

SparkNC Report to the General Assembly

March 1, 2025

SparkNC empowers students to discover careers in high-tech fields like artificial intelligence, software development, computer systems engineering, and cybersecurity. SparkNC launched our first year of implementation in July 2023 and piloted our program in 16 SparkLabs in the 2023-24 school year. SparkNC expanded to 18 labs in 17 districts in 2024-25 school year and will expand to at least 9 new districts in 2025. Through SparkLabs across our interdistrict network, learners explore high-tech fields and collaboratively prepare for modern work. For more about SparkNC, please see [these overview materials](#) shared with JLEOC on March 26, 2024.

SparkNC has been funded through multiple appropriations by the North Carolina General Assembly, beginning in the 2021-23 biennial state budget. With SparkNC's initial appropriation, we partnered with 18 districts to design the SparkNC experience for learners, which is a whole new way to do school that is industry-relevant, competency-based and learner centered. SparkNC also provides the opportunity for learners to earn high-school elective credit by choosing and completing learning experiences.

According to [North Carolina Session Law 2023-134, Section 7.62](#), "SparkNC, in consultation with the partnering public school units, shall provide an interim report to the Joint Legislative Oversight Committee by March 1, 2025, on the following:

1. Number and percentage of student participation in the Program.
2. Student retention and persistence in the Program.
3. Student completion of Learning Accelerator credits and student achievement of personalized learning goals within the Program.
4. Student evaluation of the Program.
5. Student interest in science, technology, engineering and mathematics following participation in the program.
6. Cost per student for Program participation.
7. The number and percentage of students who have participated in the Program who choose to pursue a career pathway or further study in a STEM field.
8. Public school unit persistence in the Program.

9. Recommendations for Program changes, including recommended legislative changes and changes needed to ensure the federal funding for career and technical education can be used for the Program.”

Below, we provide the most up-to-date data available on our inter-district program when it is currently available. In a couple of instances we are not yet able to answer the request because they require multiple years of implementation data or our external evaluation partners are still seeking access to state data sets to answer them. We will update the General Assembly when those data are available.

We welcome the opportunity to share more about the growth of our interdistrict network and refinement of our program in response to insights from our first full year of implementation.

Student Participation

Number and percentage of student participation in the Program.

To date, more than 3,000 North Carolina students across 17 school districts have had the opportunity to explore high-tech fields through SparkNC’s programming, learning platform and events. While some students participate in SparkNC events and choose not to track their participation via our SparkNC platform, most do. Since August 2023, 2,401 students have engaged in SparkNC’s learning platform.

SparkLabs in our partner districts have partnered with between 38 and 269 learners, ranging from 6% to 50% of eligible students at the school where the SparkLab is located. In a few cases, SparkLabs are not located in high-schools or the lab leader serves students across the district in a more virtual implementation. These SparkLabs with a wider potential reach have served between 1% and 18% of eligible students.

Students on SparkNC Platform August 2023 - February 2025

Partner District	# of Students	% of students served in the school where SparkLab is located	SparkLab school population, * indicates multiple schools served	Rural Urban
Asheboro City Schools	96	7%	1,286	Urban
Cabarrus County Schools	202	2%	11,452*	Urban
Chatham County Schools	168	14%	1,231*	Rural
Cumberland County Schools	209	1%	14,936*	Urban
Edgecombe County Schools	202	12%	1,617*	Rural
Elizabeth City-Pasquotank Public Schools	38	6%	652	Urban
Granville County Schools	107	15%	694	Rural
Guilford County Schools	79	7%	1,202	Urban
Lexington City Schools	165	19%	876	Urban
Mount Airy City Schools	102	17%	613	Urban
New Hanover County Schools	113	50%	227	Urban
Rockingham County Schools	213	14%	1,477*	Rural
Rowan-Salisbury Schools	269	29%	929	Urban
Scotland County Schools	103	12%	1,280	Rural
Vance County Schools	172	18%	967*	Rural
Wake County Public Schools	114	3%	3,644*	Urban
Warren County Public Schools	49	14%	349	Rural

* Indicates that SparkLab serves multiple high schools in the district. In these cases, the full population of students who have opportunity for access is listed.

Source for high-school population data: [2024-25 ADM Month 1 report](#) from [NCDPI Student Accounting Data](#).

Source for rural/urban designation [is here](#).

Source for 2023-24 district size: p. 7 of [this budget highlight report](#).

Student retention and persistence in the Program

SparkNC is a whole new way to do school, with learners setting their learning goals, choosing when and what they want to explore and completing and stacking units toward credit at their own pace. They can earn a high-school credit within a semester often by adding SparkNC to their block schedule, or they can take a year or two to complete SparkNC learning experiences outside of their school schedule. In addition, learners are not required to complete SparkNC for credit and can participate in a couple learning experiences and then return years later and do some more without penalty. Students report that this approach to learning that is low-risk, highly engaging and flexible is why they want to be part of SparkNC. Students have an opportunity to work toward credit with SparkNC throughout high school and their endpoint with SparkNC is not until they graduate or leave a SparkNC district.

Because of the flexibility of SparkNC's learner-centered approach, measuring persistence is challenging. Based on our initial year and a half of implementation, we have planned platform updates that, when built, will help us better follow learners on their self-designed journeys.

One indication of student persistence is that SparkLab leaders report that numerous students who have already earned the High-Tech Learning Accelerator credit continue to drop-in at SparkLabs, participate in activities and complete learning experiences. They share that SparkLab feels "like home" to them and they have been asking "what's next?" for them if they want to earn more credits through SparkNC. Fortunately, starting fall of 2025, they will have an opportunity to earn additional credits because the General Assembly has allowed for learners to earn up to four high-school credits through SparkNC and NCDPI has allocated course codes for this to count as a computer science credit toward graduation.

Student attainment

The legislation asked SparkNC to report on student attainment in two ways. Initially, the legislation requested student completion of Learning Accelerator credits and, in the December 2025 update to the legislation, it added "student achievement of personalized learning goals within the Program."

Some learners enter SparkNC with a plan to earn credit toward graduation, whether they do so within a semester or take more time to do so. **During our pilot year, 2023-24, 210**

students earned the High-Tech Learning Accelerator credit. Others who began SparkNC last school year but did not earn credit, will continue to complete and stack units this year and beyond.

SparkNC is an approach to learning that allows students to set their own learning goals. Many students participate in SparkNC events and learning experiences to explore high-tech fields without seeking to complete learning units or stack them toward a high-school credit. Since the update to the legislation in late 2025 that requested SparkNC to report on measuring “student achievement of personalized learning goals within the Program,” SparkNC has planned for a platform redesign that will help us better measure learner progress toward students’ self-set goals that change over time. We hope to build that capacity in 2026 and will share updated data in our next schedule report in February 2027.

Student evaluation of the Program.

In spring 2023, our external evaluators launched a Year 1 Implementation survey of students who had participated in SparkNC. In that survey, 83% of respondents said they “would recommend participating in SparkNC to learn about high-tech careers.” 90% of respondents said that SparkLab is easy to find and an engaging space to work.

An important component of building learner interest in these high-tech fields is the SparkLab Leader that learners work with to guide their learning journeys. In our first year, 94% of students surveyed reported that their SparkLab leader is someone they trust.

In December 2024, SparkNC launched a student survey to help measure progress toward our four signals of success that we use to measure our efforts in helping learners achieve the Spark Scholar Vision. In that survey, 82% of learners agreed that their lab leaders supported them, cared about their thoughts and opinions and used their feedback to improve their SparkNC experience. In addition, 75% of respondents reported they felt they could now make an informed decision about their college and career goals after participating in SparkNC. We see these as helpful initial baselines and are partnering with districts to ensure that all learners feel a strong sense of belonging and support and feel more informed to make decisions about their futures as a result of being in SparkNC.

Student interest and further pursuit in STEM

The General Assembly also requested the number and percentage of students who have participated in SparkNC who choose to pursue a career pathway or further study in a

STEM field. This could be measured in several ways: 1. students who participate in SparkNC who choose to enroll in other STEM courses in subsequent semesters in high school, 2. students who earn a post-secondary certificate in a STEM field after their SparkNC, or 3. students who attend post-secondary education in a STEM program. Each of these measures requires multiple years of data or access to data sources which are not yet available. SparkNC has partnered with an external evaluator at NC State to access EPIC data sets over time to see if students from our 2023-24 pilot year enroll in STEM courses later in high-school. We will provide this data in our next report after we have been able to access 2024-2025 EPIC data which will be available to our researchers in early 2026.

Despite not having multiple years of course data that confirm an ongoing interest in STEM, we do have some early indications that SparkNC has a positive impact on learners’ interest in high-tech fields. At our Tech Creatives Summit at NC State in July 2023, the vast majority of learners (94%) reported an increased interest in a high-tech career, with nearly half having a “greatly increased” interest (see table below) after that event.

Table 7. Respondent change in interest in a high-tech career, post-event

Interest in a High-Tech Career	Count of Responses	Pct of Responses
Greatly Decreased	1	1%
Slightly Decreased	1	1%
No Change	3	4%
Slightly Increased	33	45%
Greatly Increased	36	49%

Source: 2023 SparkNC Tech Creatives Summit: Survey Results. Prepared for SparkNC by The William and Ida Friday Institute for Educational Innovation, Dec 2024.

In our first implementation year, our external evaluators found that SparkNC had positive impacts on student interest in high-tech careers. Of students who indicated they had little or no interest in pursuing a high-tech career prior to SparkNC, 72% reported a positive change in their interest in going into high-tech after their SparkNC experience. And 81% of students who reported being “very or extremely interested” in high-tech careers before SparkNC were *even more interested* in high-tech careers after SparkNC, strengthening the likelihood that they will pursue these options after high school. **In all, 78% of students reported a positive change in their interest in high-tech careers after they participated in SparkNC.**

Measuring student post-secondary education and career choices perhaps years after they leave SparkNC and graduate high school is a persistent challenge we share with all programs serving high school learners trying to impact post-graduation decisions. SparkNC is exploring the development of an alumni program that will provide opportunities for Spark Scholars to stay connected to our network of business partners and opportunities even after they graduate. We hope to have more information to share about this potential new program in our next report in February 2027.

Cost per student for Program participation.

Cost per student varies by district based on program participation. The costs are comprised of:

1. Platform: \$12/year per student. Covers accessing learning content and tracking progress through the SparkNC platform. SparkNC has covered this cost for districts through funding allocated by the GA.
2. SparkLab Leader FTE: varies. With GA support, SparkNC offered districts a \$65,000 per year implementation stipend to district partners. Most districts used these funds to support the SparkLab Leader role. More than half of districts reported that they used district funds to supplement the stipend in order to cover the salary, benefits, FICA, etc. for the SparkLab leader. In 9 districts, these additional costs ranged from a few thousand dollars up to \$40,000.
3. SparkLab: One-time costs for establishing a SparkLab include furniture, computers and hands-on learning kits and consumables. These costs were about \$60,000 per lab in our initial pilot districts. Some districts incurred costs for needed repairs or upgrades to the space (such as upgraded wiring for electricity or internet services).
4. SparkNC's core staff supports local district implementations of SparkLabs in addition to our efforts to build and strengthen the core program to expand within existing and into new districts with the goal of serving all 115 districts in NC.

Public school unit persistence in the Program.

One hundred percent of the 16 pilot districts from 2023-24 school year returned to the SparkNC program for 2024-25. In addition, Wake County Public School System joined our network and partnered with Wake Tech to place two labs on their RTP and East campuses. And demand for SparkNC continues, with dozens of districts, as well as charter and private schools and homeschool families, expressing interest in joining our network. We are also in conversations with some community colleges about exploring ways to expand offerings to CC students in the future to support their early exploration of high-tech fields.

Recommendations for Program and legislative changes

The legislation requested that SparkNC share recommendations for program changes, legislative changes and changes needed to ensure the federal funding for career and technical education can be used for the Program.

The legislature has already made several supportive and responsive changes to the legislation to: allow all North Carolina districts beyond our initial 18 partner districts to open SparkLabs; allow learners to earn up to four high school credits through SparkNC's offerings, and for credit earned through SparkNC to count as a computer science credit toward graduation. To support sustainability of implementation of SparkNC in districts, it would be beneficial for CTE funds to be used to support the SparkLab Leader role in future years given our alignment with computer science standards and the high-tech and portrait of a graduate skills learners develop in our program.

Regarding program updates, SparkNC, as a design-build program, takes feedback and data seriously and we have partnered closely with learners, lab leaders, and business, district and higher education partners to inform our program offerings and changes. Based on our year and a half of implementation, we have made numerous updates and changes to our program, learning experiences and student and lab leader supports.

Thank you for this opportunity to provide updates and insights into SparkNC's pilot year and beyond. We will have additional insights and recommendations based on further implementation and refinement of our program in our next report to the General Assembly in February 2027.