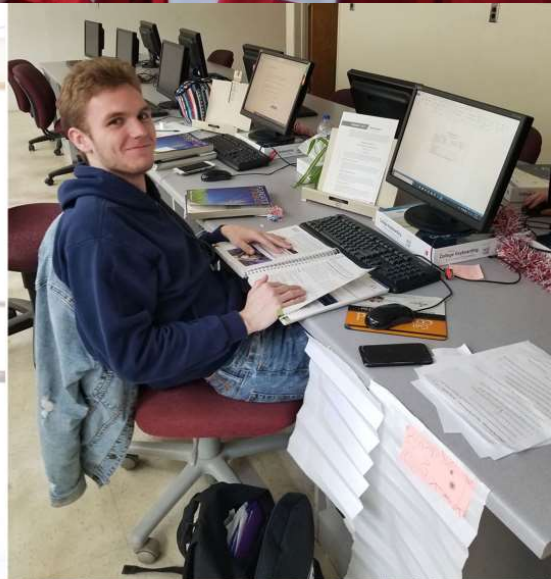


The relationship between vocational programming and postsecondary pathways in the Vandalia Community School District



Area Vocational Center



Vela Institute
Illuminating Education



About Vela Institute

Vela Institute is a nonprofit organization dedicated to increasing access to evaluation, analytics, and data tracking to education partners to improve student and community outcomes. Established in 2017, Vela Institute accomplishes its mission through applied research, data analytics, professional development, and the use of evidence-based practices.

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Executive Summary

The advantages of obtaining a postsecondary credential following high school are well known. However, many students face barriers related to cost, quality, relevance, and alignment with their interests and goals. The current project sought to determine how participation in Vandalia Community School District's OKAW Area Vocational Center related to the postsecondary paths of 2022 and 2023 Vandalia Community High School (VCHS) graduates.

The project was guided by three questions:

1. What are the current postsecondary paths of the VCHS 2022 and 2023 graduates?
2. Are there any distinguishing characteristics between VCHS students and those who participated in OKAW programs?
3. What are the differences in the current postsecondary paths between VCHS students and those who participated in the OKAW programs?

Results indicate that over half of VCHS graduates opted to explore postsecondary education. The distribution of graduates across different types of institutions reveals a preference for 2-year institutions. Results also indicate that just under half of VCHS graduates entered the workforce after high school, with a small portion both working and pursuing further education.

There were notable group differences among VCHS graduates, with male graduates more likely to participate in OKAW programs and more likely to report being employed after high school. While overall reported postsecondary participation rates were similar, female graduates were more likely to enroll in 2-year institutions. Graduates who were eligible for free or reduced lunch were less likely to enroll in trade schools and 2-year institutions and were more likely to report entering the workforce after high school.

Participation in OKAW programs was found to have a positive impact on students' post-graduation outcomes. While the pursuit of postsecondary credentials is similar regardless of attending VCHS only or also participating in OKAW, those involved in OKAW indicated a higher inclination towards trade school enrollment, were more likely to earn dual credit, and had lower unemployment rates. Finally, VCHS graduates who earned dual credit in high school were equally likely to pursue a postsecondary credential but were more likely to utilize their vocational skills and less likely to be unemployed.

The research-based recommendations provided in the current report can help VCHS enhance support for student success and contribute to a thriving workforce. Addressing these challenges can help ensure that all students can pursue fulfilling careers, whether through postsecondary education or direct entry into the workforce.

Project Background

The advantages of obtaining a postsecondary credential following high school are well known. Such credentials include professionally recognized certificates, apprenticeship completion certificates, state or federally recognized licenses, or associate or bachelor's degreesⁱ. Research has repeatedly shown that, on average, those who hold a postsecondary credential tend to earn higher salaries, experience lower unemployment levels, are more frequently offered health insurance and retirement plans by employers and report greater satisfaction with their educational and career trajectories compared to individuals who only have a high school diplomaⁱⁱ. However, not all students have equal access to and completion of postsecondary education and training, and many face barriers related to cost, quality, relevance, and alignment with their interests and goalsⁱⁱⁱ. Given the importance of postsecondary credentials and these barriers, high school vocational programs offer a possible path to their postsecondary futures.

The relationship between high school vocational programs—specifically Career and Technical Education (CTE)—and postsecondary employment and attainment of postsecondary credentials is not well researched. One recent study found that focusing on a particular CTE field in high school is associated with an increased probability of enrolling in and obtaining a postsecondary credential in that field. This relationship is particularly strong in health-related fields, with an increase of 12.5 percentage points in postsecondary credential attainment^{iv}. Other work found that students who devoted a portion of their high school time to vocational courses earned significantly higher wages shortly after graduation and several years later. This was true for students who pursued postsecondary education and those who did not^v. Finally, a systematic review by the American Institutes for Research (AIR) in 2014 highlighted that CTE participation positively impacts several high school outcomes, including academic achievement, high school completion, and college readiness^{vi}.

This project sought to explore how participation in Vandalia Community School District's OKAW Area Vocational Center related to the postsecondary paths of 2022 and 2023 Vandalia Community High School (VCHS) graduates. Given that one of the goals of Vandalia Community School District is to prepare its students for success in their postgraduation endeavors, whether they choose to pursue higher education, vocational training, or employment, studying the post-graduation pathways of its graduates can help evaluate the extent to which the school system fulfills this goal and identify areas of improvement and innovation.

The current project sought to answer the following three questions:

Question 1: What are the current postsecondary paths of the VCHS 2022 and 2023 graduates?

The first question sought to determine the post-graduation activities of the 2022 and 2023 graduating classes. Answering this question sets a baseline for VCHS graduates' activities in their first and second years after high school graduation.

Question 2: Are there any distinguishing characteristics between VCHS students and those who participated in OKAW programs?

The second question examined whether there were notable distinctions between students exclusively attending VCHS and those also involved in OKAW programs. Understanding if distinct student profiles prefer certain high school routes can shed light on how students are preparing for their post-high school futures.

Question 3: What are the differences in the current postsecondary paths between VCHS students and students who participated in the OKAW programs?

The project's final question aimed to assess how students involved in OKAW programs differed in their postsecondary journeys from those who did not participate. This analysis will aid in gauging the extent to which OKAW in Vandalia is a pathway for applying vocational skills learned and achieving a postsecondary credential.

Project Sample and Methodology

Data for the current project were gathered from the 2022 and 2023 VCHS graduates, with all data provided by the Vandalia Community School District.

Variables of interest included year of graduation, participation in OKAW, gender, free or reduced lunch eligibility, and graduation grade point average (GPA). This information was extracted from the Vandalia Community School District's central database and securely transferred to the Vela Institute in January 2024.

The outcomes of interest were collected by Vandalia Community School District staff in April 2024. Staff individually contacted each of the 2022 and 2023 graduates and asked them in which postsecondary activities they were currently engaged. Graduates who indicated they were working were asked where they were employed and their job title. Graduates who indicated they were working on a postsecondary credential were asked where they were enrolled and the intended focus of their studies. The Vandalia

Community School District staff member also recorded if the graduate had completed dual credit courses at VCHS.

Graduates' open-ended responses were transferred to the Vela Institute. Vela content-coded the responses and categorized them into the following categories: military service, working, enrolled in a trade school, enrolled in a two-year institution, enrolled in a four-year institution, and unemployed/not enrolled in school. If a graduate participated in OKAW programs and indicated they were working, their job title was examined to determine if it was reasonable that they were using skills learned during their participation in OKAW programs.

The final sample consisted of 175 graduates. Figure 1 provide an overview of the graduates' characteristics¹.

Figure 1: Student Characteristic Profile

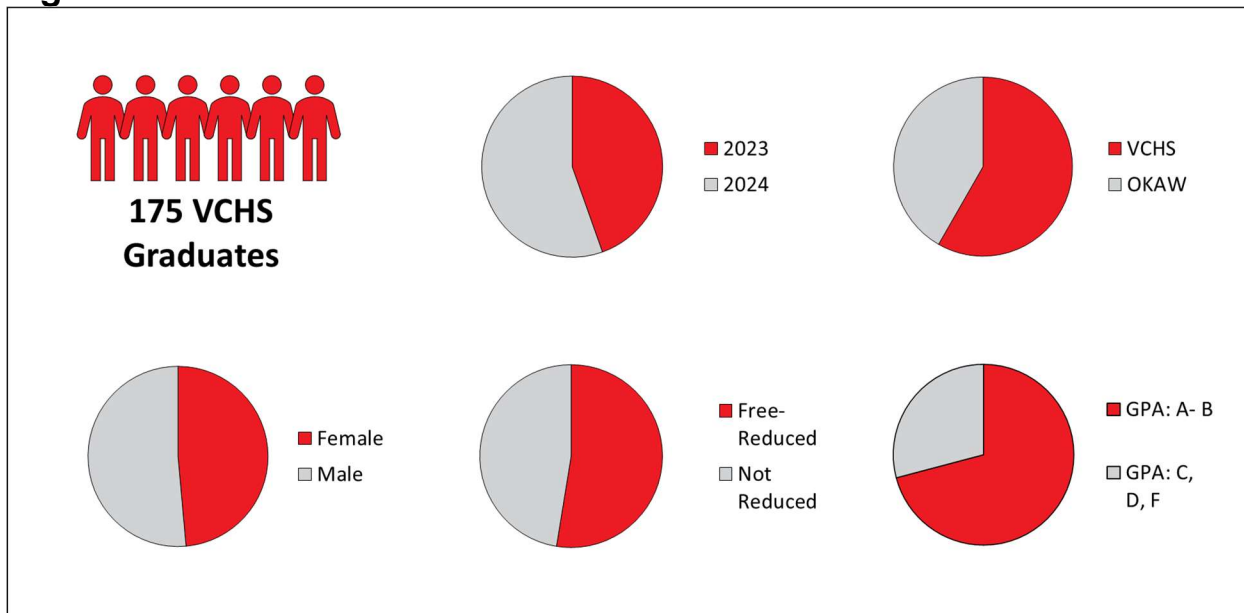


Figure 2 indicates a gender-balanced sample with 85 females and 90 males, along with a similar balance in lunch eligibility, with 92 eligible and 83 not eligible. There were slightly more graduates in 2023 (55.4% or 97 students) than in 2022 (44.6% or 78 students). A majority, 58.3% (102 students), attended VCHS solely, while 41.7% (73 students) also participated in OKAW programs. Academically, the majority of graduates had either an "A" (20.6%) or "B" (50.3%) GPA, and a smaller number earned a "C" (18.9%) or "D" (6.3%) GPA.

¹ Three graduates were excluded from analysis due to missing at least one demographic variable of interest. Race-ethnicity was not used in the analyses due to a lack of variability in the sample with 94.9% of the total sample identifying as White, non-Hispanic.

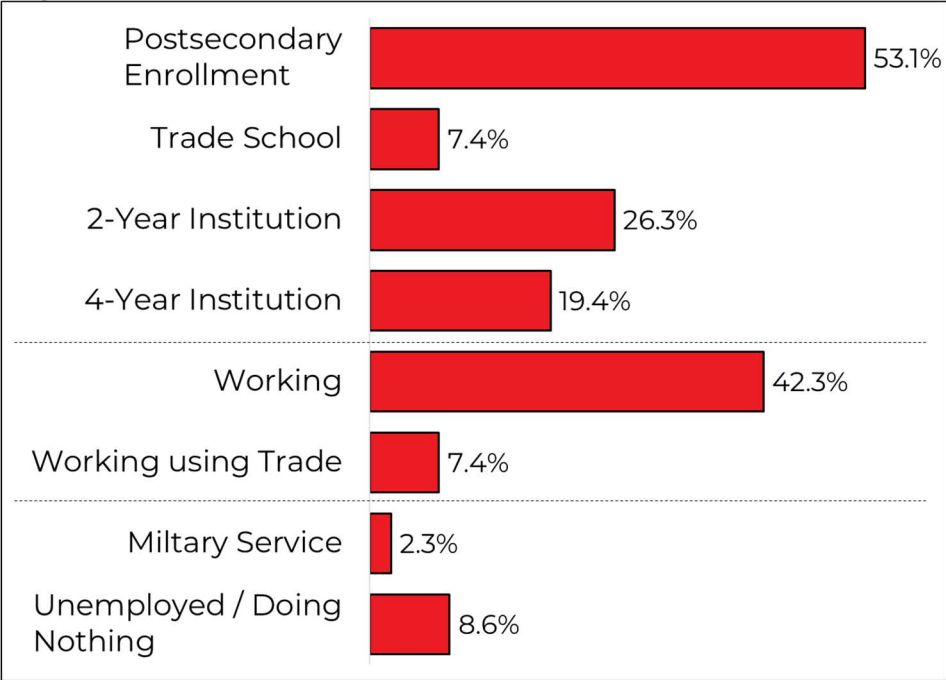
Project Results

The following section provides a breakdown of the results that answer the project's three primary questions. Notable differences by graduate characteristics and interpretations of the results are also provided.

Question 1: What are the current postsecondary paths of the VCHS 2022 and 2023 graduates?

The first question sought to determine the post-graduation activities of the 2022 and 2023 VCHS graduates. Figure 2 shows the postsecondary activities of these graduates as of April 2024.

Figure 2: VCHS 2022 and 2023 Graduates' Postsecondary Activities



Question 1 Key Findings

Figure 2 shows that over half of the graduates from VCHS in 2022 and 2023 (53.1%) pursued further education after high-school and sought to obtain a postsecondary credential.

- 7.4% reported attending a trade school.
- 26.3% reported attending a 2-year institution.
- 19.4% reported attending a 4-year institution.

Looking result showing the pursuit of secondary credentials, a few notable differences by graduate characteristics stood out:

- Female graduates were more likely to be enrolled in 2-year institutions.
 - Female graduates had similar likelihoods of enrollment in trade schools and 4-year institutions compared to male graduates.
- Graduates who were eligible for free or reduced lunch were less likely to be enrolled in trade schools and 2-year institutions.
 - Graduates who were eligible for free or reduced had a similar likelihood of enrollment in 4-year institutions compared to those not eligible.
- GPA only predicted enrollment in 4-year institutions.
 - GPA did not predict enrollment in trade schools or 2-year institutions.

Figure 2 also shows that just under half of the 2022 and 2023 VCHS graduates (42.3%) reported working after high school.

- 8.0% reported both working and pursuing a postsecondary credential.
- Male graduates were more likely to report working after high school.
- Graduates who were eligible for free or reduced lunch were more likely to report working after high school.
- GPA did not predict the likelihood to report working after high school graduation.

Question 1 Conclusions

The first question sought to determine the post-graduation activities of the 2022 and 2023 VCHS graduates.

Results indicate that over half of VCHS graduates opted to explore postsecondary education. The distribution of graduates across different types of institutions reveals a preference for 2-year institutions, which could be due to various factors such as cost, proximity, program offerings, or quicker entry into the workforce. The fact that 7.4% chose trade schools suggests a recognition of the value of vocational training.

Gender differences in enrollment patterns are also noteworthy, with female graduates favoring 2-year institutions, which may reflect their educational or career preferences. However, there are similar enrollment rates in trade schools and 4-year institutions between genders.

The lower enrollment in trade schools and 2-year institutions among graduates eligible for free or reduced lunch could point to financial barriers in accessing these educational paths, despite similar enrollment rates in 4-year institutions. This suggests that financial aid and scholarships might be more accessible or targeted toward 4-year programs, leaving a gap in support for vocational and associate degree seekers.

Results examining employment after high school showed that just under half of VCHS graduates entered the workforce, with a small portion both working and pursuing further

education. This indicates a substantial number of students are either delaying further education or choosing to go directly into the workforce, possibly due to economic reasons or a desire to gain practical experience.

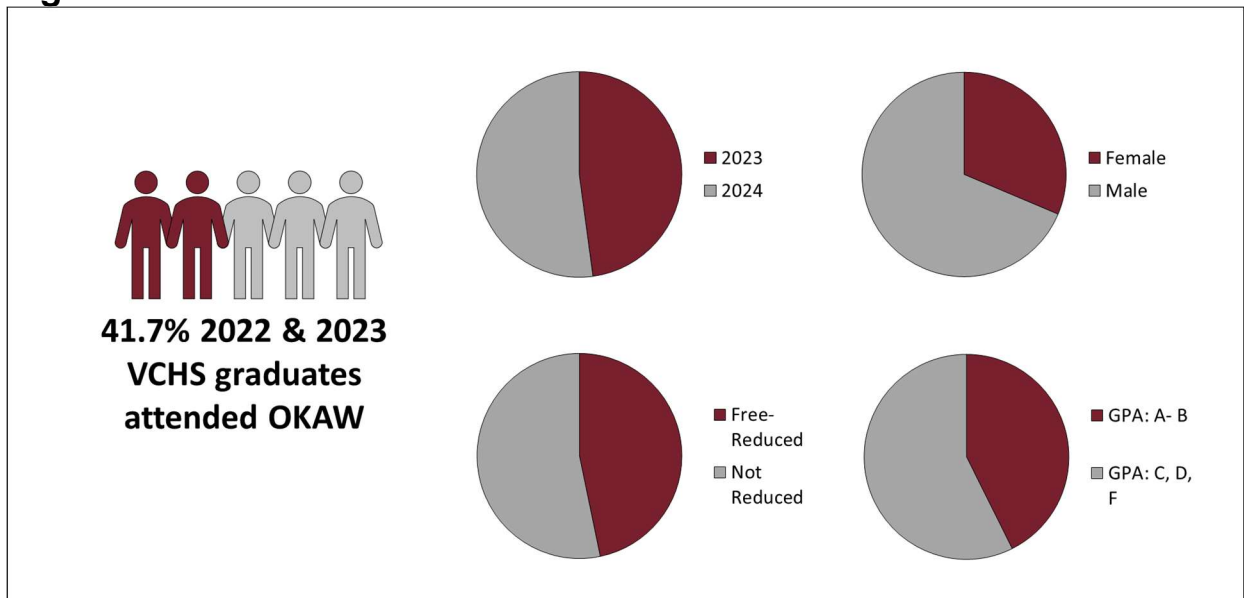
The finding that graduates eligible for free or reduced lunch were more likely to be working suggests potential financial constraints or differing career aspirations. Additionally, the higher likelihood of male graduates working after high school could indicate a range of factors, from economic necessity to a proactive approach in gaining work experience.

The relationship between GPA and enrollment in 4-year institutions suggests that higher academically performing graduates are slightly more likely to pursue bachelor's degree programs and potentially receive scholarships to help defray the financial costs of postsecondary education. The fact that GPA was not a meaningful predictor of pursuing a trade certificate, enrolling in a 2-year institution, or going to work after high school suggests that factors other than academic achievement are driving graduates' postsecondary decisions.

Question 2: Are there any distinguishing characteristics between VCHS students and those who participated in OKAW programs?

The second question examined whether there were notable distinctions between students exclusively attending VCHS and those also involved in OKAW programs. Figure 3 shows the characteristics of the graduates who attended OKAW during their time at VCHS.

Figure 3: OKAW 2022 and 2023 Student Profile



Question 2 Key Findings

Figure 3 indicates similar participation in OKAW across the 2022 and 2023 classes and comparable levels of participation among graduates who were and were not eligible for free or reduced lunch.

- Male graduates were more likely to have participated in OKAW programs compared to female graduates.
- GPA was not a meaningful predictor of engaging in OKAW programs while at VCHS.

Question 2 Conclusions

The second question examined whether there were notable distinctions between graduates who exclusively attended VCHS and those also involved in OKAW programs.

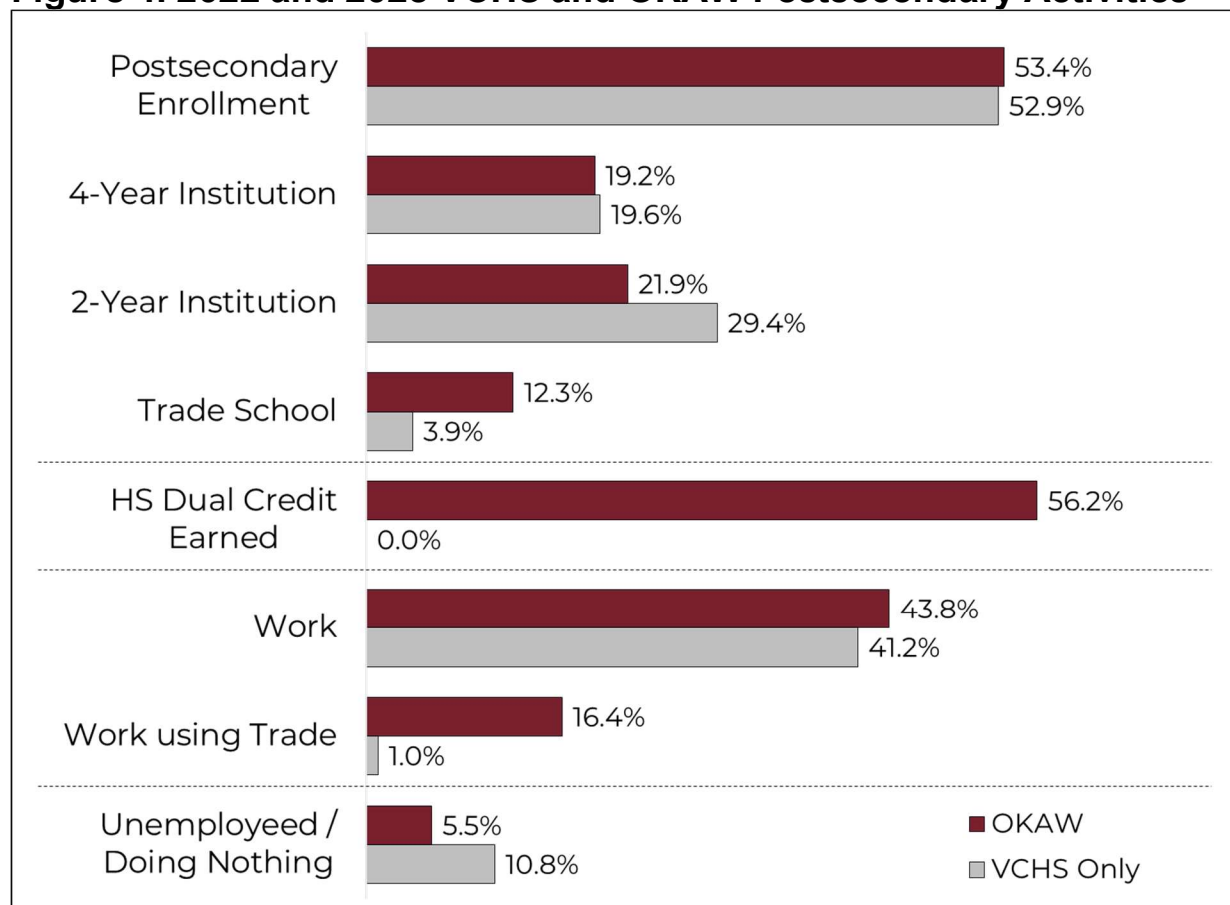
Results suggest there is a notable gender disparity, with male graduates participating in OKAW more than female graduates. This could imply that the program's outreach or appeal may be more effective with male students, or that there are barriers to participation for female students.

Furthermore, the lack of a relationship between GPA and OKAW program engagement suggests that these programs are perceived as separate from academic achievement, potentially appealing to students with a wide range of academic performances.

Question 3: What are the differences in the current postsecondary paths between VCHS students and students who participated in the OKAW programs?

The project's final question aimed to assess how students involved in OKAW programs differed in their postsecondary journeys from those who did not participate. Figure 4 shows the postsecondary activities of graduates who exclusively attended VCHS and those who also participated in OKAW programs.

Figure 4: 2022 and 2023 VCHS and OKAW Postsecondary Activities



Question 3 Key Findings

Figure 4 shows that similar percentages of pursuit of postsecondary credentials among graduates who only attended VCHS and those who also attended OKAW (VCHS only 52.9% versus OKAW 53.4%).

- Graduates who participated in OKAW *had a higher likelihood* of enrolling in a trade school (12.3%) compared to graduates who only attended VCHS (3.9%).

Levels of post-graduation employment were similar between graduates who only attended VCHS and those who also attended OKAW (VCHS only 41.2% versus OKAW 43.8%).

- Graduates who participated in OKAW (16.4%) *were more likely* to use the vocational skills learned at OKAW (compared to 1.0% of students who only attended VCHS).
- Graduates who participated in OKAW programming *were less likely* to report being unemployed or doing nothing (5.5%) compared to VCHS only graduates (10.8%).

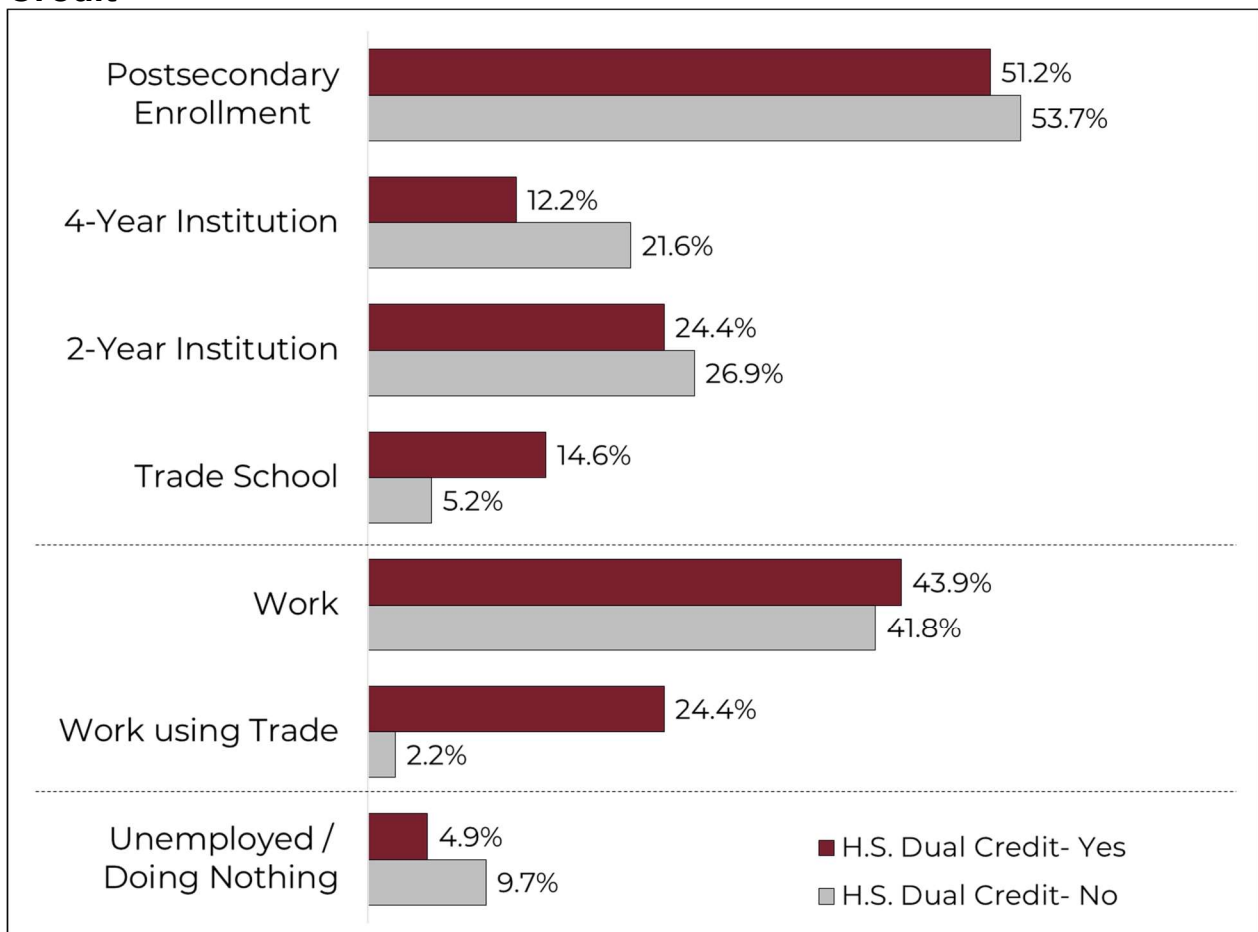
Figure 4 shows that graduates who participated OKAW programs *were more likely* to earn dual credit in high school.

- 56.2% graduates who participated in OKAW completed at least one dual credit course in high school (compared to 0.0% of students who only attended VCHS).

Dual Credit Follow-Up Analyses

Given the strong association between OKAW participation and earning dual credit, follow-up analyses were conducted to examine the relationship between dual credit and postsecondary activities. Figure 5 shows the reported postsecondary activities of 2022 and 2023 VCHS graduates who did and did not earn dual credit in high school.

Figure 5: Postsecondary Activities Among Graduates Earning Dual Credit



Dual Credit Key Findings

Figure 5 shows a similar percentage of graduates report pursuing postsecondary credentials among those who earned dual credit (51.2%) and those who did not (53.7%).

- Graduates who earned dual credit were more likely to report enrolling in a trade school (14.6%) compared to graduates who did not earn dual credit (5.2%).

Figure 5 indicates that the reported post-graduation employment rates are comparable for graduates with dual credit (43.9%) and those without (41.8%).

- Graduates who earned dual credit were more likely to use the vocational skills learned at OKAW (24.4%) compared to graduates who did not earn dual credit (2.2%).

Question 3 Conclusions

The third question aimed to assess how students involved in OKAW programs differed in their postsecondary journeys compared to those who did not participate.

Results suggest that participation in OKAW programs has a positive impact on students' post-graduation outcomes. While the pursuit of postsecondary credentials is similar regardless of attending VCHS only or also participating in OKAW, those involved in OKAW were more likely to enroll trade school. This could indicate that OKAW programs are effectively preparing students for specific vocational paths. Moreover, OKAW participants report lower unemployment rates, suggesting that the skills acquired are relevant in the job market.

The significant difference in dual credit attainment between OKAW participants and VCHS-only graduates highlights the potential of OKAW programs to enhance academic opportunities. Given that graduates who earned dual credit are more likely to utilize their vocational skills and less likely to be unemployed, VCHS should consider further integration of similar programs to improve student readiness for both postsecondary credential attainment and entering the workforce.

Findings, Recommendations, and Conclusion

Several notable implications and recommendations are supported by the project's results examining the relationship between vocational programming and postsecondary pathways.

Overall Findings

- **Pursuit of Postsecondary Credentials:** Over half of the graduates pursue further education, with a significant number attending 2-year institutions. This suggests that community colleges are a popular choice, possibly due to their affordability and accessibility.
- **Gender and Postsecondary Pathways:** Female graduates are more likely to enroll in 2-year institutions and are less likely to report being employed after high school. This indicates potential gender preferences or other factors impacting graduates' postsecondary decisions.
- **Economic Disparities:** Those eligible for free or reduced lunch are less likely to enroll in trade schools and 2-year institutions and are more likely to report entering the workforce after high school. This suggests socioeconomic barriers to accessing certain educational pathways.
- **OKAW Programming:** Participation in OKAW programs is associated with higher enrollment in trade schools and a greater likelihood of using vocational skills in employment. This underscores the value of vocational training in preparing students for specific career paths.
- **Dual Credit Benefits:** Earning dual credit is linked to higher trade school enrollment and greater use of vocational skills in employment, highlighting the importance of dual credit courses in enhancing job readiness and aligning with vocational training.
- **Academic Performance:** GPA is a predictor for enrollment in 4-year institutions but not for trade schools, 2-year institutions, or employment after high school. These results suggest that factors other than academic achievement are influencing graduates' postsecondary pathways.

Recommendations

- **Enhance Access to Vocational Training:** VCHS should promote and expand access to vocational programs like OKAW, especially for students from lower socioeconomic backgrounds or those intending to work directly after high school, to help bridge the gap in trade school enrollment.
- **Increase Dual Credit Opportunities:** Expand dual credit programs to provide more students with the opportunity to earn dual credits while at VCHS, particularly in vocational areas, to enhance their readiness for postsecondary education, including trade schools, and employment.
- **Address Socioeconomic Barriers:** Implement initiatives to reduce financial and informational barriers for students eligible for free or reduced lunch, helping them access a broader range of postsecondary options, including trade schools and 2-year institutions.
- **Career Counseling and Skill Development:** Offer comprehensive career counseling and skill development programs to help VCHS students make informed decisions about their educational and career paths, emphasizing the practical benefits of vocational training and dual credit courses.
- **Community Partnerships:** Continue to foster partnerships with local businesses and industries to provide internship and apprenticeship opportunities, easing the transition from school to work.

Overall Conclusions

Given the importance of postsecondary credentials, which include earning higher salaries, lower unemployment levels, and greater access to health insurance and retirement plans provided by employers, it is crucial to explore the various pathways that can help high school students earn these credentials. The current project explored the relationship between vocational high school programs and their potential as a pathway to postsecondary futures.

These findings offer valuable insights into the positive impact that high school vocational programs and earning dual credit can have on VCHS graduates. The research-based recommendations provided in this report can help VCHS enhance support for student success and contribute to a thriving workforce. Addressing these challenges can help ensure that all students can pursue fulfilling careers, whether through postsecondary education or direct entry into the workforce.

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