

The Career and Technical Education Division of Erie 1 BOCES encompasses four Centers; Potter, Harkness, Ken-Ton and Calspan. The largest Center in the district is Harkness with approximately 1500 high school students. Ken-Ton and Potter are similar with approximately 500 high school students. Calspan has just under 100 high school students. In our Centers, the question isn't so much about staffing, but adding a section to an existing program or creating a new program. Career and Technical Education programs traditionally include the trades such as Building Trades, Electrical Construction, Auto Mechanics and Cosmetology to name a few. In the last 20 years, programs have been added to include Cybersecurity, Fashion Design Technology, Video and Recording Arts and others to meet the interests of high school students. We have a communications team that works with area high schools to collect data on what high school students are interested in as a hands-on industry. This information is compiled and presented to the Coordinator of CTE to determine if a program should open a new section or if another team is needed to research the possibility of creating a new CTE Program fueled by student interest.

Looking at the industry trade data from the *Significant Industries in WNY Report* (dol.ny.gov), it is clear that traditional trades such as Electricians and Plumbers are in high demand. Electricians in the WNY share 10.1% of the trade's workforce, while the HVAC trade owns 5.8%. In the past five years at Erie 1 BOCES we have increased our Electrical Systems program by expanding to our Ken-Ton Center to be able to educate and train an additional 24 high school students per year in this field. Harkness and Potter already graduate approximately 24 students each in Electrical Systems yearly. This school year we have expanded the HVAC program to the Harkness Center providing the

opportunity to graduate 24 trained trades people in this HVAC yearly which is in addition to the 24 students that graduate from our Potter Center yearly with HVAC certificates. Jobs are available in these areas that need trained workers. It is part of our mission to provide the WNY workforce with high school graduates ready to join industry or local unions to perform work in industries where there is a shortage. The two industries this report will focus on for growth are Fashion Design Technology and Cybersecurity. These are two non-traditional trades that are popular among high school students in WNY.

Erie 1 BOCES takes into consideration what the area's high school students are interested in as well as the needs of business and industry. Through the Communication Team, data is collected through visits at local high schools each fall. Surveys are given and social media analytics are watched as to what high school kids are following. QR codes are used to entice kids to search out the webpages for programs offered in our CTE Centers where videos, examples of student achievements through projects, and the attractive written descriptions of programs are presented using a marketing plan that relates to teenagers. Through the registrations for programs, data is kept to follow the interests of populations as well as where the students are geographically located. Fashion Design Technology is the program I have taught for 17 years. I have experienced almost losing my job because of low enrollment 10 years ago to three years ago being told the program was expanding to add another teacher because of continuous years of waitlists when high school students were being turned away. In the 2020-2021 school year, the Fashion Design Technology Program had a waitlist turning away an additional 8% of high school kids maxing out my class with 28 students. The following school year the waitlist grew to 14%. This

increase in high school student interested in Fashion Design Technology is attributed to the Covid pandemic when staying home had teenagers on social media seeing how to create DIY projects and wanting to learn how to sew and design. In the winter of 2022, it was decided to expand the Fashion Design Technology (FDT) program by adding another instructor so no students would be turned away. Last year's enrollment in FDT grew to 38 high school juniors with no one getting turned away with the addition of adding a FDT teacher and opening up an additional section. This current school year we started with 40 fashion juniors. Watching the enrollment increase, I can see the justification through the data to add a new section for FDT to meet the needs of high school student interest. With Buffalo State University in the area, many of our graduates leave BOCES and join the Fashion, Textile and Technology (FTT) Department at this collegiate school also promoting that pathway from high school to college. Our college articulation agreement with this University allows our FDT students to begin their collegiate journey with six introductory credits in their FTT program setting our graduates up for the 3 in 1 pathway to attend the Fashion Institute of Technology in NYC which is the number one fashion college in the US.

With 50 BOCES students creating \$1,000,000 in revenue for the district, expanding a program with notable growth is a good investment. The cost for a BOCES student to be in a CTE program per year is presently at \$10,000 for the present school year. Each graduate completes a two-year program with us equating \$20,000 in tuition for the student. Simple math tells me with the \$10,000 per student per year tuition, Harkness's budget revenue would be \$15, 000, 000 this school year (actual for 2021-2022 school year: \$9,356,964) with Potter's at \$5,000,000 for this school year (actual for 2021-2022 school year: \$4,586,747)

(e1b.org). The Potter building is broken up with a middle school P-Tech program leaving a smaller space for high school trades. This is the reason for such a difference in high school CTE population between the Centers. When the FDT department expanded, the second section opened at Potter because of the geographic location of students. This program is supported by many Southtown students that crave for creative industries. After speaking “off record” with one of the financial personal at BOCES, I learned that there is a budget per CTE Center not per program. For a Center to invest in a new section of a program or a completely new program, they need to make budget money available for all new equipment, building maintenance and construction to retro fit a classroom that already exists into a usable space. This could cost anywhere from \$100, 000 to \$1, 000,000 depending on the equipment needed. When this occurs, the other programs in that Center have less access to the budget money for that school year.

Since FDT is a trade that has an average traditional student as a female teenager, if there are teenage males enrolled in the program, they are labelled a non-traditional student based on gender. There are also on average 40% of FDT students that have IEPs and 6% of students that are English learners. The Communication Department markets the programs at BOCES Centers to all students including the non-traditional in order to qualify for the Perkins Grant. The Carl D. Perkins Grant is a Non-Traditional Career and Technical Education Grant for a CTE Pathway. This grant can assist the funding of programs with non-traditional learners based on gender, homelessness, families on disability, and English learners to name a few criteria to qualify. Having access to grant money to finance CTE in addition to student tuition, aids in the development of programs

with the latest technology to prepare our graduates for the waiting workforce or to continue their education collegiately.

Cybersecurity is a popular program at the Harkness Center. The incoming junior class in 2021 had 29 students registered, in 2022 - 26 students, 2023 - 23 students and 2024 - 22 students. This program sees the same patterns as FDT with a certain percentage of students living outside the geographic lines of the Harkness Center component districts. However, home districts can allow cross contracts to send students to Harkness bussing them through a transportation budget cost so students can have the opportunity to attend. Also, if a non-component district has students that would normally attend a BOCES that is not Erie 1 BOCES, an agreement can be made so the out of district student can attend E1B. For example: Erie 2 BOCES does not have Cybersecurity as one of their programs at the Ormsby Center located in East Aurora (e2ccb.org). If there is an East Aurora high school student that wants to attend the Cybersecurity program, East Aurora can contract with Erie 1 to send their student to Harkness. Looking at the data for the Cybersecurity program, there have been students attending Harkness whose districts agree with providing the out of district transportation so their students can attend a program at Harkness that Ormsby does not have. Eight students in 2022, ten students in 2023, and six students in 2024 attended or are attending Cybersecurity at Harkness from Southtown districts. These are schools that have the cross-contract agreement with E1B and allow their students that can afford a long bus ride, 45-60 minutes, in their schedules to attend Harkness. If a new section of Cybersecurity opened up at the Potter CTE Center in West Seneca, I predict there would be a full class to support the additional cost of setting up a classroom with equipment and staff for Cybersecurity. If

Cybersecurity is more accessible to students in the Southtown districts, the enrollment will grow from those schools.

As stated earlier, the tuition cost for each student to attend a CTE Center for Erie 1 BOCES is presently at \$10, 000. With increased communication to non-component districts and the Southtown component districts, I believe it is time for Cybersecurity to grow. This will decrease the over crowding classroom at Harkness giving more teacher to student time to develop more intricate skills in the technology industry. On the “Professional, Scientific and Technical Science” chart in the *2021 Significant Industries in WNY Report*, (dol.ny.gov) occupations that are based in technology through software and services make up 4.9% of the workforce. In addition, all industries need computer technicians that can provide software support and security to protect the information of customers, medical patients and consumers. There are jobs in Cybersecurity and the technology industry waiting for our graduates. Students can also choose to attend a college to earn a more advanced degree in Computer Science and Technology to start in the industry above an entry level position. In regards to the Perkins grant, expenses to expand this program can be offset by grant money since in 2023 Cybersecurity had four females attending the first year of the program and this school year there are six females, two of which are English learners. Traditionally prior to 2023, males made up the entire population of our Cybersecurity program.

In conclusion, over my career at Erie 1 BOCES, I have witnessed first-hand the addition and subtraction of program and staff. The data used to support these budget decisions is based on need in the local workforce, high school student interest and allocation of funding from revenues not just generated from tuition

but also available grant monies. Over the course of the last three years, Cybersecurity is mirroring similar trends that Fashion Design Technology did prior to the expansion of adding a new section. With interest from Southtown district students for Cybersecurity, the increase of female students and English learners in this course, I believe it is a wise decision to expand this program to the Potter Center to continue reaching more WNY high school students preparing them for computer positions in the workforce to help fill jobs.

Works Cited

- (2021). Western New York Significant Industries, A Report for Workforce Development Systems, Bureau of Labor Market of Information, Division of Research and Statistics [Review of *Western New York Significant Industries, A Report for Workforce Development Systems, Bureau of Labor Market of Information, Division of Research and Statistics*]. In *dol.ny.gov*.
https://dol.ny.gov/system/files/documents/2022/03/2021-significant-industries-western-ny_0.pdf
- Anonymous. (2024, October 25). *Budget connections to CTE and Program Growth* (D. Borchert, Interviewer) [Review of *Budget connections to CTE and Program Growth*].
I conducted the interview with a member of the financial team who wished to remain anonymous.

Career & Technical Education - Erie 2-Chautauqua-Cattaraugus BOCES. (2024, October 21). Erie 2-Chautauqua-Cattaraugus BOCES.
<https://www.e2ccb.org/programs/career-technical-education/>

Erie 1 BOCES. (2022).
<https://www.e1b.org/en/about-us/resources/Reports--Plans/23-24-PDFs-Plans-and-reports/2022-2023-Erie-1-BOCES-Report-Card.pdf>

Fusco, A. (2024, October 24). *Data Collection for Program Growth* (D. Borchert, Interviewer) [Review of *Data Collection for Program Growth*].
I conducted the interview with Ms. Fusco

High School Programs. (2019). E1b.org. <https://www.e1b.org/en/k-12-education-programs/high-school-programs.aspx>

Reports and Plans. (2023). E1b.org. <https://www.e1b.org/en/about-us/reports-and-plans.aspx#Erie-1-BOCES-Budget-Book>

(n.d.). Maximizing access and Success for Special Populations, Supporting Non-Traditional Learners in Career and Technical Education [Review of *Maximizing access and Success for Special Populations, Supporting Non-Traditional Learners in Career and Technical Education*]. In *acteononline.org*. Retrieved November 1, 2024, from https://www.acteononline.org/wp-content/uploads/2024/05/Supporting_Nontraditional_Learners_ACTE_AdvanceCTE_Jan2024.pdf