**Special School District**

**Career and Technical Education 2016-17 Evaluation Plan Summary**

| **Coordinator** | **Planning Team** | **Evaluator** |
|---|---|---|
| Dave Baker | Kevin Andert, Mary Braun | Matthew Traughber |

# Program Description

## Purpose or Mandate

The formation of Technical Programs at North & South Tech was a result of The Vocational Education Act of 1963 which authorized federal funds to support residential vocational schools. The Act included a requirement for States to create a State Plan for vocational education. Missouri's State Plan called for the creation of what are now referred to as Area Career Centers.

The purpose of SSD's Career and Technical Education (CTE) Division is to prepare students to enter the highly competitive world of work, either immediately after high school or upon the completion of a post-secondary degree or professional certification or licensure. This preparation includes instruction in academic skills and professionalism as well as technical skills taught in authentic learning environments, with curricula designed around current and future industry demands.

## Summary Description of the Program and What It Is Expected to Accomplish

CTE operates two technical high schools with more than 30 programs in a wide range of technical areas. Technical course offerings range from traditional technical fields, such as precision machining and construction, to burgeoning fields such as network administration and health sciences. Programs at the two schools accept applications from any 10th- through 12th-grade student residing in St. Louis County.

Please consult the Career Technical Education Program Description for a detailed review of this program's characteristics and intended outcomes. The Program Description is available through the SSD Department of Evaluation and Research.

# Summary of Goals and Objectives

## Previous (2013-2014) Cycle Goals and Measurable Objectives

**Goal 1:** Train students in the skills needed to succeed in Industry.

> **Objective 1.1:** The number of students earning Industry Recognized Certifications (IRC) will increase by 5% over the previous year.
> **Objective 1.2:** 80% of 12th graders will master 80% of essential skills identified within their program

**Goal 2:** Meet the goals of MSIP College and Career Readiness.

> **Objective 2.1:** Earn "on track" status for MSIP standard 3.1-3 which includes measures for ACT, SAT, COMPASS, and the Armed Services Vocational Aptitude Battery (ASVAB).
> **Objective 2.2:** The percent of students at or above the state standard for 3.1-3 will increase by 5% over the previous year.

**Objective 2.3:** Earn "on track status for MSIP standard 3.4 which includes measures for Advanced Placement (AP), International Baccalaureate (IB) and Technical Skills Attainment (TSA) as well as dual enrollment in college.

**Objective 2.4:** The percent of students at or above the state standard for 3.4 will increase by 5% over the previous year.

**Objective 2.5:** Earn "on track" status for MSIP standard 3.5-6* which includes measures for positive post-secondary placement.

**Objective 2.6:** The percent of students at or above the state standard for 3.5-6 will increase by 5% over the previous year.

## *Current* (2014-2016) Cycle Goals and Measurable Objectives

**Goal 1:** CTE outreach, admissions, and programming result in optimal levels of student enrollment and retention.

**Objective 1.1:** CTE schools and individual programs will experience enrollments near capacity.

**1.1a Measure:** Proportion of enrollment against capacity among DESE-approved programs.
**1.1a Target:** 70%
**1.1b Measure:** Proportion of enrollment against capacity among exploratory programs.
**1.1b Target:** 65%

**Objective 1.2:** Students who begin a CTE program will persist in and complete the program.

**1.2a Measure:** Proportion of students who begin a 2-year program that complete the first year.
**1.2a Target:** 89.3% (target represents 2% increase over baseline)
**1.2b Measure:** Proportion of students who begin a 2-year program that complete the program.
**1.2b Target:** 65% (target represents 2% increase over baseline)

**Goal 2:** Students participating in CTE programs are adequately prepared for a career and/or post-secondary education related to their field of concentration.

**Objective 2.1:** Students are successful in earning entry level credentials.

**2.1 Measure:** Proportion of students who have completed an eligible program that earn an entry level credential (this excludes TSA and IRC).
**2.1 Target:** 71%

**Objective 2.2:** Students pass Technical Skills Assessments (TSAs) and Industry Recognized Credential assessments (IRCs) at a high rate.

**2.2 Measure:** Passing rate among students who take a TSA and/or IRC.
**2.2 Target:** 71% (this represents the Perkins target)

**Objective 2.3:** Students demonstrate applied academic skill levels that meet the demands of their chosen career/technical field.

**2.3 Measure:** The proportion of students who achieve a passing score in all areas of the ACT WorkKeys assessment (the areas are Applied Math, Reading for Information, and Locating Information).
**2.3 Target:** 70% (target represents improvement over baseline)

**Objective 2.4:** Students are successful in earning National Career Readiness Certificates.

**2.4 Measure:** Weighted calculation (per the MSIP5 formula) of aggregate student performance level on the ACT WorkKeys assessment. This metric reflects the proportion of eligible students

participating in junior and senior level career and technical education programs who earn Bronze, Silver, Gold, or Platinum Career Readiness Certificates based on WorkKeys score.

**2.4 Target:** 65.7% (target reflects the "On Track" performance level for MSIP5 College and Career Readiness Standard 3: Indicators 1-3)

**Objective 2.5:** Students are eligible to earn college credits while in high school.

**2.5 Measure:** Proportion of career and technical education programs that offer students the opportunity to earn articulated and/or dual college credit.
**2.5 Target:** 100%

**Objective 2.6:** Students experience positive post-secondary outcomes.

**2.6 Measure:** 180-day positive placement rate
**2.6 Target:** 80% (target reflects the "On Track" performance level for MSIP5 College and Career Readiness Standard 3: Indicator 4)

# Current Cycle Action Plans

- Provide test taking and content preparation for the ACT and COMPASS (Standard 3.1-3). Sub-steps include: Review Princeton, Cambridge and other provider materials for ACT "test-taking strategy" implementation; Train teachers in utilization of Plato material for ACT content preparation; Continue work with STLCC personnel to engage in COMPASS preparation and assessment on both North and South campuses.

- Improve IRC assessment and dual enrollment participation (Standard 3.4). Sub-steps include: Continue to review student IRC results to determine the most appropriate assessments for our students within DESE's guidelines; In-service instructors on IRC preparation materials and attitudinal impact on student assessment; Increase course offerings which allow students to earn dual credit (Sociology, Forensics, math offerings).

- Outreach to parents and students regarding the benefits of successful dual credit acquisition – Parent Teacher Conferences, Social Media, etc. (Standard 3.5-6 – Increase opportunities for parents and students to learn of post-secondary opportunities and funding sources). Sub-steps include: Continue with Free Application for Federal Student Aid (FAFSA) workshops on both campuses; Support FAFSA outreach through social media; Continue with "Options Night" on the South campus and duplicate on the North Tech campus with increased post-secondary institution participation (community and four-year colleges, apprenticeship opportunities, etc.); Sustain guidance counselor presence on both campuses with an increased focus on Missouri Connections and initial 2-year post-secondary plan – "What will you do with your first two years after high school?"; Increase visibility of the Scholarship Foundation work with both campuses, which can personalize student plans for scholarship attainment.

Career and Technical Education
2016-2017 Program Evaluation Report

Special School District

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# Evaluation Summary

Through traditional programs like welding and automotive technology as well as emerging fields like networking technology, the Career and Technical Education (CTE) program prepares students to enter the highly-competitive world of work, either immediately after high school or upon the completion of a post-secondary degree or professional certification or licensure. This report reviews program performance data pertaining to college and career readiness assessments, post-graduate outcomes, and student enrollment and retention trends.

## Major Conclusions

- CTE student retention rates have increased over three years. Retention of students attending the half-day program at North Tech was identified as opportunity for improvement.

- There have been significant increases in enrollment for the two exploratory programs offered at South Tech specifically designed to accommodate all learners, including those with IEPs. Enrollment in South Tech exploratory programs improved from 62.9% of capacity in 2015 to over 90% of capacity in 2016 and 2017. Enrollment (as a percentage of capacity) in exploratory programs at North Tech also increased markedly in 2017.

- In 2016, over 70% of students at both North Tech and South Tech met industry-specific work readiness expectations in all three ACT WorkKeys content areas (reading for information, locating information, and applied math). The percentage of North Tech students earning gold, silver, or bronze National Career Readiness Certificates (which are based on WorkKeys results) increased in 2016.

- Students at South Tech far exceeded the Perkins requirement for Technical Skills Assessment (TSA) pass rate (73%). In 2016, 78.3% of South Tech students successfully passed their program's TSA or Industry Recognized Credential (IRC).

- Student performance on TSAs represents an opportunity for improvement for North Tech. In 2016, the proportion of students who successfully passed their program's TSA or IRC (55.9%) both fell below the established performance target and decreased in comparison to the prior year.

- In the past two years, more than 90% of students enrolled in programs that offer entry-level credentials successfully earned those credentials.

- Established targets for positive post-secondary (180-day) outcomes were met. Ninety-four percent of spring 2016 South Tech graduates reported occupational or education status consistent with what DESE characterizes as a positive outcome; 81% of 2016 North Tech graduates reported a positive post-secondary outcome.

- Parent and student customer perception data collected as part of district-wide surveys (distinct from the present evaluation) suggest a strong level of satisfaction with CTE Programming. For example, per the 2016 Parent Climate Survey, 97% of South Tech parents and 91% of North Tech parents expressed agreement with the statement, "My child is being prepared to do well in the next grade level or after graduation."

- Future actions based in the evaluation findings will include developing targeted plans to increase student and family engagement, expanding voice of customer efforts with North Tech half-day students, and formulating improvement strategies for programs performing below Perkins expectations for TSA/IRC.

## *Program Description*

**Purpose or Mandate**
The technical programs at North and South Technical High Schools were a result of The Vocational Education Act of 1963, which authorized federal funds to support residential vocational schools. The Vocational Education Act included a requirement for States to create a state plan for vocational education. Missouri's state plan called for the creation of what we now refer to as Area Career Centers.

Career and Technical Education (CTE) supports the following CSIP goals and Process Classification Framework elements:

> CSIP Objective 1.1 Ensure achievement for all students
> CSIP Objective 1.2 Ensure that all students are ready to participate in college, career or community programs
> CSIP Objective 1.3 Ensure student satisfaction and engagement
> PCF 2.0  Develop, deliver, and assess curriculum, assessment, and instruction
> PCF 5.0 Manage student and stakeholder relationship and engagement
> PCF 14.0 Manage partner district relationships and operations

A biennial evaluation of this program is required under Board Policy IM. The last evaluation report was approved by the Board on 11/11/14.

**What this program does**
The CTE program prepares students to enter the highly-competitive world of work, either immediately after high school or upon the completion of a post-secondary degree or professional certification or licensure. Program offerings range from traditional vocational programs such as welding and carpentry to emerging fields such as network administration, culinary arts and health sciences.

**How this program works**
The CTE program provides authentic learning environments for instruction in technical skill attainment as well as instruction in academic and employability skills, with curricula designed around current and future industry demands. High school juniors and seniors in south, west and central St. Louis County have the option to attend South Tech part-time for three hours each day. High school sophomores, juniors and seniors in north St. Louis County have the option to attend North Tech part-time or full time. Sophomores have the opportunity to participate in a semester- or year-long career exploration program. Juniors and seniors have the opportunity to enroll in a 1- or 2- year technical program such as cosmetology or precision machining. Those students attending North Tech full time will complete their academic coursework at and graduate from North Tech. Half-day attendees are considered to be students of and graduate from partner district high schools.

**What customers/stakeholders expect**
Students and parents expect the CTE program to provide opportunities for high school students to participate in authentic learning environments and receive engaging and differentiated instruction in technical skill attainment as well as instruction in academic and employability skills.

The community and workforce/industry expect the CTE program to provide a talent pipeline to fill current and future labor needs and demands. The expectation is that students leave the CTE program with advanced 21st Century skills, entry-level technical skills, and the academic skills necessary to be successful in the workforce.

**What were the major accomplishments or benefits of this program?**

- Professional training for teachers in their field of instruction has increased. There has been a concentrated effort to work with teachers to identify professional development opportunities that will increase content knowledge and instructional quality.

- The Career and Technical Education program has worked to increase and build stronger formal partnerships with business and industry. New local partnerships with Clayco and Laclede Gas have led to students participating in a structured mentoring program that has also opened doors to entry-level employment.
- Students with IEPs have increased opportunities to participate in CTE programs. Programs have been developed in the areas of construction and outdoor maintenance as well as information technology and graphics that are designed to accommodate all learners. These programs are located at both North and South Technical High Schools.
- Students have expanded opportunities to obtain entry-level credentials. A budget specific to assessment was created to better facilitate and encourage students to earn entry-level credentials. Students now have the ability to earn credentials such as OSHA 10, ServSafe, EPA 608, CRP, CNA, Cosmetology State License, and EMT. While not all of these credentials are reported as Industry Recognized Credentials (IRCs) by DESE, they are in many cases necessary for entry-level employment following graduation.
- Student performance on the ACT WorkKeys assessments has improved. Greater opportunity has been created for students to spend time during the school day participating in sequential instruction in reading, locating information, and applied mathematics that is tailored to their skill level.
- The CTE admissions process has undergone a data-informed process of improvement designed to better identify students with a high likelihood of success and resultantly increase student satisfaction and retention.
- Students have consistently placed at the district, state and national level in program area competitions hosted by career and technical student organizations including SkillsUSA, FBLA, FCCLA and FFA. In 2017, 21 students from South Tech advanced from the state Skills USA competition to the national competition; students from both North and South Tech have advanced to the FBLA National Competition.
- Improvements to school websites along with strategic use of social media has reinforced efforts to enhance student engagement, parent engagement, and stakeholder involvement.

## How well did this program fulfill its purpose or mandate?

☐ Inadequate   ☐ Approaching Satisfactory   ☒ Satisfactory   ☐ Excellent

## What factors made essential contributions (+/-) to this rating?

- Students are meeting the expectations of their chosen fields as evidenced by higher rates of ACT WorkKeys proficiency and National Career Readiness Certificate attainment.
- More students have been afforded the opportunity to earn entry-level credentials.
- CTE has increased engagement with industry advisory boards. The expectation has shifted for advisors to engage students both in and outside of the classroom setting. In the 2015-16 school year, students engaged with industry advisors through 121 different activities and events. Nearly 60% of advisors have interacted with students in the classroom.
- Program curriculum review, formally conducted on a 5-year cycle, is now conducted as needed based on evolving student requirements and industry demands. This ensures that programs and graduates meet the current and future needs of industry.
- Although strides have been made to improve student achievement and retention, increasingly rigorous standards and competition in the form of career-training coursework offered by sending schools have contributed to some CTE programs operating at a sub-optimal level of student enrollment.
- With a DESE shift in focus from TSAs to IRCs, programs have been challenged to identify relevant IRCs that are both appropriate for high school students and align with the needs of local industry. A plan has been developed for the 2017-18 school year to increase student performance on both TSA and IRC assessments.

**What is the general level of customer or stakeholder satisfaction with this program?**

☐ Not at all Satisfied ☐ Somewhat Satisfied ☒ Satisfied ☐ Completely Satisfied

**What factors made essential contributions (+/-) to this rating?**

- Per the 2016 SSD Parent Climate Survey, 97% of South Tech Parents and 91% of North Tech parents expressed agreement with the statement, "My child is being prepared to do well in the next grade level or after graduation."
- Per the 2016 SSD Student Climate Survey, 94% of South Tech students and 87% of North Tech students indicated agreement that they, "Like going to this school."
- Based on the 2016 Annual Sophomore Survey at North Tech, 80.3% of half-day students and 76.7% of full-day students indicated that the program met or exceeded their expectations.
- In 2015, 88.9% of Advisory Board members indicated that participating in advisory was beneficial and worthy of their time (Source: Program Advisory Board Member Survey). Per the same survey, 95% of Advisory Board members indicated the intention to continue to serve on Career and Technical Education program advisories.

# *Evaluation Results*

**What is the status of the program's progress toward achieving its goals?**

**Goal 1:** CTE outreach, admissions, and programming result in optimal levels of student enrollment and retention.

**Measurable Objective 1.1**: CTE schools and individual programs will experience enrollments near capacity.

***Results***: CTE program capacity is calculated as a the proportion of enrollment to the number of available seats (available seats being determined by program guidelines and recommended safety standards). It serves as an indicator of the extent to which programming attracts and is engaging to both current and prospective students. Achievement of this objective was evaluated by enrollment against capacity for both DESE-approved programs (target of 70%) and exploratory programs (target of 65%). Results overall and by each program category are provided in the accompanying figures.
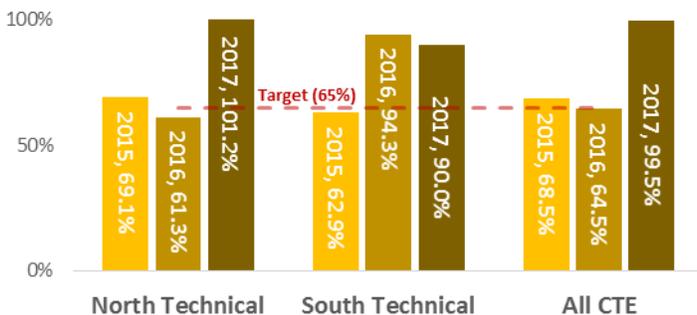
**CTE Enrollment vs. Capacity Overall**
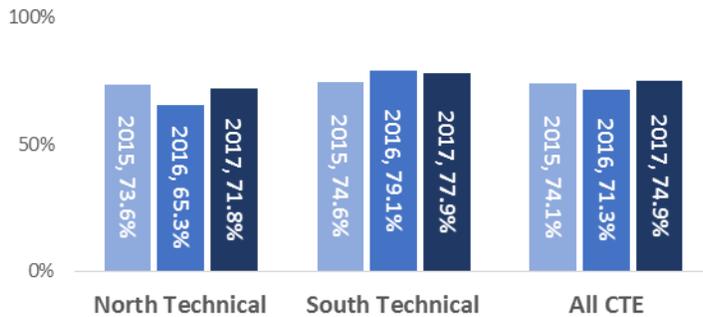


**CTE Enrollment vs. Capacity: Approved Programs**
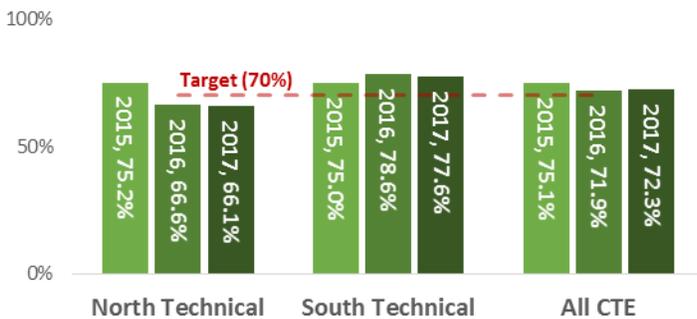


**CTE Enrollment vs. Capacity: Exploratory Programs**



Targets were met in 2017 with the exception of DESE-approved programs at North Tech. Overall, enrollment as a proportion of capacity was 74.9% in school year 2017, which represents an increase over the two prior years' rate. Enrollment against capacity tends to be higher at South Tech than North Tech, though in 2017 North Tech's rate increased by 6.5 percentage points while that for South Tech modestly decreased (by 1.2 percentage points).

When examining rates for DESE-Approved programs only, both North Tech and South Tech experienced a minor decline in 2017. The current year rate for North Tech is down 9.1 percentage points from that in school year 2014-15.

Exploratory program enrollment as a proportion of capacity exceeded that for DESE-approved programs in 2016-17. Rates for exploratory program have increased markedly over the previous 1-2 years, with South Tech experiencing a more than 30 percentage point increase in 2016 and North Tech a 40 percentage point increase in 2017. These increases can be attributed to an increase in exploratory offerings for special education students as well as an adjustment in staffing in the North Tech sophomore exploration program. Exploratory enrollment exceeded capacity at North Tech this year.

**Measurable Objective 1.2:** Students who begin a CTE program will persist in and complete the program.

**Results:** Students' persistence throughout the entirety of a CTE program is referred to as "retention." Retention represents a program quality indicator related to factors including student engagement, student satisfaction with program offerings and instruction, student program fit, and admissions practices. The majority of CTE programs span two years in duration, though there are some one-year program options available to students. CTE staff track student retention throughout the school year and as a result have identified points in time during the progression through the program when students tend to be more likely to depart.

The measures chosen for Objective 1.2 include (a) The proportion of students who begin a 2-year program that complete the first year, and (b) The proportion of students who begin a 2-year program that complete the program.[1] Targets established for these measures are 89.3% and 65%, respectively (each represents a 2% increase over baseline).

The first set of charts on this page display 1-year rates, both overall and by school (these rates include

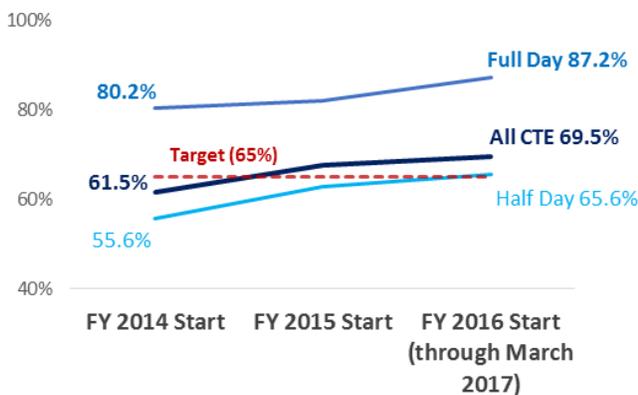**CTE Student Retention Over Year 1 of Program**
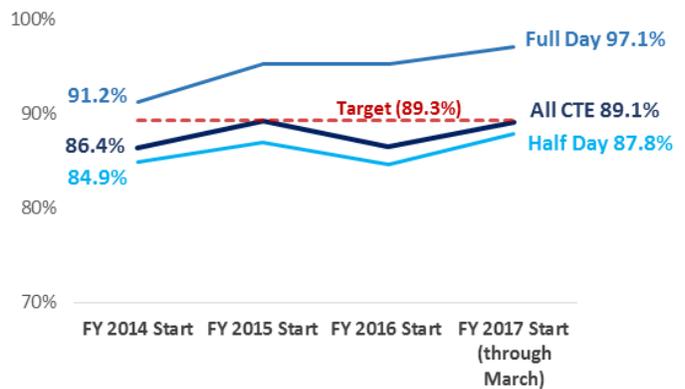


**CTE Student Retention Over Year 1 of Program By School**
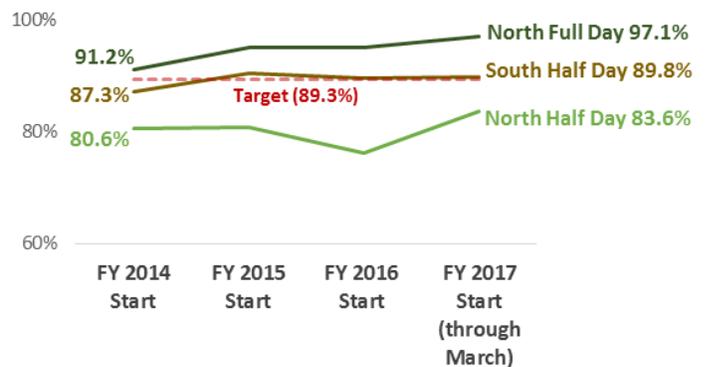


students who enroll as seniors in order to complete a single year of a program). The subsequent charts display retention rates over the entire life of two-year programs (these rates include only students who begin a 2-year program as a junior).

The results suggest that the 1- and 2-year retention targets are currently being met with the exception of half-day students attending North Tech. Though retention trends for half-day North Tech students are improving, only 47.1% of such students who began a 2-year program in fall of 2016 persisted through the entirety of it. Across programs, both 1- and 2-year retention rates have shown a positive trend. Retention rates for full-day students are high (97.1% across year 1 and 87.2% over the life of 2-year programs).

**CTE Student Retention Over Entire 2-Year Program**



**CTE Student Retention Over Entire 2-Year Program By School**
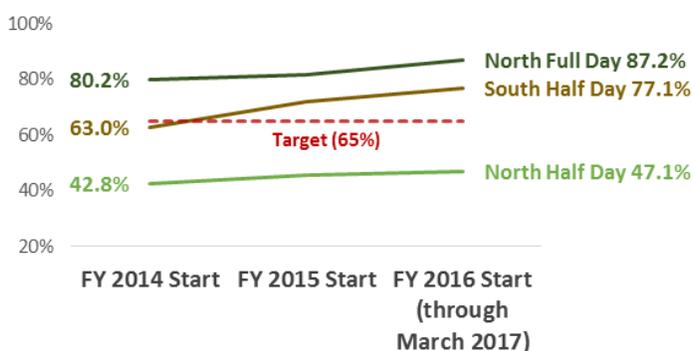
**Goal 2:** Students participating in CTE programs are adequately prepared for a career and/or post-secondary education related to their field of concentration.

**Measurable Objective 2.1:** Students are successful in earning entry level credentials.

***Results:*** Many CTE programs provide students the opportunity to earn what are termed "entry level credentials" for a given field their course of study is preparing them to pursue. Students earn these credentials by successfully passing a certification exam (or exams). These credentials are separate from TSAs and IRCs (see Objective 2.2) and are required or expected in industry for entry-level employment. Currently these credentials include OSHA 10 (Construction, Health Sciences & Manufacturing), SERVSAFE (Culinary & Hospitality), EPA 608 (HVAC), CPR (Health Sciences, EMT, Early Childhood), Police Dispatcher (Law Enforcement), and S/P2 Safety (Culinary, Auto Tech, Auto Body, Diesel and Welding). Achievement of this objective was assessed by the proportion of students who completed the portion of the program which includes preparation for this credential and then successfully earned the certification, with a target for goal attainment set at 71% (this parallels Perkins targets for TSAs and IRCs; see Objective 2.2).

The target has been met each of the last two years at both technical high schools. Over 90% of students eligible for an entry level certificate earned one. Data is presented in the table below.
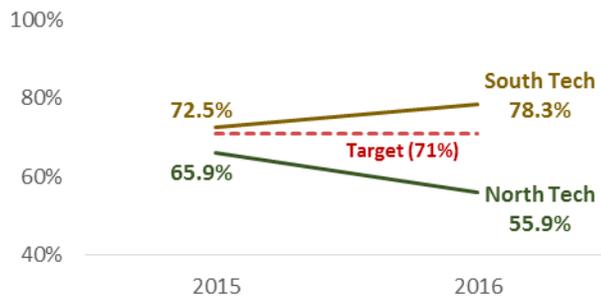
**Proportion of Students Earning Entry-Level Credentials**

| School | 2015-16 | 2016-17* |
|---|---|---|
| North Technical | 91.76% | 92.23% |
| South Technical | 93.29% | 92.28% |

*In progress at time of report.

**Measurable Objective 2.2:** Students pass Technical Skills Assessments (TSAs) and Industry Recognized Credential assessments (IRCs) at a high rate.



**TSA and IRC Pass Rates**

***Results:*** CTE students demonstrate skill acquisition and college/career readiness through the TSA and IRC assessments unique to their program of study.[2] With the exception of floor laying, every current CTE program offers either a TSA or IRC.

Assessment passage rates over two years, by school, are reported in the figure at left. The target established for TSA/IRC pass rate was 71% (this parallels the Perkins target). Students at South Tech met the target each of the past two years, however students at North Tech failed to meet it. North Tech students passed TSA/IRC assessments at a lower rate in 2016 than in 2015.

**Measurable Objective 2.3:** Students demonstrate applied academic skill levels that meet the demands of their chosen career/technical field.

***Results:*** Attainment of Objective 2.3 was measured by the proportion of students who achieved a passing score in all areas of the ACT WorkKeys[3] assessment. The three content areas of the WorkKeys are Applied Math, Reading for Information, and Locating Information. Individual fields/industries are surveyed to determine the WorkKeys scores that represent a minimal academic skill level required by the field (the "median" of necessary scores suggested by industry personnel is used as the criterion). The criterion for "passing" is dependent upon the CTE program in which a

student is enrolled. A target of 70% of students achieving passing scores for all areas was established (the target represents an improvement over baseline).

Results appear in the figure at right. Students at both North Tech and South Tech met the target in 2016. The proportion of students at North Tech who passed all three areas of the WorkKeys in 2016 was 10 percentage points higher than in the prior year. In addition, the percentage of students passing *none* of the three content area assessments this past school year decreased at each school (data not shown).

**Proportion of Students Who Met WorkKeys Industry Criterion In All Three Content Areas**
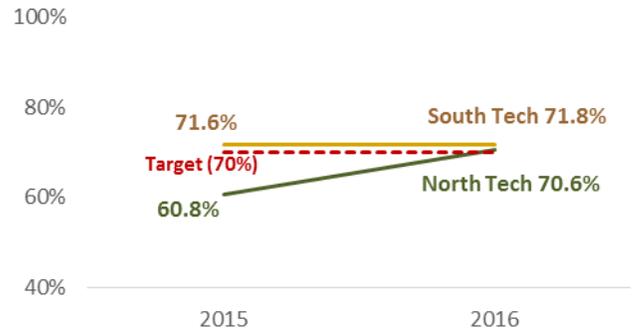


**Measurable Objective 2.4:** Students are successful in earning National Career Readiness Certificates.

**National Career Readiness Certificate Results**
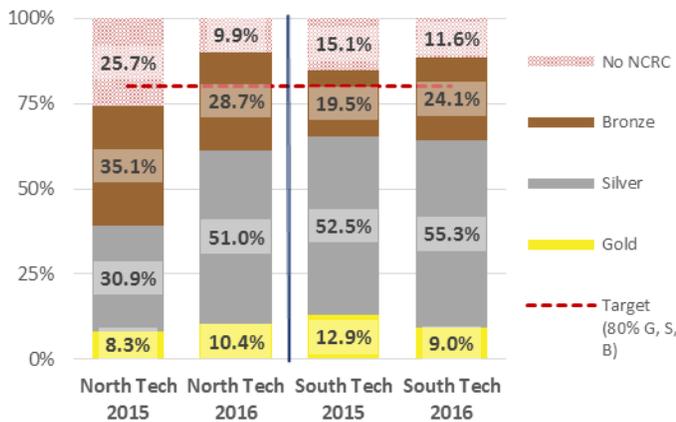


**Results:** National Career Readiness Certificates (NCRC) are based on ACT WorkKeys performance (see Objective 2.3). According to the Missouri DESE MSIP5 school accreditation formula, districts earn a greater proportion of points in the College and Career Readiness standard when students earn NCRCs. The target for this objective is 65.7% of students earning either a gold, silver, or bronze NCRC, which is based on the MSIP "On Track" performance level for MSIP5 College and Career Readiness Standard 3. To earn a gold award, students must receive a score of 5 or higher on each of the three content area tests of the WorkKeys assessment. Those who earn at minimum scores of 4 on all three tests earn a silver certificate, and those who score at least a 3 across tests earn a bronze.

The target for this objective was met by both schools in 2016 (though North Tech failed to meet the goal the year prior). A breakdown of results for each school is shown in the accompanying figure. North Tech students earned a much larger percentage of gold and silver certificates in 2016 than was the case in 2015. The proportion of students earning no NCRC decreased at each school in 2016.

**Measurable Objective 2.5:** Students are eligible to earn college credits while in high school.

**Results:** One goal of the CTE program is to provide students with increasing options to earn college credits concurrent with their technical high school course credits. CTE staff collaborate with post-secondary institutions to coordinate these agreements (some of which require the student to ultimately matriculate at the post-secondary institution in order to receive the college credit; students are also required to pay tuition for college credits earned while in CTE). The target for this objective was set at 100% of CTE programs. The proportion of programs offering college credit opportunities has approached or met the target in each of the past three years (see table below).

**College Credit Opportunities**

| | 2015 | 2016 | 2017 |
|---|---|---|---|
| CTE programs offering articulated or dual credit option (target 100%) | 100.0% | 96.3% | 96.2% |

**Measurable Objective 2.6:** Students experience positive post-secondary outcomes.

**Results:** Positive post-secondary placement rates were used to assess this outcome. The target for this objective was set at 80%, which reflects the "On Track" performance level for MSIP5 College and Career Readiness Standard 3: Indicator 4. Note that the this analysis included all CTE students, including half-day. SSD technical schools conduct independent follow-up on both full-day sand half-day students (though only outcomes for full-day students are reported to DESE and contribute to the District's APR).

**Positive Placement Rates**
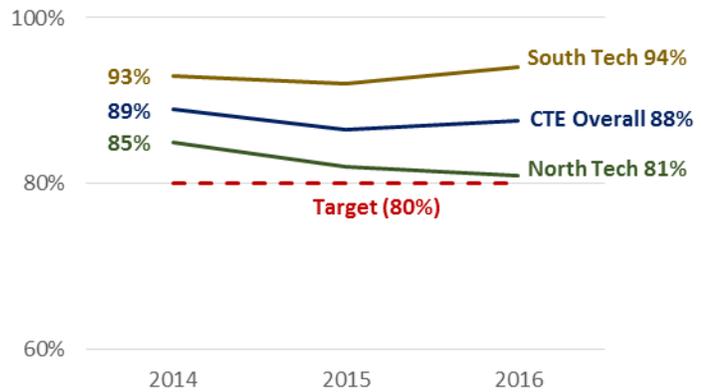


The chart at right reflects the proportion of students who reported what DESE deems a "positive post-secondary outcome" when surveyed approximately 180 days following the completion of the prior school year. Recent students who are employed greater than half time, attending college, or in the military are considered to have positive placements. Both dropouts and students whom the school is unable to contact are included in the calculations.

The 80% target has been met each of the last three school years at both North Tech and South Tech. Positive placement has increased slightly for South Tech students but declined several percentage points at North Tech over three years.

# *Evaluation Results Summary*

## Strengths and Opportunities for Improvement

*Strengths:*

1. Modest improvements in enrollment as a percentage of capacity overall.
2. Sizable improvements in enrollment as a percentage of capacity *for exploratory programs*.
3. Improvements in 1- and 2-year program retention. Retention rate increases have occurred following data-driven improvements to admissions and student counseling processes.
4. A high percentage of students who were eligible to earned entry-level credentials.
5. The TSA/IRC pass rate at South Tech exceeded the established target and increased in 2016.
6. The ACT WorkKeys target was met for both schools in 2016. The proportion of North Tech students meeting the industry median criterion in all three areas increased 10 percentage points over the prior school year.
7. Nearly 100% of CTE programs offer dual and/or articulated college credit to students.
8. Over 80% of students have reported positive post-secondary outcomes in each of the previous 3 years.

*Opportunities/Weaknesses:*

1. Enrollment vs. capacity at North Technical for DESE-approved programs failed to meet the established target and has decreased over the previous two years.
2. Though gradually improving, the 1- and 2-year retention rates for half-day students attending North Tech fell well below established targets. In recent years, fewer than 50% of North Tech half-day students have persisted throughout the entirety of 2-year programs.
3. The TSA/IRC pass rate at North Tech fell below the established target and declined in 2016.

## How well aligned are the program's processes with the goals of the program?

The program's processes are well aligned to the goals of the program.

## Deployment Level of Program Services

☐ Little or no deployment of program services.

☐ The program services are in the early stages of deployment in most areas or schools.

☐ Services are deployed, although some areas or schools are in early stages of deployment.

☐ Services are well deployed, although deployment may vary in some areas or schools.

☒ Services are well deployed, with no significant gaps.

☐ Services are fully deployed without significant weaknesses or gaps in any areas or schools.

**Should resources be changed to improve this program?**       ☐ **Yes**  ☒ **No**
*If Yes, describe changes.*

**Should goals be changed, added or removed?**       ☐ **Yes**  ☒ **No**
*If Yes, describe changes.*

## *Evaluation Implications*

**What are the costs of this program?**

Fiscal Year 2016 Expenditures:

> Salary and Benefits: $16,870,080
> Other Costs: $2,508,000
> Fees & District Wide Expenses: $209,000
>
> Total Costs: $19,587,080
>
> **Cost Per Custome**r (1772 Students): **$11,054**

Other costs include equipment and supplies, tools, technical student organizations, mileage, printing and binding, professional memberships, and student certification and licensure. Costs reported do not include student assessment-related expenditures or student transportation expenditures. Note that the student count includes both full-day and half-day students (it is not a "full-time equivalent" count), and includes January enrollees.

**What are the major sources and amounts of Funds?**

SSD Budget, Perkins Funding

**How many customers (students) are served by this program?**

1,772 students participated in SSD career and technical education programs in FY 2016.

**Estimated Cost Effectiveness**

☒  Mandated program; costs cannot be significantly reduced.

☐ Mandated program; costs could be reduced (include in Action Plan, below).

☐ Benefits greatly outweigh costs.

☐ Benefits outweigh cost, but improvement appears possible (include in Action Plan, below).

☐ Costs outweigh benefits (include in Action Plan, below).

**Explanation**

Career and technical education is an integral component of SSD's mission. Special School District is responsible for providing career and technical education in St. Louis County.

**General Recommendation Resulting from this Evaluation**

☐ Continue the program as is.  It is meeting or exceeding all expected outcomes.

☒  Continue the program with specific action plans for improvement.

☐ Expand the program, replicating effective components.

☐  Streamline, refine, or consolidate elements of the program.

☐ Redesign the program.

☐ Reevaluate the purpose and/or goals of the program.

☐ Discontinue ineffective or nonessential program components.

☐ Discontinue the program.

| Action Plan 1 | Provide test taking and content preparation for the ACT and COMPASS (Standard 3.1-3). Sub-steps include: Review Princeton, Cambridge and other provider materials for ACT "test-taking strategy" implementation; Train teachers in utilization of Plato material for ACT content preparation; Continue work with STLCC personnel to engage in COMPASS preparation and assessment on both North and South campuses. |
|---|---|
| **Status of Action Plan 1** | • All Junior and Senior communication arts teachers allocate time weekly to spend on activities related to communication arts and the ACT.<br>• Beginning in 2015 North Tech has offered an after school ACT Boot Camp the 8 weeks leading up to the April ACT Test Date. This is open to All students.<br>• Starting in the 2016-17 school year, all juniors participated in a session about what to expect on the ACT. This session included test-taking strategies, test preparation tips, and what to expect on the day of the test.<br>• The math department has begun utilizing several computer-based preparation programs including ALEKS to offer individualized remediation. |

| Action Plan 2 | Improve IRC assessment and dual enrollment participation (Standard 3.4). Sub-steps include: Continue to review student IRC results to determine the most appropriate assessments for our students within DESE's guidelines; In-service instructors on IRC preparation materials and attitudinal impact on student assessment; Increase course offerings which allow students to earn dual credit (Sociology, Forensics, math offerings). |
|---|---|
| **Status of Action Plan 2** | • The number of programs offering an IRC option for students has increased every year for the last 3 years. This includes adding NIMS certification to precision machining, HTMP certification to Hospitality and Hotel Management, HBI PACT Certification to the construction based programs, and Adobe Certified Associate certification to Graphic Design.<br>• The career and technical education programs have adopted DESE's Quality Indicators evaluation tool and have specifically targeted assessment as an area for growth or maintenance for all programs. Programs where assessment scores do not meet expectations are required to complete a program improvement plan in this area.<br>• The Manager of Assessment and Data began participating in 2016 in the DESE committee to select appropriate Industry Recognized Credentials. This participation should assist SSD as we move forward. |

| Action Plan 3 | Outreach to parents and students regarding the benefits of successful dual credit acquisition – Parent Teacher Conferences, Social Media, etc. (Standard 3.5-6 – Increase opportunities for parents and students to learn of post-secondary opportunities and funding sources). Sub-steps include: Continue with Free Application for Federal Student Aid (FAFSA) workshops on both campuses; Support FAFSA outreach through social media; Continue with "Options Night" on the South campus and duplicate on the North Tech campus with increased post-secondary institution participation (community and four-year colleges, apprenticeship opportunities, etc.); Sustain guidance counselor presence on both campuses with an increased focus on Missouri Connections and initial 2-year post-secondary plan – "What will you do with your first two years after high school?"; Increase visibility of the Scholarship Foundation work with both campuses, which can personalize student plans for scholarship attainment. |
|---|---|
| **Status of Action Plan 3** | • Both North and South Tech offer Options Nights and FAFSA Completion Workshops to help students better understand their post-secondary options and the financial aid process. |

| | - North and South Tech have increased their dual credit offerings including adding dual credit American history and adding dual credit anatomy and physiology to Pre-Professional Health Sciences.<br>- North Tech has utilized funds from St. Louis University to offer dual credit scholarships to students enrolled in dual credit courses who are unable to pay for the credit.<br>- All students in courses with dual credit opportunities receive presentations from classroom teachers and administrators about the dual credit process and benefits of participating in dual credit. |
|---|---|

## *Forward Planning*

### What specific actions are needed in the next evaluation cycle?

#### Short-term (within the next school year)

1. All programs that offer an IRC will also identify and offer a TSA for students who are unsuccessful on the IRC assessment. Most IRC assessments are intended for post-secondary students while TSA assessments are intended for secondary students. All programs with pass rates below the Perkins requirement will also develop an assessment preparation and improvement plan. (Objective 2.2; OFI 3)

> Anticipated Date of Completion: May 2018

2. Recommend to DESE at least two new potential IRC assessments that are better-aligned to secondary programs. (Objective 2.2; OFI 3)

> Anticipated Date of Completion: May 2018

#### Medium-term (1-2 years)

3. Expand the voice of customer cycle for half-day North Tech students to better understand the issues leading to students withdrawing prior to completion. This will include focus groups, surveys and exit surveys with departing students throughout the school year. (Objective 1.2; OFI 1, 2)

> Anticipated Date of Completion: December 2018

4. Develop a targeted plan to increase student and family engagement, specifically addressing the portions of the year when students are most likely to withdraw from North or South Tech. Engagement opportunities would include both during and outside-of-school hours and may include the opportunity to be involved digitally through tools like social media. This may also include opportunities to interact with business and post-secondary partners. (Objective 1.2; OFI 2)

> Anticipated Date of Completion: May 2019

#### Long-term (3 years and more)

5. Continue to expand opportunities and access for special education students in the CTE program. This may include the development of new programs, the redesign of existing programs, or offering differentiated instruction and delivery to better accommodate all learners. (no associated objective or OFI)

> Anticipated Date of Completion: On-going

**What are future goals, objectives, measures, and targets that will be used to monitor and evaluate this program?**

**Goal 1:** CTE outreach, admissions, and programming result in optimal levels of student enrollment and retention.

> **Objective 1.1:** CTE schools and individual programs will experience enrollments nearing capacity.
> **1.1 Measure:** Proportion of enrollment against capacity for all CTE programs.
> **1.1 Targets:** 70%
> **1.1 Monitoring Schedule:** Report twice per year (October & February)

> **Objective 1.2:** Students who begin a CTE program will persist through the end of the first year of their program.
> **1.2 Measure:** Proportion of students who begin a 2-year program that complete the first year.
> **1.2 Target:** Annual 2% increase over baseline
> **1.2 Monitoring Schedule:** Quarterly

> **Objective 1.3:** Students who begin a CTE program will persist in and complete their program.
> **1.3 Measure:** Portion of students who begin a 2-year program and complete the program.
> **1.3 Target:** Annual 2% increase over baseline
> **1.3 Monitoring Schedule:** Quarterly

**Goal 2:** Students participating in CTE programs meet the pre-requisite core job skill requirements for a career and/or post-secondary education related to their field of concentration

> **Objective 2.1:** Career and technical education students will be adequately prepared to meet WorkKeys expectations for their chosen career field.
> **2.1a Measure:** Proportion of students who meet WorkKeys pre-requisite score requirements for their chosen career field as evidenced by performance on the formative KeyTrain assessment.
> **2.1a Target:** 70%
> **2.1a Monitoring Schedule:** Monitor KeyTrain at minimum twice per year.
> **2.1b Measure:** The proportion of students who achieve a passing score in all three areas of the ACT WorkKeys assessment
> **2.1b Target:** 70%
> **2.1b Monitoring Schedule:** Annually

> **Objective 2.2:** Career and technical education students will successfully pass a TSA or IRC.
> **2.2 Measure:** TSA/IRC pass rate
> **2.2 Target:** 73% of students pass a TSA and/or IRC assessment
> **2.2 Monitoring Schedule:** Annually

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**Notes:**

1. The retention rate at the technical high schools only includes students who attend at least one day. Students who are accepted but never attend are excluded from this model. These "no-shows" are tracked in a separate model and compared year over year. In addition, only students who start in August are included in this model. While there is a January start, the January junior cohort is small in size due to space limitations. For example, South Tech may have a January junior cohort of only 13 students.

2. Additional information regarding the TSA/IRC assessments can be found here: https://dese.mo.gov/college-career-readiness/career-education/technical-skills-attainment-industry-recognized-credential

3. Additional information regarding the ACT WorkKeys assessment can be found here: http://www.act.org/content/act/en/products-and-services/workforce-solutions/act-workkeys.html

**Appendix A**
**CTE Programs 2016-17**

| Program | Location(s) |
|---|---|
| Auto Body | North & South Tech |
| Auto Tech | North & South Tech |
| Carpentry | North & South Tech |
| CISCO Networking | North & South Tech |
| Construction Innovations | North & South Tech |
| *Construction Materials & Methods** | South Tech |
| Cosmetology | North & South Tech |
| Culinary Arts | North & South Tech |
| Dental Sciences | South Tech |
| Diesel Tech | North Tech |
| Early Childhood Education | North & South Tech |
| Electrical Trades | North & South Tech |
| Electronics & Robotics | South Tech |
| EMT | North & South Tech |
| Fashion Design | North Tech |
| Firefighting | North & South Tech |
| Floor-Layers Middle Apprenticeship | South Tech |
| General Construction Trades | North & South Tech |
| Graphic Design | North & South Tech |
| Graphic Production & Printing | North Tech |
| Health Sciences | North & South Tech |
| Homeland Security | North Tech |
| Hospitality & Hotel Management | North Tech |
| HVAC | North & South Tech |
| *Information Technology & Graphics** | North & South Tech |
| Law Enforcement | North & South Tech |
| Motorcycle & Small Engine | South Tech |
| *Outdoor Maintenance & Landscape** | North Tech |
| Pharmacy Sciences | South Tech |
| Precision Machining | North & South Tech |
| Pre-Professional Health Sciences Academy | North & South Tech |
| *Sophomore Career Exploration** | North Tech |
| South Tech Makes | South Tech |
| Veterinary Assistant | North & South Tech |
| Web & Computer Programing | North & South Tech |
| Welding | North & South Tech |

*Exploratory programs