guaranteed an interview at IBM. Curriculum is developed with input from corporate partners and students attend tuition-free. The P-TECH model has expanded beyond New York to other states and has grown from one school in 2011 to 60 schools in 2016 with over 300 companies affiliated with P-TECH schools.¹⁷

• *Tennessee Code Annotated, Title 49, Chapter 4 – 2017 Amendment:* Expanded eligibility of the Tennessee HOPE scholarship to students enrolled in middle college high schools starting their junior year. Qualifications include classification as an in-state student and a minimum cumulative grade point average (GPA) of 3.0 at the end of the student’s sophomore year. In order to remain eligible, students must maintain a cumulative GPA of 3.0 and be enrolled in at least 12 college credits (full-time).¹⁸

Postsecondary Policies and Programs
Tennessee Postsecondary Policy Landscape

There are no system-wide policies to govern postsecondary institutions regarding early and middle college high school practices. Recent legislation (2017) provides a state-level definition of a middle college high school as “a program operated by an eligible public two-year postsecondary institution in partnership with an LEA that permits students in the fall semester of their junior year in high school to enter the eligible public two-year postsecondary institution and to earn both a high school diploma and an associate’s degree in two years.”¹⁹ Although this definition has provided some clarification for middle college high schools, similar language has not been established at the state level for early college high schools.

A list of Tennessee’s early and middle colleges, including general characteristics and admissions requirements, is included in Table 3.

Table 3 – Admission requirements and general characteristics for active early and middle college high schools in Tennessee.¹⁹

TN Department of Education Scorecard Metrics for Early and Middle College High Schools					
High School	Postsecondary Institution	School District	Grades Served	Required ACT Scores	Postsecondary credential upon completion?
Career Magnet Academy	Pellissippi State CC	Knox County	9-12	None required	No
Early College Academy	Chattanooga State CC	Marion County	9-12	None required	Associate's Degree
Hamilton County Collegiate High	Chattanooga State CC	Hamilton County	10-12	19	Associate's Degree
Hollis F. Price Middle College	LeMoyne-Owen College	Shelby County	9-12	None required	No – up to 60 credits
Jackson Central-Merry Early College High	Jackson State CC	Madison County	9-12	None required	No
Middle College	Roane State CC	Anderson, Campbell, Oneida, and Roane counties	11-12	Subscores: English- 18, Math- 21, Reading- 19	Associate's Degree
The Middle College	Austin Peay State University	Montgomery County	11-12	20	No
Middle College High	Christian Brothers University	Shelby County	9-12	19	No
Middle College High	Nashville State CC	Davidson County	10-12	Subscores: English- 18 Math- 19, Reading- 19	No
Southwest Early College High	Southwest Tennessee CC	Shelby County	9-12	None required	Associate's Degree
STEM School	Chattanooga State CC	Hamilton County	9-12	None required	Associate's Degree
Sumner County Middle College High	Volunteer State CC	Sumner County	11-12	19 Composite Score; Subscores: Math- 19, Reading- 19, English- 18	No
Sumner County Middle Technical College High at Portland	TCAT Nashville	Sumner County	11-12	None required	Tech degree or certification
Tennessee Valley Early College	Cleveland State CC	Bradley County	9-12	Subscores: English- 18, Math- 19, Reading- 19	Associate's Degree

National early and middle college high school outcomes

The National Center for Restructuring Education, Schools and Teaching (NCREST) evaluated outcomes for students enrolled in early and middle college high schools in an effort to assess which groups benefited from the model. Their findings highlighted that success rates did not differ by racial or ethnic group, were the same for males and females, did not depend on whether there was a mother or father in the home, were the same whether students were born in or

out of the United States, and did not differ according to students' eligibility for free or reduced lunch.²⁰

Early and middle college high school outcomes in Tennessee

Early and middle college high school outcomes are reported via the Tennessee Department of Education State Report Cards. Outcomes from 2015-2016 are presented in Table 4. Schools established after 2015 do not have metrics available for this reporting period

Table 4 – Tennessee Department of Education scorecard metrics for early and middle college high schools: 2015-2016.²¹

Only institutions with state scorecard metrics available are listed.

TN Department of Education Scorecard Metrics for Early and Middle College High Schools						
High School	Total Enrollment	% Economically Disadvantaged	Attendance	Grad Rate	Average ACT	TNReady ELA
Hamilton County Collegiate High	121	0.0%	98.3%	100%	26.2	74.3%
Hollis F. Price Middle College	109	49.5%	95.2%	96.6%	20.0	51.4%
The Middle College	118	11.9%	91.9%	98.1%	20.6	85.1%
Middle College High	132	43.2%	91.9%	98.1%	20.6	57.8%
Middle College High	283	35.3%	97.6%	100%	21.3	
STEM School	263	14.8%	96.9%	95.9%	20.9	42.9%
Sumner County Middle College High	50	8.0%	100%	100%	24.9	Not Reported
Sumner County Middle Technical College High at Portland	5	0.0%	100%	100%	18.0	Not Reported
All Districts	997,893	35.1%		88.5%	19.7	

State to Watch



Texas

As of the 2017-2018 school year, Texas has 198 early college high schools operating in the state. State policy (Texas Education Code §29.908(b) and Texas Administrative Code §102.1091) has established a designation process for early college high schools to ensure campuses target students who are least likely to attend college. The Texas Education Agency (TEA) engaged Jobs for the Future and other early college high school experts to aid in the redesign of the statewide blueprint for early college high schools, which will be implemented in 2018. The blueprint sets outcomes-based accountability measures, including classification levels for early college high schools: provisional early college, early college, and distinguished early college. Based on the school designation, established blueprint targets vary. Policy also mandates that students attend tuition-free and the associated costs are the responsibility of the secondary school unless the postsecondary institution waives tuition and fees. A Memorandum of Understanding (MOU) is required for every partnership and must include a provision for to students to concurrently earn a high school diploma and an associate's degree or 60 credit hours toward a bachelor's degree.²²

“Texas remains a national leader in the early college high schools concept and will continue to be as more districts and charters embrace this innovative concept.”

Michael Williams, Texas Commissioner of Education, 2012-2015²³

Questions to Consider

How many Tennessee students graduate with associate's degrees from early/middle colleges?

There is currently no formal tracking system to report associate's degrees earned by early and middle college high school students.

How are early and middle college high schools defined throughout the state?

Tennessee passed legislation in 2017 defining middle college high schools as “a program operated by an eligible public two-year postsecondary institution in partnership with an LEA that permits students in the fall semester of their junior year in high school to enter the eligible public two-year postsecondary institution and to earn both a high school diploma an associate degree in two (2) years.”¹⁹ Currently, the terms “early and middle college high school” are not used uniformly throughout the state. For example, some middle college high schools do not provide the ability to earn enough college credit for an associate's degree along with high school requirements.

How do students transition to junior level work after graduation from early college?

Graduates of early and middle college high schools may have earned enough credits to enroll as a junior at a four-year university immediately after high school. Little academic research has been conducted on the social transition to universities for these students. However, the Tennessee Transfer Pathway has removed barriers associated with loss of credits from one institution to another. For students enrolled in a selected major in the pathways program, the credits completed at a community college are guaranteed to be accepted at a Tennessee public or private university or transferred to another Tennessee community college.²⁴

How are early and middle college high schools incorporated into the Basic Education Program and the outcomes-based formula in Tennessee?

Because early and middle college students are enrolled in a high school, the Basic Education Program (BEP) allocates funds as if they are traditional high school students.²⁵ In the outcomes-based funding formula, high school students registered for dual enrollment courses are accounted for in credit attainment benchmarks, the same as other college students. Additionally, community colleges are measured on the dual enrollment headcount and are able to adjust the weight of this measure in the outcomes formula to increase or decrease the funding percentage allocated to dual enrollment performance.²⁶

What are the demographics of students in early and middle college?

The early and middle college high school framework was developed to help traditionally underrepresented and at-risk students complete high school and enroll in college. Within Tennessee, demographics of students vary based on the program (see Table 4). Programs that align closely with the intended framework do not have specific admission criteria, but instead recruit at-risk and underrepresented students who could be successful in a non-traditional high school setting.

Which states have solved the funding issues?

Funding mechanisms vary greatly across the United States. Several states have passed legislation to address funding sources. For example, Texas mandated that the costs of early and middle college high school enrollment are not charged to students or their families and are the responsibility of the secondary school. A database of funding mechanisms was created by the Education Commission of the States and can be accessed on their website for further exploration.²⁷

Conclusion

Early and middle college high schools can be an effective and efficient means for high school students to engage in postsecondary education while earning a high school diploma. These programs require close collaborations and partnerships between the community, local education agencies, and postsecondary institutions. All can benefit from these engagements in terms of funding, state requirements, and cultivating a pipeline of talent for local employers. Review of the 14 existing early and middle college high schools illustrate the need for more analysis and coordination to determine the effectiveness and feasibility of expanding these models to more regions in the state.

Based on the original intent to engage low-income and at-risk high school students, some of the programs in Tennessee have deviated from the original approach. While no evidence has been identified to determine the motivations for focusing on high-performing students, the cost-gaps identified in this brief may emphasize the challenges many of our low-income students and their families face when engaging in early and middle college programs.

While early and middle college programs could provide a significant contribution to the overall completion goal for Tennessee, data currently are insufficient to conduct a quality analysis. In the future, to help communities and regions develop early and middle college programs, these data and more specific cost projections would be useful in the decision-making process.

Appendix

Key Terms

Concurrent enrollment: officially defined by the National Alliance of Concurrent Enrollment Partnerships (NACEP) as “the subset of dual enrollment courses taught by college-approved high school teachers.” Colloquially, concurrent enrollment tends to be used interchangeably with dual enrollment.²⁸

Cooperative innovative programs: terminology used in Tennessee’s Public Chapter 459 that includes early and middle college high school programs.²⁹

Dual credit: a high school course aligned with college curriculum at a local postsecondary institution. After completion of the course, students take an exam to earn credit at the same local institution.³⁰

Dual enrollment: a college-level course taught at either a postsecondary institution, high school, or online by a credentialed instructor where the students receives college credit at the completion of the course.³¹

Early college: high school program located on a college campus that is designed to enable the student to earn a high school diploma and associate’s degree in 4 to 5 years with no cost to the student.³²

Early College High School Initiative (ECHSI): launched in 2002 by the Bill & Melinda Gates Foundation with the goal of increasing the opportunity for traditionally underserved students to earn a postsecondary credential.³³

Middle college: high school program located on a college campus that incorporates college coursework into high school curriculum at no cost to the student.³⁴

Middle College National Consortium (MCNC): consortium focused on increasing the number of high school students who have access to early colleges, middle colleges, and dual enrollment programs.³⁵

National Center for Restructuring Education, Schools & Teaching (NCREST): research center at Teacher College- Columbia University which collects and analyzes data, offers professional development, and aids in program design on behalf of Middle College National Consortium.³⁶

National Alliance of Concurrent Enrollment Partnerships (NACEP): the national accrediting body for concurrent enrollment partnerships. The organization supports members through sharing best practices, conducting research, and advocating for its national network.³⁷

Tennessee Dual Enrollment Grant: available to high school students enrolled in college courses at eligible postsecondary institutions funded through the Tennessee Lottery and administered by the Tennessee Student Assistance Corporation (TSAC). Eligibility requirements include that the student must be at least a high school junior, meet admissions criteria for dual enrollment for the postsecondary institution, and be a Tennessee resident one year prior to enrollment.³⁸

Additional Resources

Barnett, E., Bucceri, K., Hindo, C., & Kim, J. (2013). Ten key decisions in creating early colleges. Columbia University, Teachers College. New York: National Center for Restructuring Education, Schools and Teaching.

Berger, A., Turk-Bicakci, L., Garet, M., Knudson, J., & Hoshen, G. (2014). Early college, continued success. Early college high school initiative impact study. San Mateo, CA: American Institutes for Research.

Jobs for the Future Early College Designs: <http://www.jff.org/initiatives/early-college-designs>

Middle College National Consortium (MCNC): <http://mcnc.us/>

National Center for Restructuring Education, Schools and Teaching (NCREST): <http://www.tc.columbia.edu/ncrest/>

Palaich, R., Augenblick, J., Foster, S., Anderson, A. B., & Rose, D. (2006). Return on investment in early college high schools. Augenblich, Palaich and Associates, Inc. Denver: Prepared for Jobs for the Future.

Endnotes

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- ⁴Born, T. (2006). Middle and early college high schools: Providing multilevel support and accelerated learning. *New Directions for Community Colleges*, 2006(135), 49-58.
- ⁵Zinth, J. (2016). Early College High Schools: Model Policy Components. Policy Analysis. Education Commission of the States: <http://files.eric.ed.gov/fulltext/ED569132.pdf>
- ⁶Jobs for the Future: http://www.jff.org/sites/default/files/ECHS_get_results_040113.pdf
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- ⁸Barnett, E., Bucceri, K., Hindo, C., & Kim, J. (2013). Ten key decisions in creating early colleges. Columbia University, Teachers College. New York: National Center for Restructuring Education, Schools and Teaching: http://www.tc.columbia.edu/ncrest/MCNC_Report_March2014.pdf
- ⁹Tennessee Public Chapter Number 459: <http://tennessee.gov/sos/acts/105/pub/pc0459.pdf>
- ¹⁰U.S. Department of Education – Pell Experiment <https://www.ed.gov/news/press-releases/fact-sheet-expanding-college-access-through-dual-enrollment-pell-experiment>
- ¹¹U.S. Department of Education: <https://www2.ed.gov/documents/essa-act-of-1965.pdf>
- ¹²Making Education Affordable and Accessible Act of 2017: <https://www.congress.gov/bill/115th-congress/house-bill/1710/related-bills>
- ¹³Go to High School, Go to College Act of 2015: <https://www.govtrack.us/congress/bills/114/s1106/summary>
- ¹⁴Tennessee Public Chapter Number 459 – 2007: <http://tennessee.gov/sos/acts/105/pub/pc0459.pdf>
- ¹⁵Tennessee Department of Education: https://www.tn.gov/assets/entities/education/attachments/eps_sdc_implementation_guide.pdf
- ¹⁶Bard Early Colleges: <http://www.bard.edu/earlycollege/about/>
- ¹⁷IBM: <https://www-03.ibm.com/press/us/en/presskit/42300.wss>
- ¹⁸Tennessee Public Chapter Number 405 – 2017: <http://publications.tnsosfiles.com/acts/110/pub/pc0405.pdf>
- ¹⁹Tennessee Department of Education State Report Card: <https://www.measuretn.gov:444/ReportCard/#/>
- ²⁰Barnett, E., Bucceri, K., Hindo, C., & Kim, J. (2013). Ten key decisions in creating early colleges. Columbia University, Teachers College. New York: National Center for Restructuring Education, Schools and Teaching: http://www.tc.columbia.edu/ncrest/MCNC_Report_March2014.pdf
- ²¹Tennessee Department of Education State Report Card: <https://www.measuretn.gov:444/ReportCard/#/>
- ²²Texas Education Agency Early College High Schools: <http://tea.texas.gov/ECHS/>
- ²³Texas Education Agency: <http://tea.texas.gov/index2.aspx?id=25769820883>
- ²⁴Tennessee Transfer Pathway: <http://www.tntransferpathway.org/>
- ²⁵Tennessee State Board of Education – The Basic Education Program (BEP): <https://www.tn.gov/sbe/topic/bep>
- ²⁶Tennessee Higher Education Commission – outcomes-based funding formula: <https://www.tn.gov/thec/article/2015-20-funding-formula>
- ²⁷Education Commission of the States Early Colleges/Middle Colleges – All state profiles: <http://ecs.force.com/mbdata/mbprofall?Rep=EMA>
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