

STRENGTHENING PATHWAYS TO REGISTERED APPRENTICESHIP

Findings from the Inland Empire
High School Pre-Apprenticeship Study



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Solutions



San Bernardino County
Superintendent of Schools
Transforming lives through education

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EXECUTIVE SUMMARY

The San Bernardino County Superintendent of Schools (SBCSS) stewards one of California's largest regional high school pre-apprenticeship systems. Through IEConnect, SBCSS and its partners connect thousands of Inland Empire students with industry-aligned education across six pathways, 72 high schools, and 25 school districts. This study examines how the region can build upon that foundation by strengthening the connections that help interested students move from high school pre-apprenticeship toward registered apprenticeship and related opportunities by drawing on a survey of 5,963 Career Technical Education (CTE) students across Riverside and San Bernardino counties—386 of whom self-identified as registered pre-apprenticeship candidates—and interviews with 25 educators, program administrators, and workforce partners. Because longitudinal data are unavailable, the study examines students' knowledge, interest, preparation, and perceived barriers—not actual apprenticeship entry or persistence—and complementary stakeholder perspectives.

The findings trace a series of conditions shaping students' movement through the pathway:

1. **Students' understanding of apprenticeship pathways was limited.** Fewer than half (48.4%) correctly identified an apprenticeship as paid employment combined with structured training, and relatively few recognized themselves as registered pre-apprenticeship candidates. Teachers were students' most common information source and were strongly associated with candidates' accurate understanding of apprenticeship.
2. **Interest and preparation did not consistently translate into a clear path forward.** Approximately 28% of all students—and 50% of self-identified candidates—reported high intent to pursue apprenticeship. Information about apprenticeship shared by teachers, families, and employers was associated with greater intent, while teacher and school-event exposure was associated with taking or planning to take more preparatory steps. Stakeholders emphasized that relationships, direct connections, and continued guidance are critical to moving students from interest to action.
3. **Interconnected structural barriers may constrain transitions.** Transportation, financial and family responsibilities, age and documentation requirements, and limited apprenticeship capacity may affect successive stages. Although most students without licenses considered obtaining one important—and licensure progress was greater among students working, taking college-credit courses, or interested in apprenticeship—only 18.2% held a license, with many citing cost, vehicle access, scheduling, and lack of adult supervision as barriers. While cumulative effects cannot be established, the findings suggest students with fewer resources or supports may experience compounding disadvantages throughout the transition process.
4. **The regional ecosystem requires greater coordination across partners.** Participants viewed the existing system as a strong foundation, highlighting efforts by SBCSS and individual educators to create industry exposure, direct connections, and transition supports. At the same time, they described variation in classroom implementation and regional gaps in shared information, handoff processes, cross-sector coordination, and outcome tracking — functions that extend beyond the capacity of any single organization.

Drawing on these findings and prior research, the report concludes with six evidence-informed recommendations to build upon the system's existing strengths: (1) clarify core pathway experiences, (2) create a centralized information hub, (3) provide direct pre-graduation handoffs, (4) expand industry exposure, (5) catalogue and coordinate responses to transition barriers, and (6) track student outcomes alongside apprenticeship availability. Together, these actions can support a more continuous pathway from high school into apprenticeship and high-quality employment.

I. INTRODUCTION

In the United States, registered apprenticeship programs are an important workforce strategy for preparing individuals for high-demand careers while addressing persistent workforce shortages in the skilled trades and technical professions. Yet in California, where the average apprentice begins around age 30, these opportunities often reach individuals relatively late in their career development (California Division of Apprenticeship Standards, 2023). High school pre-apprenticeship programs can introduce students to these pathways earlier and equip them with the knowledge, skills, and experience needed to enter and succeed in a registered apprenticeship through industry-aligned coursework, hands-on learning, and exposure to careers that may not require a traditional four-year degree. As policymakers, educators, and employers seek to strengthen workforce pipelines, these programs have received growing attention as a mechanism for connecting students to stable, well-paying careers while meeting regional labor market needs.

The San Bernardino County Superintendent of Schools (SBCSS) is a regional leader in efforts to systematically bridge the opportunity and awareness gap between high school students and registered apprenticeship programs. Through broad regional partnership, thousands of high school students across the Inland Empire (I.E.)—a region co-extensive with California’s Riverside and San Bernardino counties—gain access to registered pre-apprenticeship opportunities every year. At the center of this effort is IEConnect, the regional high school registered pre-apprenticeship system stewarded by SBCSS, which strengthens Career Technical Education (CTE) programs by aligning classroom learning with industry expectations and intentionally directing students to registered apprenticeship opportunities after graduation. During the 2025-2026 academic year, 4,508 students became registered pre-apprentices in six industry pathways across 72 high schools¹ in 25 school districts in the I.E.

While substantial investments have been made in expanding pre-apprenticeship opportunities, less is known about what happens after students complete these programs. Emerging national research suggests that this challenge extends beyond the I.E. A recent multistate initiative found that immediate transitions from pre-apprenticeship into registered apprenticeship were relatively uncommon—with only 8% of pre-apprentices becoming apprentices—and varied across programs, sectors, and geographic contexts. The findings indicate that pre-apprenticeship often leads to several possible destinations—including employment and further education—and that registered apprenticeship entry depends upon both students’ goals and the strength of the systems connecting them to available opportunities (Jobs for the Future [JFF], 2026). Regional stakeholders have raised similar concerns that I.E. students who wish to continue into apprenticeship may complete high school as registered pre-apprentices without ultimately making that transition. Understanding where and why interested students may lose momentum is essential to creating a clearer, more navigable pathway and ensuring that regional investments in pre-apprenticeship produce their intended educational and workforce returns.

To better understand this dynamic, SBCSS commissioned this study to examine barriers affecting the transition from registered pre-apprenticeship programs to registered apprenticeships in the I.E. The study draws upon multiple sources of evidence, including a survey of nearly 6,000 students enrolled in CTE across Riverside and San Bernardino counties, interviews with educators, pre-apprenticeship and apprenticeship administrators, and in-

¹ This includes 42 high schools in Riverside County and 30 in San Bernardino County.

dustry stakeholders, and an examination of existing research on apprenticeship and workforce development pathways.

The findings suggest that successful transitions are shaped by more than a single barrier. Structural, informational, and organizational factors affect students at different stages of the pathway, from developing interest and preparing before graduation to navigating apprenticeship opportunities afterward. Together, the findings point to opportunities for SBCSS and its partners to strengthen the connections and coordination surrounding students as they move from high school pre-apprenticeship toward apprenticeship and other career opportunities.

II. SBCSS' STEWARDSHIP OF THE REGIONAL PRE-APPRENTICESHIP MODEL

SBCSS serves as the coordinating steward of one of California's largest regional high school pre-apprenticeship systems. Through IEConnect, SBCCS manages the core infrastructure in partnership with local school districts, employers, apprenticeship sponsors, community colleges, workforce development organizations, and the California Division of Apprenticeship Standards. Rather than operating as a standalone educational program, the model builds upon existing CTE pathways by integrating state-approved pre-apprenticeship requirements into courses students are already taking. In doing so, the model seeks to strengthen connections between secondary education, postsecondary training, and regional workforce needs while creating structured pathways into registered apprenticeships for interested students.

A distinguishing feature of SBCSS' model is that it relies on existing CTE instruction rather than creating an independent, parallel curriculum. According to program leadership, approximately 95 percent of required competencies are already embedded within participating CTE courses. Throughout the academic year, students continue developing technical skills while receiving additional supports designed to familiarize them with apprenticeship opportunities, including employer-developed videos, pathway-specific informational materials, parent communications, career exploration activities, and student engagement events. To support consistent implementation across districts, SBCSS provides teachers with onboarding, instructional resources, technical assistance, and other systems of support intended to help educators integrate pre-apprenticeship into their existing programs.

From a student's perspective, participation begins within an existing CTE pathway rather than through a separate application to a workforce program. As of the 2025-2026 academic year, students are generally invited to participate in the Fall of their second year of CTE coursework, which is typically their senior year. Students who elect to participate complete the required paperwork (including a parent or guardian signature) and are registered with the Division of Apprenticeship Standards as pre-apprenticeship candidates, after which they continue their normal CTE coursework while participating in any additional components of the pre-apprenticeship system, including completing any required industry-based certifications. The current regional model includes pathways in (1) Automotive, (2) Building and Construction (including Masonry), (3) Culinary Arts, (4) Child Development/Early Education, (5) Emergency Medical Services/Public Safety, and (6) Mechatronics. Importantly, these pathways are not selected solely on the basis of student demand or labor market needs. Under California regulations, pre-apprenticeship programs may only be established where a registered apprenticeship sponsor already exists, making existing regional apprenticeship infrastructure a key determinant of which pathways can be offered.

Toward the end of the academic year, teachers verify that participating students have successfully completed the required competencies for their occupational pathway. Students who satisfy these requirements are then certified by the Division of Apprenticeship Standards as registered pre-apprentices and participating school districts receive credit toward California's College/Career Indicator—an accountability measure recognizing students who graduate prepared for postsecondary education and careers—for each pre-apprentice. Notably, becoming a registered pre-apprentice reflects successful completion of the high school component of the pathway, but it does not guarantee placement into a registered apprenticeship after graduation.

Instead, graduating from high school as a registered pre-apprentice marks the beginning of a second phase: transitioning from pre-apprenticeship into the regional apprenticeship system. Students interested in pursuing an apprenticeship are encouraged to connect with apprenticeship sponsors through a referral process coordinated by SBCSS and its partners. Depending on the industry, students interested in apprenticeship may transition directly into a registered apprenticeship, work with an intermediary providing case management, participate in a bridge or workforce development program, or enroll in community college coursework associated with an apprenticeship. Because students' goals vary considerably, not every registered pre-apprentice intends to become an apprentice. Some continue to four-year universities, community colleges, military service, or immediate employment, while others view the pre-apprenticeship experience primarily as career exploration or workforce preparation rather than a direct pathway into careers.

For students who wish to continue along the pathway, the transition into apprenticeship is not a single event but a series of steps: understanding available opportunities, developing interest, preparing and applying, entering a registered apprenticeship, and remaining engaged through its early stages. This study examines the factors shaping each of these intermediate steps, with particular attention to whether interested students are positioned to move from high school pre-apprenticeship toward apprenticeship entry.

Although SBCSS has developed substantial infrastructure to support students and educators during the high school portion of the pathway, program leaders identified the post-graduation transition as the least developed component of the regional system. Apprenticeship capacity varies across industries, community college partnerships remain uneven throughout the region, sponsors differ in their ability to support incoming students, and comprehensive outcome data are not currently available to track students after they complete their high school program. As a result, relatively little is known about why some registered pre-apprentices successfully transition into apprenticeships while others do not. Understanding that transition—and identifying opportunities to strengthen it—is the central focus of the present study.

III. WHY PRE-APPRENTICESHIP MATTERS

Economic & Workforce Development Benefits

Educators, employers, and policymakers have increasingly turned to pre-apprenticeship programs as a way to expose students to career opportunities, develop workforce skills, and expand access to postsecondary options beyond a traditional four-year degree. While apprenticeship systems have long played an important role in preparing workers for skilled occupations, school-based pre-apprenticeship programs provide an earlier entry point through which students can explore career options, develop foundational academic and workplace skills, and

prepare to enter registered apprenticeship or related employment pathways (Butrica et al., 2023; U.S. Department of Labor, n.d.).

The growing emphasis on pre-apprenticeships reflects broader economic and workforce trends as employers across many industries continue to report difficulties finding qualified workers, particularly in skilled trades and technical occupations (Associated General Contractors of America, 2024; Deloitte & the Manufacturing Institute, 2025). At the same time, students and families face increasing concerns about the cost of higher education and the burden of student debt (Gallup & Lumina Foundation, 2024; Board of Governors of the Federal Reserve System, 2025). Pre-apprenticeships and apprenticeships offer an alternative pathway that allows participants to develop marketable skills, gain hands-on experience, and enter well-paying careers without necessarily pursuing a four-year degree (Decker, 2019). Research suggests that investments in CTE and apprenticeship pathways can generate substantial economic returns by increasing workforce participation, improving employment outcomes, and strengthening regional economies (Baddour & Hauge, 2020; Hendricks et al., 2021).

Educational & Career Exploration Benefits

Importantly, pre-apprenticeship programs can benefit students even when they do not ultimately pursue the corresponding trade by providing structured career exploration and developing transferable workplace skills and confidence (Dumbrell & Smith, 2007; Karmel & Mlotkowski, 2011; Maher & Attack, 2011). More broadly, CTE participation is associated with greater educational engagement and high school completion while exposing students to a wider range of career opportunities (Dougherty, 2018; Michaels & Barone, 2020).

IV. WHAT MAKES PRE-APPRENTICESHIPS SUCCESSFUL

Awareness & Perceptions of Apprenticeship Pathways

Despite these benefits, pre-apprenticeship programs face several persistent challenges, particularly as they relate to transitions to apprenticeship. One of the most commonly cited barriers is awareness. Apprenticeships remain less visible than traditional college pathways, and many students, families and educators have limited familiarity with how apprenticeship systems operate (Smith, 1997; Wallace, 2018). Higher education is often presented as the default postsecondary pathway, while apprenticeships receive comparatively less attention, potentially limiting student participation and interest (Hendricks et al., 2021; Ryan & Lőrinc, 2018). This limited awareness can create challenges not only for student recruitment, but also for helping students understand the opportunities available to them after completing a pre-apprenticeship program.

Mentorship, Guidance, and Social Capital

Mentorship and social connections also play an important role in helping students navigate education and career pathways. Trusted adults, peers, and industry contacts can introduce students to career opportunities, clarify pathway requirements, and connect them with apprenticeships or employment (Boat et al., 2022; Mason et al., 2022). Beyond providing this practical guidance, supportive relationships can offer the encouragement and psychosocial support young people need to pursue their education and career goals (Corney & du Plessis, 2010; Lim & You, 2019; Song et al., 2022). Research further indicates that these relationships do not all serve the same function: parents and teachers can provide sustained emotional support and guidance, while mentors, near-peers, and employers can extend students' networks and provide access to career-specific information, connec-

tions, and opportunities (Boat et al., 2022; Marcionetti & Zammitti, 2025; Mason et al., 2022).

Employer Engagement & Pathway Alignment

Employer engagement is also central to program success, particularly because employers often identify gaps between young applicants' preparation and the skills, experience, and workplace behaviors apprenticeships require (Straw et al., 2022). Collaboration among schools, apprenticeship programs, employers, and labor organizations can help address these gaps by aligning training with workplace expectations and creating clearer pathways into employment (James Relly & Laczik, 2022). This alignment appears to improve outcomes: participants are more likely to complete an apprenticeship when their pre-apprenticeship prepares them for the same occupational field (Waugh et al., 2025). Sustained employer involvement and support from industry-focused intermediaries can further strengthen these pathways through program development, recruitment, training, and retention (Howe et al., 2023).

Facilitating Transitions to Registered Apprenticeship

Completing a pre-apprenticeship does not automatically lead to entry into a registered apprenticeship. National evaluations show substantial variation in transition rates across programs and occupational fields, suggesting that successful transitions depend not only on students' preparation but also on how intentionally the two systems are connected (JFF, 2026; Walton et al., 2022). Although research has not yet isolated the causal effects of specific transition practices, the available evidence points to the importance of aligned pathways, strong relationships between pre-apprenticeship providers and apprenticeship sponsors, application assistance, career navigation, supportive services, and continued contact as students move between programs (Gallup, 2024; JFF, 2026; Walton et al., 2022).

Together, these practices can create a “warm handoff” in which a trusted educator, program representative, or intermediary actively connects a student with an apprenticeship sponsor or employer rather than simply providing information and leaving the student to navigate an unfamiliar application and enrollment process independently. Qualitative research with youth similarly suggests that passive referrals, delayed follow-up, and unclear communication can create a disconnect between referral and participation, while personal introductions and individualized guidance can help young people remain engaged (Social Policy Research Associates, 2025). Promising strategies include introducing students directly to apprenticeship representatives before graduation; helping them complete applications, prepare for interviews or entrance examinations, and obtain required documentation; assigning a consistent point of contact to follow up across the transition; coordinating support for transportation and other participation barriers; and maintaining contact until students have entered an apprenticeship or another aligned opportunity (JFF, 2026; Social Policy Research Associates, 2025; Walton et al., 2022). Effective pre-apprenticeships must therefore do more than make students aware of their next step: they must help students make the institutional and relational connections necessary to take it.

V. TRACKING STUDENT OUTCOMES & UNDERSTANDING TRANSITIONS

The extant literature identifies significant gaps in understanding what happens as students move from pre-apprenticeship into apprenticeship and employment. Compared with traditional college pathways, fewer longitudinal data sources are available to track participation, persistence, completion, and discontinuation in appren-

ticeship pathways (Laporte & Mueller, 2013). Although a small number of studies have examined transitions into apprenticeships and factors associated with subsequent persistence, the evidence remains comparatively limited and varies across populations and program models (Dorsett & Stokes, 2022; Powers & Watt, 2021). As a result, additional systematic tracking is needed to understand why some pre-apprentices successfully transition into apprenticeships while others enter employment, pursue other education, or disengage from the pathway.

Taken together, existing research suggests that pre-apprenticeships hold considerable promise as a workforce development strategy, but their success ultimately depends on more than enrollment alone. The effectiveness of these programs is determined not only by the quality of classroom instruction, but also by students' awareness of opportunities, access to guidance and mentorship, connections to employers, and ability to successfully navigate the transition from education into the workforce. Understanding these transition points is therefore critical for strengthening apprenticeship pathways and maximizing the impact of investments in workforce development.

VI. METHODOLOGY & DATA

This study employed a mixed-methods research design to examine barriers affecting students' transitions from registered pre-apprenticeship programs into registered apprenticeships throughout Riverside and San Bernardino counties. Because comprehensive longitudinal outcome data are not currently available, the study cannot establish the proportion of registered pre-apprentices who ultimately apply to, enter, or persist in a registered apprenticeship. Instead, it combines survey data collected from CTE students with semi-structured interviews conducted with educators, apprenticeship sponsors, pre-apprenticeship administrators, and other workforce stakeholders. These complementary data sources provide insight into students' knowledge, intentions, preparation, and perceived barriers, as well as stakeholders' experiences supporting students through the transition process.

Student Survey

The quantitative component of the study consisted of an online survey administered during February and March 2026. SBCSS distributed the survey to CTE instructors at high schools offering registered pre-apprenticeship pathways throughout Riverside and San Bernardino counties. These instructors were then asked to share the survey with students enrolled in their CTE programs. Participation was voluntary and students completed the survey anonymously.

A total of 6,914 students completed the survey. Upon reviewing the data, 951 responses were removed based on predefined data-quality criteria, including implausibly short completion times and responses that were not relevant to the survey topic. The final analytic sample included 5,963 students. Because the survey was distributed to all students enrolled in participating CTE courses aligned with registered pre-apprenticeship pathways—not only to registered pre-apprenticeship candidates—the sample includes students with varying levels of exposure to and participation in the registered pre-apprenticeship system.² Throughout this report, “students” refers to this full survey sample, regardless of whether respondents reported formally participating in the registered pre-apprenticeship program. Analyses limited to respondents who self-reported as registered pre-apprenticeship

² See: Tables TA-1 and TA-2 for comparison of school-level administrative counts of registered pre-apprentices with self-reported candidate counts.

candidates are explicitly described as examining the “candidate sample” or “candidates.”

Table 1. Characteristics of the Student Survey Sample

STUDENT DEMOGRAPHICS		
County	n	%
Riverside County	1,734	29.1%
San Bernardino County	4,229	70.9%
Grade Level		
10th Grade	1,511	25.3%
11th Grade	2,490	41.8%
12th Grade	1,962	32.9%
Self-Identified Gender		
Man	3,063	51.4%
Woman	2,840	47.6%
Non-Binary / Other Gender Identity	60	1.0%
WORKFORCE & POST-SECONDARY PREPARATION		
Current Employment Status	n	%
Holds Paid Job	827	13.9%
Does Not Hold Paid Job	5,108	86.1%
College Credit Enrollment Status		
Currently Enrolled in Course for College Credit	3,111	52.4%
Previously, but Not Currently, Enrolled in Course for College Credit	539	9.1%
Never Taken a Course for College Credit	2,285	38.5%
Registered Pre-Apprenticeship Candidate	386	6.5%

Note. Percentages may not sum to 100% because of rounding. Analytic sample counts may not sum to the full sample (N = 5,963) because of limited missing responses. Registered pre-apprenticeship candidate status is self-reported and likely underestimates actual participation as administrative records reflect substantially higher participation.

The final analytic sample included 5,963 students enrolled in CTE programs across the I.E. Most respondents were in 11th or 12th grade, and the sample was relatively evenly divided between students identifying as men and women. Approximately seven in ten respondents attended school in San Bernardino County, reflecting the study’s concentration within the county where SBCSS is sited. Most students did not currently hold a paid job, while approximately six in ten were currently taking or had previously completed a college-credit course.

Student Survey Key Measures

Several measures were constructed from survey responses to examine students' knowledge of, interest in, and preparation for apprenticeship pathways:

- **Apprenticeship knowledge** measures whether students correctly identified an apprenticeship as a paid job that combines employment with structured training. Responses selecting another definition or indicating uncertainty were classified as incorrect.
- **High apprenticeship intent** identifies students who reported being “likely” or “very likely” to apply for an apprenticeship within one year of graduating high school. All responses ranging from “neither likely nor unlikely” to “very unlikely” are classified as low or no intent.
- **Apprenticeship preparation** captures the number of concrete actions students reported or anticipated taking to explore or prepare for apprenticeship, such as researching apprenticeship opportunities, discussing apprenticeship careers with others, or seeking additional information. Higher values indicate that students had taken or planned to take more preparatory steps.
- **Sources of apprenticeship information** identifies whether students reported learning about apprenticeships from teachers, counselors, family members, employers or community organizations, school presentations or events, social media, or websites. Because students could select multiple sources, each source is examined separately.
- **Post-high-school plan certainty** measures students' confidence in their post-graduation plans, ranging from “very sure” to “not sure at all,” with an additional option for students who reported not thinking about their post-high-school plans very much.
- **Driver's-license status** distinguishes among students who already hold a driver's license, possess a learner's permit, plan to obtain a license before or after graduating high school, or are not currently considering licensure.
- **Driver's-license priority** measures whether students who do not already have a license or learner's permit consider obtaining a driver's license an important personal priority.
- **Barriers to licensure** identifies the reasons students reported for not yet obtaining a license, including financial, scheduling, vehicle-access, adult-supervision, readiness, and transportation-preference considerations. Students could report more than one barrier.

Quantitative Analyses

Quantitative analyses first used descriptive statistics to characterize students' apprenticeship knowledge, interest, preparation, transportation circumstances, and perceived barriers. Multivariate regression models³ were then used to examine how student characteristics, information sources, and pathway-related experiences were associated with apprenticeship knowledge and interest, as well as transportation-related outcomes and perceived barriers. These analyses identify relationships among measured factors but are not intended to establish causality.

Because respondents were still enrolled in high school, the survey measured apprenticeship knowledge, intent, and preparation rather than subsequent application, entry, or persistence. Stakeholder interviews provide additional insight into the barriers that may emerge during those later stages.

³ See: Tables TA-3 through TA-8.

Stakeholder Interviews

The qualitative component of the study consists of semi-structured interviews with stakeholders involved in pre-apprenticeship and apprenticeship programs throughout Riverside and San Bernardino counties. To begin the recruitment process, SBCSS distributed recruitment emails to instructors and administrators involved in pre-apprenticeship and apprenticeship programs throughout both counties. The emails described the study, and invited recipients to schedule an interview directly with the research team through a separate sign-up process, ensuring that participation remained voluntary and that SBCSS was not aware of who chose to participate. Multiple recruitment emails were sent during the project period. Each participant that signed up for an interview completed an interview; no additional inclusion or exclusion criteria were imposed. Interviews were conducted in March and April of 2026 with 7 individuals representing organizations involved in the apprenticeship system and 18 representing pre-apprenticeship programs, for a total of 25 interview participants. Within our 25 participants, 14 administrators and 11 instructors; 11 participants were male, and 14 were female. Collectively, the interviews represented all occupational pathways included in the regional pre-apprenticeship model, with participants distributed approximately evenly across Riverside and San Bernardino counties.

Each interview was structured so that participants were assigned a set of questions based on their familiarity with apprenticeship or pre-apprenticeship students and programs. Interviews were conducted over a 30 minute period and generally consisted of 15 or 16 questions that were primarily designed by research staff at the UC Riverside Center for Community Solutions (CCS), with input from graduate student researchers and one School of Public Policy faculty member. Because the interview questions were intentionally oriented toward identifying transition barriers and opportunities for improvement, the qualitative findings necessarily emphasize system gaps more than the many routine or successful aspects of program implementation.

Interviews were conducted virtually with a member of CCS' research staff. Once the project period was completed, a member of CCS' research staff coded each interview using *Taguette* software. The interviews were coded using thematic analysis, organizing information based on themes of key interest to researchers. The final codebook contained 55 original codes, spanning economic concerns, familial constraints, and students' future plans, among other themes.

Study Limitations

Several limitations should be considered when interpreting the study's findings. First, the student survey was distributed voluntarily through instructors in participating CTE programs rather than through a probability-based sampling design. The resulting sample should therefore not be considered representative of all CTE students or pre-apprenticeship candidates in Riverside and San Bernardino counties. Because the survey was distributed to students with varying levels of participation in and exposure to registered pre-apprenticeship, the findings also do not describe registered pre-apprentice candidates exclusively, unless otherwise noted. Analyses of the candidate sample rely on students' self-reported identification as registered pre-apprenticeship candidates. Because some students may not have known or accurately reported their status, these analyses may omit registered candidates who did not recognize their participation and may disproportionately reflect candidates who were more aware of or engaged with the program.

Second, respondents were surveyed while still enrolled in high school. The survey therefore measured students' apprenticeship knowledge, interest, preparation, and perceived barriers rather than their subsequent applica-

tion, entry, persistence, or actual barriers encountered. The cross-sectional analyses identify associations among these measures but cannot establish that any particular experience, information source, or barrier caused differences in student outcomes. Likewise, there is no observation of students' actual behavior to extend the data beyond self-reported attitudes and beliefs.

Finally, the interviews reflect the experiences of 25 stakeholders who voluntarily participated in the study. Although participants represented all occupational pathways and were distributed roughly evenly across the two-county region, their perspectives may not capture every local program, institution, or stakeholder experience. The qualitative findings should therefore be understood as recurring themes that provide context for the survey results and identify areas for further consideration, rather than as estimates of the frequency or prevalence of particular experiences across the regional system.

These limitations reinforce the exploratory purpose of the study. While the findings aid in identifying patterns and stakeholder-informed opportunities that can guide continued learning and program development, they should not be interpreted as evidence of the causal effects of particular program practices or students' actual action toward apprenticeship.

VII. FINDING 1. Limited Awareness and Understanding of Apprenticeship Pathways

A recurring theme across both the survey and stakeholder interviews was that many students lack a clear understanding of apprenticeship pathways, including what apprenticeships are, how they differ from other postsecondary options, and how students transition from high school into a registered apprenticeship. While pre-apprenticeship programs are intended to expose students to apprenticeship opportunities, both quantitative and qualitative findings suggest that simply participating in a CTE pathway as a pre-apprenticeship candidate does not necessarily ensure students receive consistent or accurate information about the apprenticeship system.

Student Perspectives

Fewer than Half of Students Understand What an Apprenticeship Is

Survey results indicate that apprenticeship knowledge remains limited among students enrolled in CTE pathways designed to prepare students for technical careers - many of whom are registered pre-apprenticeship candidates. Fewer than half of surveyed students (48.4%) correctly identified an apprenticeship as a paid job that combines employment with structured training, while more than half selected an incorrect definition or indicated they did not know. These findings suggest that many students may be making postsecondary decisions without a clear understanding of the opportunities available to them through registered apprenticeships.

Teachers Play the Strongest Role in Students' Understanding of Apprenticeship

Across the full student survey sample, approximately half of students (51.2%) reported learning about apprenticeships from a teacher, making instructors by far the most common source of information, while counselors, employers, school events, and websites were reported much less frequently. (See: *Figure 1. Percent of Students Reporting Learning About Apprenticeships from Each Information Source.*)

Percent of Students Reporting Learning About Apprenticeships from Each Information Source

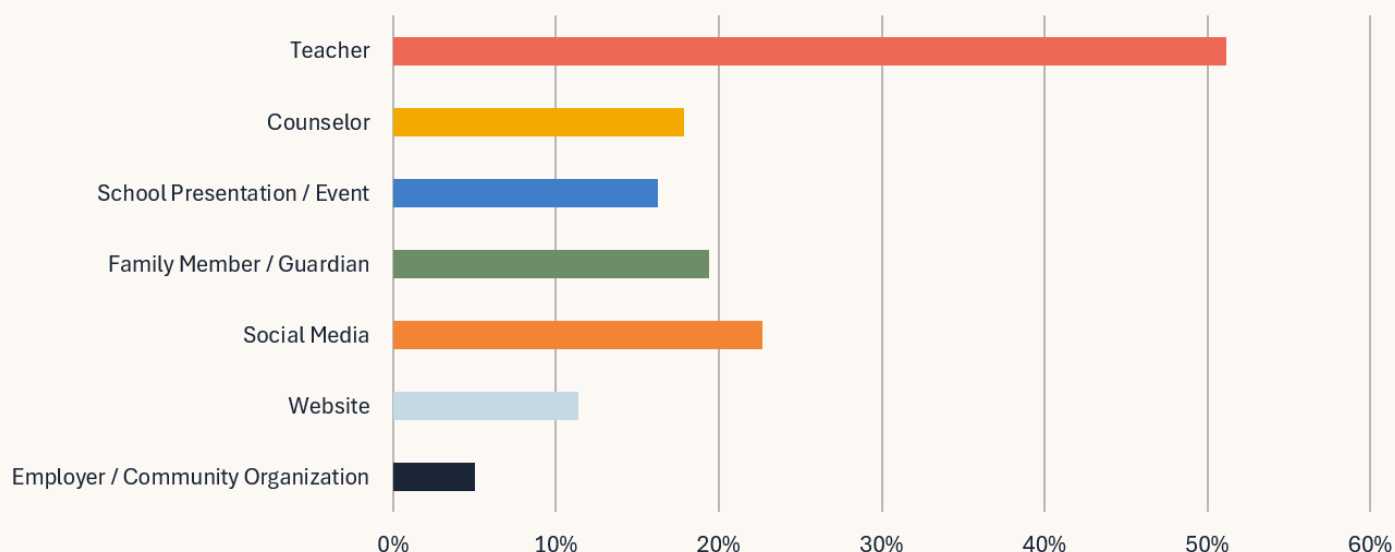


Figure 1. Percent of Students Reporting Learning About Apprenticeships from Each Information Source

(Source: Pre-Apprenticeship Survey of I.E. CTE Students, 2026)

A supplemental analysis limited to self-identified registered pre-apprenticeship candidates found that teachers were also strongly associated with apprenticeship knowledge within the candidate sample. After accounting for candidate characteristics, pathway, and other information sources, candidates who heard about apprenticeships from teachers had approximately 2.5 times the odds of correctly defining an apprenticeship relative to candidates who did not identify teachers as an information source ($OR = 2.47, p = 0.007$). Candidates who heard about apprenticeships from counselors had approximately 47% lower odds of correctly identifying the type of work and training an apprenticeship entails ($OR = 0.53, p = 0.034$), suggesting a potential need to strengthen apprenticeship information and education among the broader network of school-based professionals who help students navigate postsecondary options. Other information sources were not significantly associated with correctly defining apprenticeship within the candidate sample.

Apprenticeship Knowledge Varies Across the Two-County Region

The analysis also revealed meaningful regional differences. Even after accounting for student characteristics and apprenticeship information sources, registered pre-apprenticeship candidates attending a high school in San Bernardino County had roughly 64% greater odds ($OR = 1.64, p = 0.093$) of correctly identifying what an apprenticeship is, relative to students attending a high school in Riverside County - a suggestive relationship that was significant at the 10% level, but not the more conventional 5% level. Although this study cannot determine the reasons for this potential difference, it may reflect characteristics of the regional apprenticeship ecosystem, including educator familiarity, local implementation, and institutional supports, as well as the particularly well-established relationships and sustained, on-the-ground outreach that SBCSS's stewardship role has enabled within its home county education system.

Stakeholder Perspectives

Confusion About Apprenticeship Extends Beyond Students

Interviews with pre-apprenticeship administrators, teachers, apprenticeship sponsors, and workforce partners help explain why these knowledge gaps may persist. Rather than describing a lack of student interest, participants repeatedly characterized apprenticeship as a pathway that remains poorly understood and communicated across much of the educational system. One participant summarized this challenge by observing:

“I think there’s a lot of confusion on it...whether it’s a staff member question or a student question, because we are having trouble finding, like, the next steps for [students]... To me, it kind of feels like we’re playing a game, and everyone knows it’s soccer, but... you’re not really sure, like, when the game ends, or who you play next, or is there a championship?”

Participants consistently noted that many students—and often their parents—do not fully understand what an apprenticeship is, how it differs from other postsecondary options, or what opportunities become available after completing the pre-apprenticeship program - especially for pathways outside traditional construction trades. Stakeholders observed that students frequently recognize apprenticeship as “another option” but lack a meaningful understanding of how the system functions or how they would transition into a registered apprenticeship after graduation. Several interviewees described former students contacting them years after graduation to ask whether they had completed their pre-apprenticeship or whether they would need to repeat coursework before entering an apprenticeship, suggesting that some students complete the program without fully understanding where they are within the broader apprenticeship pathway.

Local Implementation Shapes Students’ Understanding of Pre-Apprenticeship

Participants further emphasized that these differences often reflect variation in local implementation rather than systematic shortcomings of the regional pre-apprenticeship model itself. Some districts supplement classroom instruction with pathway specialists, intermediary staff, employer engagement activities, and administrator support, while others rely almost entirely on individual CTE teachers to help students understand how pre-apprenticeship connects to opportunities after graduation. In the latter settings, these connections often depend on individual teachers who independently arrange worksite visits, invite employers and industry representatives into their classrooms, maintain relationships with former students, track their career progress, and bring alumni back to share their experiences and help current students build industry connections. As one teacher explained:

“I’ve got the success stories, and I’ve got them to come back and talk to the kids. I think that’d be the biggest thing. . . . I’ve got one [former] student that’s learning to be a technician at a Mazda dealer right now. . . . I want to bring him back as a shop foreman if I can next year. It’s all about the networking and me getting this all established.”

This example illustrates how some educators are already creating meaningful continuity between the classroom and the workforce but, at the same time, stakeholders underscored that access to these experiences currently depend heavily on the initiative, relationships, and capacity of individual teachers. Students’ understanding of apprenticeship may therefore be shaped not only by the regional pre-apprenticeship model itself, but also by the local supports, partnerships, and implementation strategies surrounding it, with potentially substantial variation

in the opportunities and guidance students receive across districts, schools, and even classrooms. Thus, efforts—like the one described above—may provide examples of promising local practices upon which the broader adoption across the regional system can be built.

Educators & Partners Lack Consistent, Current Apprenticeship Information

Finally, participants repeatedly identified the absence of a centralized, comprehensive, and up-to-date source of apprenticeship information as a significant challenge. Teachers described difficulty keeping pace with changing apprenticeship requirements across multiple community colleges and apprenticeship sponsors, with one stakeholder describing:

“Every college is different. We are spread over multiple regions [in the I.E.], so we need to be well-versed in all the colleges in our region.... Securing that type of information is hard, because they change it, and we don't get notified. It would be amazing if they had, like apprenticeship newsletter changes, things that have come up...and we could get that information, ongoing. Like, these are the changes that are coming up in apprenticeship,”

Several stakeholders suggested that students, families, and educators would benefit from a single regional information hub that clearly outlines available apprenticeship opportunities, eligibility requirements, and transition processes.

Synthesis

The student and stakeholder perspectives point to a gap between participating in pre-apprenticeship and being meaningfully connected to the apprenticeship system. Pre-apprenticeship can appropriately serve several purposes - including career exploration, skill development, and preparation for education or employment outside apprenticeship. The concern is therefore not that every participant should enter a registered apprenticeship, but that students who are interested in doing so may complete the program without the knowledge or guidance needed to take the next step.

The two sets of findings help explain different parts of this gap. The student survey shows that apprenticeship knowledge and interest are shaped by the information students receive and the people from whom they receive it. The stakeholder interviews, in turn, show that the adults responsible for providing that guidance often operate within a fragmented information environment. Requirements vary across programs and regions, information changes frequently, and the availability of intermediary staff, employer connections, and other local supports differs across schools and districts. Consequently, students' ability to understand and pursue apprenticeship may depend as much on the strength of the surrounding support system as on their participation in pre-apprenticeship itself.

Teachers sit at the center of this system: they appear especially important to students' understanding, yet stakeholders described relying heavily on individual educators who may not have consistent access to current information or transition resources. The association between apprenticeship intent and information from teachers, employers, and family members further suggests that students evaluate these pathways through networks of trusted relationships. This is consistent with prior literature showing that social networks support educational and professional development by exposing young people to opportunities, helping them interpret unfamiliar

pathways, and providing the encouragement and connections needed to act on their interests (Boat et al., 2022; Corney & du Plessis, 2010). When these networks are well-informed and connected to the apprenticeship system, they may make apprenticeship more visible and attainable; when they are not, uncertainty can persist even among students already enrolled in relevant programs.

The regional variation identified in the survey is also consistent with stakeholders' emphasis on differences in local implementation. Although the study cannot determine what produced the county-level difference, the combined findings suggest that educator familiarity, coordinated outreach, employer engagement, intermediary capacity, and institutional relationships may collectively shape how effectively apprenticeship information reaches students. This may help explain why similar program participation does not necessarily produce similar understanding across schools or communities.

Overall, the findings shift the focus from increasing awareness alone to strengthening the network that connects students to apprenticeship. More outreach may generate initial interest, but successful transitions also require a coherent information and support infrastructure that equips educators, families, employers, and other partners to provide accurate guidance and help interested students move from exploration to action.

VII. FINDING 2. Students Need Clearer Navigation and Stronger Transition Supports to Successfully Move from Registered Pre-Apprenticeship to Registered Apprenticeship

Across both the survey and stakeholder interviews, understanding and interest did not necessarily translate into a clear path toward registered apprenticeship. While candidates with stronger intent reported taking or planning to take more steps, the findings suggest that many students may still lack the clear guidance, direct connections, and continued support needed to navigate the transition after graduation.

Student Perspectives

Apprenticeship Intent is Relatively Low, Even Among Self-Reported Pre-Apprenticeship Candidates

Understanding what apprenticeships are may be an important first step, but survey findings suggest that knowledge alone is unlikely to be associated with a successful transition into apprenticeship. Across the full sample, 27.9% of students reported high intent to apply for an apprenticeship within one year of graduation. Among students who self-identified as registered pre-apprenticeship candidates, 50.1% reported high intent. (See: *Figure 2. Percent of Students Reporting High Apprenticeship Intent by Self-Reported Registered Pre-Apprenticeship Status.*)

This descriptive difference may have several explanations. Students may be more likely to recognize their pre-apprenticeship status in classrooms where teachers consistently reinforce the designation and explain how it connects to registered apprenticeship. Alternatively, students with a preexisting interest in apprenticeship may be more attentive to—or more likely to remember—their designation. Recognition may also reflect greater engagement with the program and its supplemental activities. The available evidence does not establish which, if any, of these explanations accounts for the observed difference.

Percent of Students Reporting High Apprenticeship Intent by Self-Reported Registered Pre-Apprenticeship Candidate Status

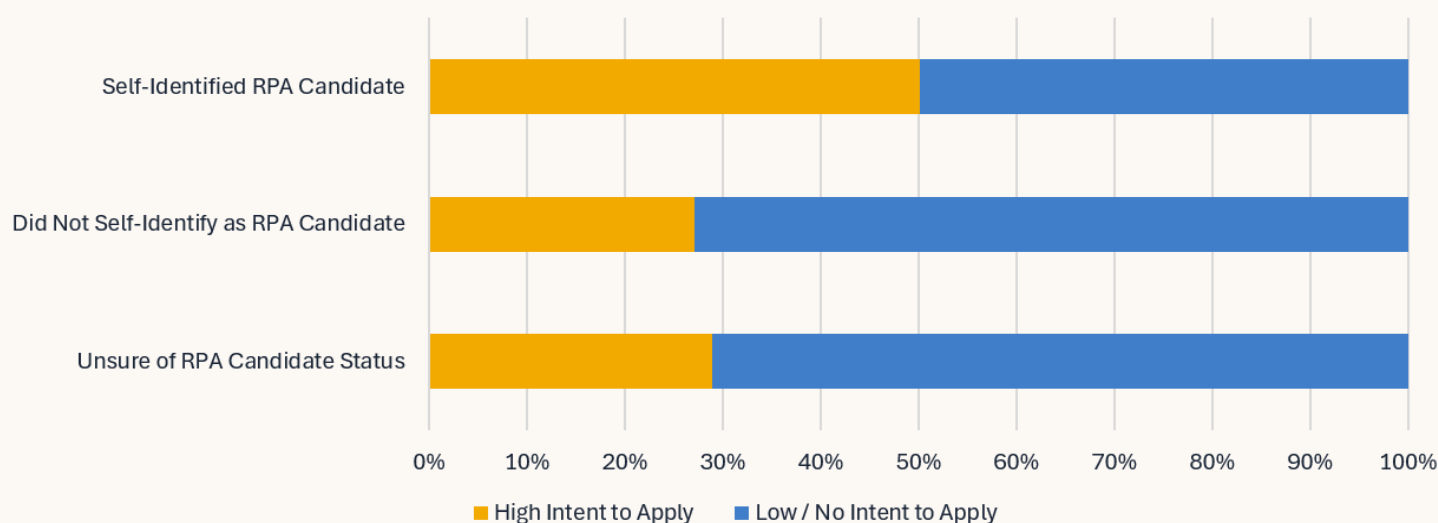


Figure 2. Percent of Students Reporting High Apprenticeship Intent by Self-Reported Registered Pre-Apprenticeship Candidate Status
(Source: Pre-Apprenticeship Survey of I.E. CTE Students, 2026)

Nevertheless, even among students who recognized themselves as registered pre-apprenticeship candidates—and who may therefore represent a comparatively informed, engaged, or interested group—only about half expressed high intent to apply. Registration or recognition as a pre-apprenticeship candidate should therefore not be interpreted as an intention to continue directly into a registered apprenticeship after graduation.

Trusted Messengers as Information Sources Are Associated with Greater Students Interest in Apprenticeship

Across the full student sample, both apprenticeship knowledge and the source of apprenticeship information were associated with students' interest in pursuing an apprenticeship. After controlling for student characteristics, previous enrollment in college-credit courses, and information sources, students who correctly defined an apprenticeship had approximately 52% greater odds of expressing high apprenticeship intent than students who did not ($OR = 1.52, p < .001$).

The people from whom students learned about apprenticeships also mattered. Students who heard about apprenticeships from teachers had approximately 43% greater odds of high intent of pursuing apprenticeship within one year of graduation than those who did not identify teachers as an information source ($OR = 1.43, p < .001$). Hearing about apprenticeships from family members was associated with approximately 55% greater odds of high intent ($OR = 1.55, p < .001$), while hearing from employers or community organizations was associated with approximately 56% greater odds ($OR = 1.56, p = .001$). Smaller but statistically significant relationships were also observed for social media, which was associated with approximately 19% greater odds of high intent ($OR = 1.19, p = .017$), and websites, which were associated with approximately 21% greater odds ($OR = 1.21, p = .042$).

A supplemental analysis examined self-identified registered pre-apprenticeship candidates. Within this smaller candidate sample, teachers, family members, and employers or community organizations remained significant predictors of apprenticeship intent, even after controlling for the specific pre-apprenticeship pathway in which the student was enrolled. Candidates who heard about apprenticeships from teachers had approximately 92% greater odds of high intent ($OR = 1.92, p = .036$), while those who heard from family members had 114% greater odds of indicating intent to pursue an apprenticeship ($OR = 2.14, p = .023$). Candidates who heard from employers or community organizations had 235% greater odds of high intent ($OR = 3.35, p = .042$). Although the employer relationship was statistically significant, the relatively small number of students who reported receiving information from employers makes it difficult to estimate the exact strength of that relationship with precision.

Collectively, these findings suggest that students may respond differently depending on who introduces apprenticeship as a career option. Teachers appear particularly influential in helping students understand apprenticeship pathways, while conversations with family members and employers may carry additional weight by signaling encouragement, legitimacy, or anticipated support.

Although the survey cannot identify the mechanisms underlying these relationships or establish causality, the consistency of the teacher, family, and employer findings across the full sample and candidate subsample reinforces the importance of trusted messengers. This interpretation also aligns with stakeholder interviews, in which participants consistently emphasized that meaningful interactions with employers, apprenticeship sponsors, current apprentices, and other industry representatives while students are still in high school can help build understanding, confidence, and sustained interest in apprenticeship careers.

Interest & Continued Exposure May Help Move Students Toward Apprenticeship

Interest alone does not ensure that students will take action toward apprenticeship, but it was associated with greater reported preparation among self-identified registered pre-apprenticeship candidates. To better understand how candidates planned to translate interest into action, students were asked which strategies they had already used or intended to use to pursue an apprenticeship, including researching opportunities online; speaking with a counselor or CTE teacher; contacting an employer, union, or training program; attending an event, presentation, or workshop; and seeking information from other sources. The analysis examined both the specific strategies candidates identified and the total number they reported using or intending to use, allowing us to assess whether those with stronger apprenticeship intent were considering or had already taken more steps than those who did not intend to pursue apprenticeship, as well as what those steps involved.

Registered pre-apprenticeship candidates with high apprenticeship intent reported completing or planning to complete an average of 0.63 more preparatory steps toward apprenticeship than candidates with lower intent, after accounting for student characteristics, college-course enrollment, pathway, apprenticeship knowledge, and information sources ($b = 0.63, p = .001$). The number of preparatory steps candidates reported was also associated with how they encountered apprenticeship information. Those who heard about apprenticeships from teachers reported completing approximately one additional preparatory step, on average, compared with candidates who did not identify teachers as an information source ($b = 1.00, p < .001$). Candidates who encountered apprenticeships through school presentations or events completed or planned to complete an average of 0.81 more steps ($b = 0.81, p = .001$). Hearing from family members was associated with an average of 0.45 additional steps, although this relationship met the 10% significance threshold but not the more conventional 5% threshold.

($b = 0.45, p = .099$).

The pathway the registered pre-apprenticeship candidate was enrolled in was also associated with higher levels of preparation in one instance: candidates in the Mechatronics pathway reported completing or planning to complete an average of 1.17 more preparatory steps than those in Child Development/Early Education pathway ($b = 1.17, p = .019$).

Together, these findings suggest that successful transitions require more than generating interest or enrolling students in pre-apprenticeship programming. Candidates reported taking more concrete steps toward apprenticeship when teachers served as an information source and when they encountered apprenticeship through school presentations or events. The results are consistent with the possibility that trusted guidance, repeated exposure, and structured opportunities to explore apprenticeship can help students move from general interest toward active preparation. Encouragingly, these relationships suggest that activities already occurring within parts of the regional system—particularly teacher guidance and school-based apprenticeship events—may be helping students move beyond general awareness toward more active preparation.

Stakeholder Perspectives

Independent Navigation Makes the Transition Difficult for Students

Stakeholder interviews strongly reinforce these findings. Rather than describing students as unmotivated or uninterested, participants consistently characterized the transition between high school and registered apprenticeship as one of the components of the current regional pre-apprenticeship system with the greatest potential for improvement.

Although students receive structured support while in high school, there is a cessation of that support at graduation and many leave without a clear understanding of what happens next. Stakeholders explained that navigating the transition often requires students to interact with numerous organizations—including apprenticeship sponsors, community colleges, unions, employers, and other intermediary partners—each operating under different timelines, eligibility requirements, and application processes. As one participant from the apprenticeship system explained, the difficulty lies not only in students' readiness, but also in the absence of a clearly supported bridge:

“What’s really hard to implement is that actual bridge between the high school and the community college or training provider. . . . These students are trying, but it’s a very adult thing to go out and get a job and try to make that job align with an apprenticeship program that [they’re] a little bit uncertain of. . . . Who’s going to work with those students when they finish their pre-apprenticeship before they start their apprenticeship?”

Many students were described as unsure of which community college offered their intended apprenticeship, how to connect with apprenticeship sponsors, or even unaware that the apprenticeship pathway continues beyond high school graduation. Several participants observed that these processes can be difficult for experienced educators to navigate, making them especially challenging for recent high school graduates attempting to move through the system independently.

Direct Relationships May Create a Warmer Post-Graduation Handoff

Stakeholders also repeatedly emphasized that stronger relationships and clearer lines of communication could help address these challenges. Many noted that pre-apprenticeship programs operate with limited direct communication with apprenticeship sponsors, employers, and unions, making it difficult for students to develop a clear picture of the transition process before graduation. Several interviewees suggested that greater integration—such as bringing apprenticeship coordinators, community college instructors, employers, and current apprentices into high school classrooms prior to students’ transition—could simultaneously improve student understanding, strengthen recruitment, and provide students with identifiable points of contact after graduation. One pre-apprenticeship administrator summarized: “I just think that human connection—people to share success stories, getting the faculty involved, or even current apprentices . . . getting them into our classrooms—I think that’s what we’re really missing right now.”

Participants further emphasized that mentorship and ongoing human connection during this period are critical, particularly the value of engaging families before graduation so they understand both the long-term benefits of apprenticeship and its immediate requirements. Rather than simply providing students with information, sustained relationships with teachers, employers, or intermediary organizations were viewed as helping students navigate application processes, overcome transition-related barriers, and envision pre-apprenticeship as the first step toward a long-term career rather than the end of the pathway.

Industry Exposure Makes Apprenticeship Careers More Tangible

Many stakeholders further articulated that students develop a stronger commitment to apprenticeship when they have opportunities to interact directly with employers, apprenticeship sponsors, and current apprentices. Worksite visits, guest speakers, employer-developed instructional materials, and other forms of work-based learning helped students better understand apprenticeship careers and envision themselves working within those occupations. Participants suggested that these experiences often strengthen students’ motivation far more effectively than classroom instruction alone, with one educator describing the change they observed when students encountered apprenticeship firsthand:

“Before the field trips . . . they always think that it’s really hard to be part of those apprenticeships. But once they start talking to all the trainers and the people who work at the facility—and they explain how to apply—everybody gets interested.”

Synthesis

The survey and interview findings suggest that moving students from awareness and intent to successful transition requires more than increasing interest in apprenticeship. Building on Finding 1, students who received information from trusted adults—particularly teachers, family members, and employers—not only expressed greater interest in apprenticeship but also reported taking or planning more concrete steps toward pursuing it. However, the interviews indicate that many students encounter uncertainty when attempting to translate that interest and preparation into action after graduation, especially as their preparation does not necessarily form a clear or coordinated pathway. Students may still be left to determine which organizations to contact, what requirements to meet, and when to act, creating multiple points at which interested candidates can lose momentum.

These findings align with recent national research identifying career navigation, relational support, intentional

employer engagement, and practical assistance with application and enrollment as important components of the transition from pre-apprenticeship to registered apprenticeship (JFF, 2026). The present study further illustrates how these dynamics operate within a large regional high school system: information from teachers and school-based apprenticeship events was associated with stronger preparation, while stakeholders emphasized that support is most meaningful when it connects students to identifiable people and opportunities. Work-based learning, mentorship, and direct interaction with employers, apprenticeship sponsors, and current apprentices can make apprenticeship careers more tangible while giving students points of contact who can support them after graduation.

Clearer transition plans, continued assistance through application and enrollment, and opportunities to develop relationships with employers, apprenticeship sponsors, program alumni, current apprentices, and other industry partners before graduation could therefore help students build the social networks known to support career development. Together, these supports may help translate students' interest and independent preparation into a more coherent pathway toward successful apprenticeship entry.

IX. FINDING 3. A Variety of Interconnected Structural Barriers May Limit Students' Transitions into Registered Apprenticeships

Transportation-related challenges were identified prior to this study as a potential barrier to apprenticeship participation and therefore became a specific focus of the student survey and stakeholder interviews. While the survey examined students' progress toward licensure and the factors that may delay it, the interviews revealed a broader set of interconnected barriers affecting the transition into registered apprenticeship. Some arise at the individual or household level, while others reflect systemic constraints—including regional geography, apprenticeship capacity, eligibility requirements, and employer practices—that require broader institutional or regional intervention.

Student Perspectives

Most Students Prioritize Licensure, but Few Currently Have a Driver's License

Nearly nine in ten students (88.8%) who did not already have a license identified obtaining a driver's license as an important personal priority, and 58% expected to obtain a license before graduating from high school. At the time of the survey, however, only 18.2% held a driver's license and an additional 16.9% held a learner's permit. Thus, many students were approaching graduation without the ability to drive independently, even though most viewed licensure as important to their future plans.

Licensure Accompanies Broader Preparation for Work & Education

Students' progress toward licensure was closely associated with other indicators of preparation for employment and postsecondary education. To examine these relationships, the analysis compared students at different stages of the licensing process—including those who already had a license, held a learner's permit, or planned to obtain a license before graduation—with students who had neither a license nor a permit and did not plan to obtain one before graduation.

Grade level was strongly associated with license status. With each one-grade increase, students had approxi-

Students' Progress Toward Obtaining a Driver's License

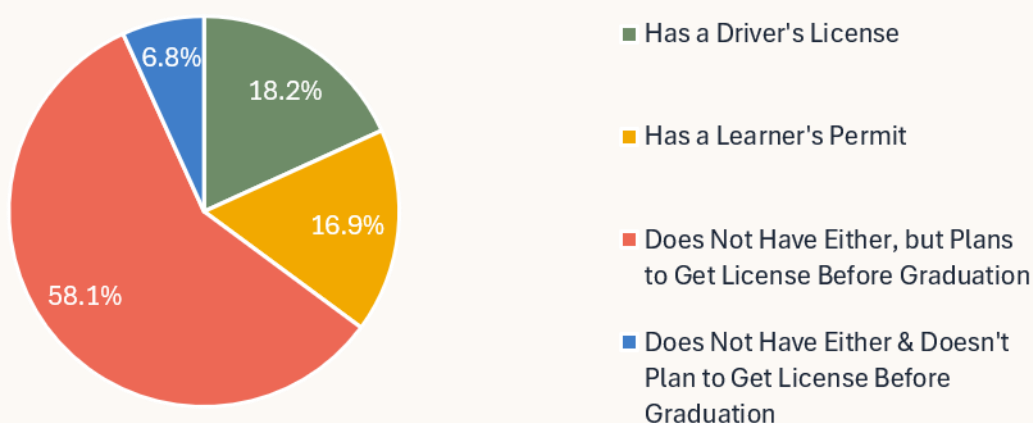


Figure 3. Students' Progress Toward Obtaining a Driver's License

(Source: Pre-Apprenticeship Survey of I.E. CTE Students, 2026)

mately 50% greater odds of already having a driver's license rather than having no license and no plans to obtain one before graduation ($OR = 1.50, p < .001$). At the same time, each grade increase was associated with approximately 26% lower odds of holding a learner's permit ($OR = 0.74, p < .001$) and approximately 47% lower odds of planning to obtain a license before graduation ($OR = 0.53, p < .001$), relative to having no plans to obtain one. Older students' lower relative odds of remaining in the permit or planning stages are consistent with—but do not directly demonstrate—progression through the licensing process as students advance through high school. Paid employment was among the strongest predictors of license status. Compared with students without paid jobs, students with paid jobs had more than five times the odds of already having a driver's license ($OR = 5.19, p < .001$) and more than twice the odds of holding a learner's permit ($OR = 2.31, p < .001$), rather than having no license and no plans to obtain one before graduation.

Participation in college-credit coursework was similarly associated with progress toward licensure. Compared with students who had never enrolled in a college-credit course, those currently enrolled had more than twice the odds of holding a driver's license ($OR = 2.22, p < .001$) and approximately 87% greater odds of holding a learner's permit ($OR = 1.87, p < .001$). Students who had previously taken college-credit coursework, but were not currently enrolled, also had more than twice the odds of holding a license ($OR = 2.10, p = .001$) and approximately 95% greater odds of holding a learner's permit ($OR = 1.95, p = .003$).

Apprenticeship interest was also associated with progress toward licensure. Compared with students who did not report high apprenticeship intent, those interested in applying for an apprenticeship within one year of graduation had approximately 45% greater odds of already holding a driver's license ($OR = 1.45, p = .008$), 32% greater odds of holding a learner's permit ($OR = 1.32, p = .050$), and 31% greater odds of planning to obtain a license before graduation ($OR = 1.31, p = .033$), relative to having no license and no plans to obtain one before graduation.

Together, these findings suggest that progress toward licensure often accompanies students' broader prepara-

tion for postsecondary education, employment, and apprenticeship. Students who are already engaging in activities connected to life after high school—such as working, taking college-credit courses, or considering apprenticeship—also appear more likely to pursue and obtain a driver’s license. Licensure may be one element of a broader orientation toward independence and workforce or postsecondary preparation: as students begin anticipating the need to travel to work, college, or training, obtaining a license may become more immediate and relevant. Paid employment may also provide both a practical reason to drive and some of the financial resources needed to pursue licensure.

At the same time, these patterns may reflect differences in the support and resources available to students. Access to a vehicle, help from an adult, money for licensing costs, and opportunities to participate in work or college coursework may all make it easier for some students to advance along several dimensions of preparation at once. The analyses cannot determine whether employment, college coursework, or apprenticeship interest encourages students to pursue licensure; whether transportation access enables participation in these activities; or whether both reflect a broader combination of future orientation, opportunity, and available support. The findings therefore position licensure not as an isolated milestone, but as one component of students’ wider transition into employment and postsecondary life. This interconnectedness also anticipates the stakeholder findings, which suggest that transportation barriers frequently overlap with financial, family, geographic, and institutional constraints that can collectively impede students’ transitions into registered apprenticeship.

Students’ Licensing Delays Often Reflect Reported Constraints, Not Indifference

Students without licenses generally did not appear indifferent toward driving. After accounting for student characteristics, college-course enrollment, apprenticeship intent, geography, and reported reasons for delay, students with high apprenticeship intent had approximately 31% greater odds of identifying licensure as a personal

Students’ Self-Reported Barriers to Obtaining a Driver's License

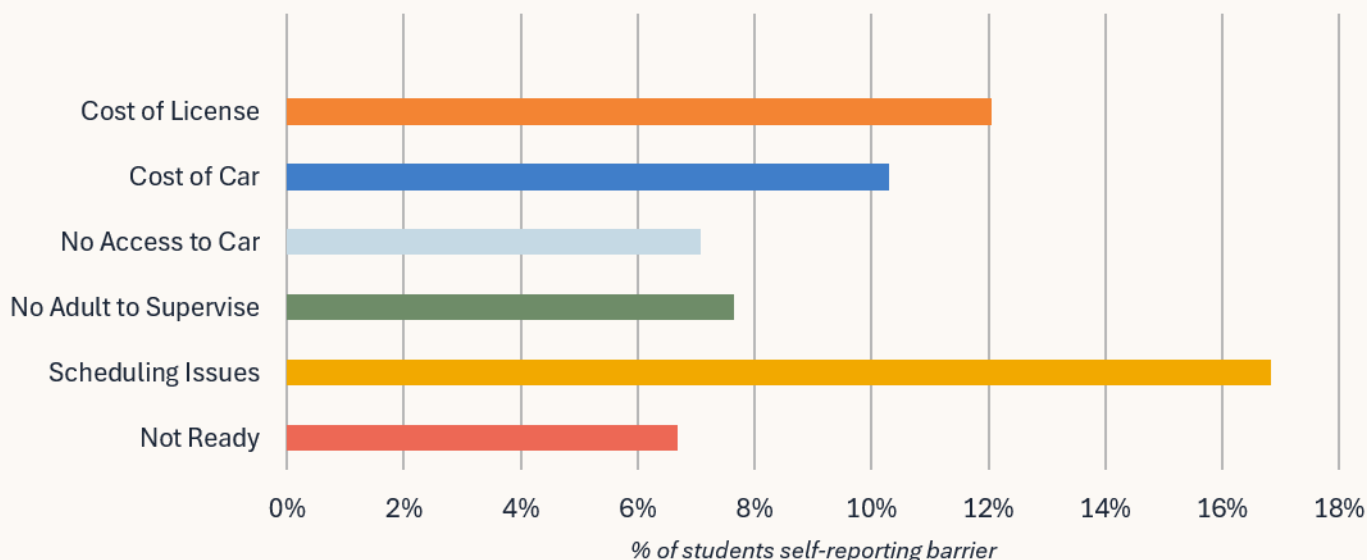


Figure 4. Students’ Self-Reported Barriers to Obtaining a Driver’s License

(Source: Pre-Apprenticeship Survey of I.E. CTE Students, 2026)

Note: The six most common barriers are depicted. Those not included are: waiting until 18 (0.58%), currently in progress (1.92%), waiting until 16 (1.2%), not interested (1.31%), other transportation options available (3.96%), paperwork issues (1.85%), parents won’t allow (4.48%), other (12.96%), none of the above (11.1%).

priority than students with lower intent ($OR = 1.31, p = .024$). Students attending high school in the High Desert had approximately 53% greater odds of prioritizing licensure than students elsewhere in the region ($OR = 1.53, p = .026$), potentially reflecting the importance of independent transportation in a geographically dispersed area. San Bernardino County students also had approximately 27% greater odds of prioritizing licensure than Riverside County students ($OR = 1.27, p = .030$).

Students most commonly attributed delays in obtaining a license to scheduling difficulties (16.8%), the cost of obtaining a license (12.1%), the cost of purchasing and maintaining a vehicle (10.3%), the absence of an adult who could assist with supervised driving requirements (7.6%), and limited access to a vehicle (7.1%). These responses demonstrate that progress toward licensure depends on more than students' personal interest. It may also require money, access to a vehicle, an available adult, and sufficient time to complete the licensing process. (See: *Figure 4. Students' Self-Reported Barriers to Obtaining a Driver's License for the six most commonly reported barriers.*)

Reported reasons for delay were also associated with whether students considered licensure a priority. In this analysis, students who indicated that none of the listed reasons for delay applied served as the reference group. Compared with that group, students citing the cost of obtaining a license had approximately 48% lower odds of identifying licensure as a priority ($OR = 0.52, p = .008$). Students citing the cost of purchasing and maintaining a vehicle had approximately 55% lower odds ($OR = 0.46, p = .001$), those without access to a vehicle had approximately 57% lower odds ($OR = 0.43, p = .001$), and those without an adult available to help them practice had approximately 48% lower odds ($OR = 0.52, p = .014$). Scheduling conflicts were associated with approximately 36% lower odds of prioritizing licensure, although this relationship met the 10% significance threshold but not the more conventional 5% threshold ($OR = 0.64, p = .059$).

Lower prioritization was also observed among students whose delays appeared more closely related to personal preference or readiness. Compared with students who reported that none of the listed reasons applied, students who did not feel ready to drive had approximately 82% lower odds of prioritizing licensure ($OR = 0.18, p < .001$). Those who were not interested in driving had approximately 97% lower odds ($OR = 0.03, p < .001$), while those who reported that other transportation options met their needs had approximately 77% lower odds ($OR = 0.23, p < .001$).

The findings point to at least two groups of students delaying licensure: those postponing driving because of their preferences, readiness, or access to other transportation, and those who may want or expect to drive but face external barriers involving cost, vehicle access, adult supervision, or scheduling. The latter group is particularly important because progress toward licensure appears to accompany other forms of preparation for life after high school, suggesting that licensure may be part of a broader cluster of activities and resources associated with workforce and postsecondary preparation.

Viewed in this context, lack of a license may sometimes be less a root cause of limited preparation than a visible symptom of the same interconnected constraints that make it difficult for students to advance on several fronts at once. This interpretation is necessarily tentative: the survey cannot determine whether access to transportation enables broader preparation, whether future-oriented students are more likely to pursue licensure, or whether both reflect differences in opportunity and available support. It is, however, consistent with stakeholder

interviews describing transportation as one of several overlapping financial, family, geographic, and institutional barriers that can collectively impede students' transitions into registered apprenticeship. Addressing transportation readiness may therefore require looking beyond the licensing process itself to the broader conditions that make licensure—and participation in employment, education, or apprenticeship—more or less attainable.

Stakeholder Perspectives

Structural Barriers Accumulate After Students Decide to Pursue Apprenticeship

While survey findings suggest that transportation alone does not explain students' interest in apprenticeship, stakeholder interviews revealed a much broader set of structural barriers that often emerge once students attempt to transition into registered apprenticeship. In addition to emphasizing the complexity of the transition process—which is extensively covered in the previous sections—stakeholders emphasized the structural conditions that shape whether students are ultimately able to pursue and enter a registered apprenticeship. Interviewees commonly cited that many of these barriers including but not limited to transportation, financial constraints, apprenticeship availability, employer hiring practices, eligibility requirements, and the geographic organization of the regional apprenticeship system, exist largely outside the students' direct control. Importantly, these barriers rarely occur in isolation, but are rather highly interconnected. Students often encounter multiple challenges simultaneously, making even highly motivated and well-prepared students vulnerable to losing momentum after graduation.

The Region's Geography Makes Reliable Transportation Essential

Transportation remained an important concern raised throughout the interviews, but participants consistently described it as one component of a broader structural landscape rather than a single, overriding barrier. Apprenticeship opportunities are frequently dispersed across the region, requiring students to travel considerable distances to worksites, community colleges, or apprenticeship training centers. Participants noted that many apprenticeships begin early in the morning, involve changing work locations, or require travel beyond students' immediate communities, making reliable transportation essential for participation. For example, one pre-apprentice interviewee explained that a specific apprenticeship program available to their students is offered exclusively through Chaffey College, located more than an hour from the high school campus, creating a substantial commuting burden for interested students. Because specialized apprenticeship-related courses are often available only at select colleges, students may have limited options for accessing required training. These challenges are further compounded by the region's limited public transportation infrastructure, which restricts students' ability to travel to educational and training opportunities independently and at a lower cost.

Financial & Family Responsibilities Can Make Apprenticeship Infeasible

Stakeholders also emphasized that many students face difficult financial tradeoffs when deciding whether to pursue apprenticeships after graduation. Several participants believed that students who would otherwise be interested in apprenticeship instead enter the workforce because they or their families depend upon immediate or steady income. One pre-apprenticeship instructor shared:

“A lot of [prospective students], have to work to bring in some money, so they can't dedicate 5 days a week to going down [to the apprenticeship site]. I know construction, some of them get paid on some of the days, but... They just don't have the support at home financially to devote the 5 days a week to it. In my opinion.”

The sentiment was shared by stakeholders on the apprenticeship side of the process, with one instructor noting the volatility of apprenticeships:

“We just lost [a student] ...he actually quit after going out on the job, because he realized that the jobs weren't lasting, because he was in a job for only one week, then he was back on the dispatch list. Then he got put out on another job that only lasted two weeks, then he was back on the dispatch list. And he said, I thought I was going to be employed the entire time... Now, whether your teacher told you that, I didn't tell you that. I said, your pay is going to fluctuate the entire three and a half years, up and down.”

Others described students balancing caring for younger siblings, their own childcare responsibilities, or lacking the financial flexibility necessary to participate in apprenticeship training before earning stable wages. In particular, participants emphasized that students benefit from having families who not only support their decision to pursue apprenticeship, but who also have the financial means to accommodate the time commitment and delayed earnings often associated with apprenticeship as their child works toward a career. One pre-apprenticeship teacher explained the importance of having parents understand and support their child's decision to pursue apprenticeship, saying:

“This is definitely where I think having supportive home life is helpful. If you have a parent or a two-parent household who understands that, yes, [they] need childcare... [they need to find] a babysitter for your younger siblings so that you can go and do things. But I can also understand that's hard for families, because it's hard for everyone right now. So it's having a support system that doesn't just again, see you as a one-trick pony [that is relied upon to provide childcare to your sibling].

Similarly, an apprenticeship instructor drew upon their recent observation of a promising student's departure from the program, sharing the student quit, “because his dad isn't working and he's providing for his entire family... that's a lot to put on an 18 year-old kid, but unfortunately that's where his reality is, so I understood that and I couldn't make anything better.”

Depending on the occupation, students may also be expected to purchase tools, work boots, or other required equipment before beginning work - costs that can total several hundred dollars. Participants suggested that these opportunity costs and upfront financial investments may discourage otherwise qualified students from pursuing apprenticeship despite recognizing its long-term career benefits.

Apprenticeship Capacity Limits Immediate Placement

Participants further explained that successful transition ultimately depends upon the capacity of the regional apprenticeship system itself. Unlike many postsecondary educational pathways, students cannot simply enroll in a registered apprenticeship after graduation and begin in the Fall. Entry depends upon apprenticeship openings, employer hiring needs, union recruitment cycles, and sponsor capacity - all of which fluctuate across industries and over time. As one participant observed, completing a registered pre-apprenticeship does not necessarily mean a corresponding opportunity will immediately become available. Another participant noted that the number of registered pre-apprentices that graduate in a given year far outpaces the number of available apprentice-

ships:

“For example, one of our colleges only accepts 10 new student[s] for their automotive apprenticeship program every year.... that only opens up 10 slots, for, you know, [the] hundreds of pre-apprentices that are going through the [automotive] program [each year]. Another [apprenticeship has] 80 active [slots]... They only accept [new] apprentices when any of those 80 graduate because 80 is the max capacity that they can handle. So every year, it could be 3 or it could be 15, it just depends on how many graduate.”

Importantly, this was not the experience across every pathway or program. One industry representative reported, “Right now, we’re able to place pretty much all of the students that are interested in continuing on,” although they also anticipated needing additional employer partners as the pre-apprenticeship program expands.

Together, these accounts illustrate that the relationship between pre-apprenticeship participation and available placements varies substantially across industries, programs, and geographic areas. In some contexts, interested students can currently be accommodated; in others, the mismatch between the scale of pre-apprenticeship completion and the number of immediately available apprenticeship openings has important implications for how transition outcomes are understood. Even a perfectly coordinated system cannot place more students than apprenticeship sponsors and employers have the capacity to receive. Moreover, openings may not occur when students graduate, creating waiting periods during which interested students may pursue other employment or education opportunities. Strengthening transitions therefore involves not only preparing students to apply, but also helping them understand the availability and timing of opportunities and remain connected when immediate placement is not possible.

Minimum-Age Requirements Can Delay Entry and Employer Connections

Additional structural barriers included age requirements, documentation and related immigration issues, and other eligibility criteria that may delay students’ entry into apprenticeship despite successfully completing their pre-apprenticeship. Stakeholders explained that age restrictions create a particularly difficult challenge in several industries. Because many students complete their pre-apprenticeship during their senior year, some graduate before reaching the minimum age required for apprenticeship worksites, employer insurance policies, and industry-specific training. Interviewees noted that students who turn 18 later in the year are often temporarily ineligible to participate in internships, clinical placements, or other apprenticeship experiences despite having completed all education requirements. As one representative of the pre-apprenticeship system explained, “our business partner, where we’re trying to put our pre-apprentices as interns... they need to be 18. That disqualifies half of our students, so those students that are lucky enough to turn 18 in their senior year, they get the opportunities, they get connected.”

Several others similarly described workplace safety regulations and employer insurance requirements as limiting students’ ability to gain meaningful work-based experience while still in high school, even when they had developed the technical skills necessary to succeed. Participants suggested these age-related restrictions may further disrupt the transition from pre-apprenticeship to apprenticeship by depriving students of the opportunity to form a connection to an employer or develop professional relationships that could help support their transition to apprenticeship while still in high school. At the same time, participants described local partners actively experi-

menting with ways to work within these constraints, including district-provided liability coverage, earlier career exploration, internships for students who meet age requirements, and bridge opportunities intended to maintain students' connection to the pathway.

Documentation Requirements Can Prevent Otherwise-Qualified Students from Pursuing Apprenticeship

Immigration- and documentation-related challenges were also identified across stakeholder groups as barriers affecting a subset of students. Participants noted that the I.E.'s large immigrant population faces unique obstacles that can complicate both educational and workforce transitions. Several interviewees described heightened uncertainty among immigrant students and their families, with some attributing this to the current federal immigration climate. Others reported instances of housing instability resulting from parental deportation or family separation that requires students to move between relatives' homes while attempting to complete high school. In addition, the absences of government-issued identification, Social Security numbers, or other required documents emerged as significant barriers to apprenticeship participation as these are often prerequisites for both employment and apprenticeship enrollment. Although these challenges affected a smaller portion of students than transportation or financial barriers, stakeholders emphasized that they can effectively prevent otherwise qualified students from entering apprenticeship pathways.

Limited Employer Familiarity May Reduce the Value of Pre-Apprenticeship

Finally, many interviewees observed that employers do not always understand how registered apprenticeship operates or how high school pre-apprenticeship connects to it. Participants suggested that this barrier may be especially pronounced in industries where relatively few employers have completed an apprenticeship themselves and the model is not yet an established route into the profession. Without that familiarity, employers may undervalue students' pre-apprenticeship preparation or overestimate the time and responsibility involved in employing an apprentice. As one apprenticeship representative explained:

“A lot of employers [in hospitality] are unaware of what an apprenticeship is. Even chefs today, if they didn't do an apprenticeship themselves, they're not familiar, and they think it's a program where they have to actually hold this person's hand—and that's not the reality of it. The apprentice in our program does 99% of the work. I just need a supervising chef who follows up . . . and makes sure that they're signing off on their hours and the completed competencies.”

Limited employer understanding may therefore constrain the pathway from both directions: it can reduce employers' willingness to participate while also limiting students' opportunities to connect their pre-apprenticeship preparation to an available apprenticeship. Participants suggested that stronger partnerships among employers, apprenticeship sponsors, and high school programs—including employer outreach, classroom presentations, worksite visits, and interaction with current apprentices—could improve employers' understanding of the model while helping students see how their classroom experiences translate into long-term career opportunities.

Barriers Compound One Another

Importantly, participants emphasized that these barriers rarely occur independently; instead, they accumulate and compound one another. For example, a student who is young for their grade may miss worksite visits or other employer-based experiences because they do not meet minimum-age requirements. That same student may ob-

tain a driver's license at age 16 but still be ineligible for apprenticeship upon graduation because some programs require applicants to have held a license for at least two years - allowing age and licensing requirements to compound across successive stages of the pathway.

Synthesis

Considered together, the survey and interview findings complicate the idea that lack of transportation reflects limited interest or preparation. Most students considered obtaining a license important, and students who expressed stronger apprenticeship intent were further along in the licensing process. At the same time, students without licenses appeared to include both those postponing driving because of their preferences, readiness, or access to other transportation and those facing external constraints involving cost, vehicle access, adult supervision, or scheduling. Lack of licensure therefore does not have the same meaning for all students.

The survey findings also suggest that licensure is intertwined with broader preparation for employment and post-secondary education. Students who were working, taking college-credit courses, or expressing stronger apprenticeship intent were more likely to hold a license or permit. Although the data cannot determine the direction of these relationships, lack of a license may sometimes be less an isolated barrier than a visible symptom of the same resource and support constraints that make it difficult for students to prepare for life after high school on multiple fronts. This interpretation is necessarily tentative, but it aligns with stakeholder accounts describing transportation as one component of a broader network of overlapping barriers.

Many of these barriers exist largely outside students' direct control. Apprenticeship capacity, employer hiring practices, union recruitment cycles, regional transportation infrastructure, documentation requirements, and family financial needs collectively shape students' ability to enter apprenticeship regardless of their motivation or preparation. Apprenticeship capacity, in particular, places an external limit on immediate entry that cannot be overcome through student preparation alone. As a result, even students who understand apprenticeship pathways, express strong interest, and actively prepare may encounter multiple obstacles that delay or prevent entry. These findings are consistent with recent national research on transition challenges (JFF, 2026); and underscore that successful transitions depend both on students' ability to participate and on the capacity of sponsors and employers to receive and support them.

Collectively, these findings shift attention from individual student readiness toward the readiness of the broader apprenticeship ecosystem to receive and support students after graduation. They also suggest that addressing transportation in isolation is unlikely to substantially improve transition outcomes: effective responses must distinguish between students' differing reasons for delaying licensure while also addressing the interconnected household, institutional, and regional conditions that shape access to apprenticeship.

X. FINDING 4. Strengthening the Regional Apprenticeship Ecosystem Requires Greater Coordination Across Partners

Student Perspectives

The student survey did not directly measure regional coordination. Nevertheless, findings from the full sample show that apprenticeship knowledge and intent were associated with information received through teachers,

family members, employers or community organizations, and other sources. Supplemental analyses within the candidate sample similarly found that information from teachers, family members, and employers or community organizations was associated with apprenticeship intent, while teacher information and school presentations or events were associated with greater preparation. These patterns underscore that students' understanding and preparation develop through interactions with multiple parts of the apprenticeship ecosystem rather than through classroom participation alone.

Stakeholder Perspectives

Opportunities for Improvement Exist at Both Local & Regional Levels

Across nearly every interview, participants emphasized that SBCSS has built a strong foundation for regional pre-apprenticeship. Several situated the coordination challenges identified in this study within the continued development of a relatively new regional system whose partnerships and transition processes are still being built and refined. When asked about opportunities for continued improvement, participants identified needs at two distinct levels. Some concerned how individual districts and schools implement the pre-apprenticeship model within classrooms and communicate its purpose to students. Others concerned how organizations across the region coordinate apprenticeship information, opportunities, and post-graduation supports. Distinguishing between these levels—local implementation and regional coordination—is important because they involve different decision-makers, resources, and forms of ownership.

One of the most consistent themes was the need for stronger communication and alignment among partners. Participants described a regional system in which school districts, apprenticeship sponsors, employers, unions, community colleges, and intermediary organizations all play important roles, but often operate independently. Teachers described difficulty staying current with apprenticeship opportunities, changing community college offerings, and evolving program requirements, while apprenticeship representatives noted limited opportunities to engage students before graduation.

Pre-Apprenticeship is Not Always Distinct from the Broader CTE Experience

At the local level, teachers frequently discussed uncertainty about the practical distinction between general CTE courses and CTE courses incorporating registered pre-apprenticeship. Some expressed that in practice, the primary distinction felt administrative rather than programmatic, reducing the pre-apprenticeship component of a course to a compliance task. Interviewees expressed concerns that pressure in some districts to register all students as pre-apprentices, regardless of individual student interest or future intent, diluted the program's focus and limited opportunities for targeted instruction. As one teacher explained:

“And the hard part is they're all registered as pre-apprentices, and so when you ask what's different about these students [compared to] a general CTE class anywhere at any high school that isn't pre-apprenticeship, there really isn't a lot of difference.”

Further, in instances where only a fraction of the class consisted of registered pre-apprenticeship students, teachers highlighted difficulties providing specialized instruction and support. As noted by a teacher:

“And it's hard to differentiate between when you're teaching. Say you got 30 kids in the class, and say 5 of them are in the [pre-]apprentice program. Yeah, you can't take them away separately.”

These insights suggest an ongoing need for local alignment among district administrators, school leaders, counselors, and classroom teachers regarding the purpose of pre-apprenticeship, which students are invited to participate, and what distinguishes the experience from the broader CTE course or an administrative formality. These decisions primarily rest with participating districts and schools, although shared regional guidance and technical assistance could support greater consistency.

Earlier Industry Engagement May Strengthen Student Understanding & Motivation

Stakeholders also emphasized expanding apprenticeship and employer engagement throughout the pathway. Participants consistently described employers as far more than just the organizations ultimately responsible for hiring apprentices. Earlier and more sustained employer involvement—including classroom presentations, worksite visits, guest speakers, employer-developed instructional materials, and opportunities for students to interact with current apprentices—was viewed as one of the most effective ways to increase student understanding, increase motivation, and demonstrate the value of apprenticeship careers. Similarly, apprenticeship administrators and community college instructors indicated the potential benefit of introducing them to students who are still in high school. Indeed, multiple interviewees expressed their own interest of visiting high schools to make presentations or having students to their campus to help make apprenticeship a more concrete and visible post-secondary pathway. This willingness to engage is an important regional asset: stakeholders generally did not describe a lack of commitment to the pathway, but rather a need for stronger structures through which their interest, expertise, and relationships could be translated into consistent opportunities for students.

A Shared Information Hub May Provide a Consistent Regional Reference Point for All Stakeholders

At the regional level, participants repeatedly suggested that stronger communication among partners could create a more seamless transition for students while reducing uncertainty for educators and apprenticeship providers alike. Many envisioned more formal structures for sharing information across the region, including regular updates, coordinated planning, and stronger alignment between pre-apprenticeship and apprenticeship programs.

Further, many interviewees recommended developing a centralized, regularly updated source of truth for all apprenticeship information for students, families, educators, and workforce partners. Because apprenticeship opportunities are distributed across the region and have distinct requirements, a shared regional information hub was repeatedly suggested as a practical mechanism for improving transparency, reducing confusion, and strengthening stakeholder alignment.

Outcome & Capacity Data Are Needed to Understand Where Transitions Break Down

Finally, participants consistently highlight the critical importance of better understanding what happens after students leave high school. While considerable effort is devoted to preparing students during their pre-apprenticeship, relatively little information is systematically collected or shared regarding which students enter registered apprenticeship, which pursue other educational or employment pathways, and where interested students encounter barriers that interrupt their intended transition. Participants viewed stronger outcome tracking not simply as an accountability measure, but as an essential tool for continuous improvement. Comparing student interest with the number, timing, and location of available apprenticeship openings would also help distinguish limitations in student transition support from constraints in the capacity of the apprenticeship system itself. In turn, this better longitudinal information would aid future efforts to identify successful transition strate-

gies, reveal emerging barriers, strengthen partnerships, and ensure that future program improvements are informed by evidence rather than anecdote.

Synthesis

Considered together, the findings point to complementary responsibilities at the local and regional levels. Participating districts and schools are best positioned to clarify how pre-apprenticeship is implemented, communicated, and differentiated within their CTE programs. SBCSS and its regional partners are better positioned to support the shared infrastructure that no individual school or district can readily create alone, including current apprenticeship information, cross-sector communication, connections with sponsors and employers, and regional outcome tracking.

These responsibilities are interdependent. Strong regional infrastructure cannot fully compensate for inconsistent local implementation, while even well-implemented school programs cannot independently resolve fragmented application processes, limited apprenticeship capacity, or gaps in post-graduation support. Strengthening the pathway therefore requires alignment within participating schools and districts as well as coordination across the broader regional apprenticeship ecosystem. Rather than calling for a fundamental redesign of the regional pre-apprenticeship model, participants overwhelmingly viewed the existing system as a strong foundation upon which to build. The opportunity now is to clarify local implementation while deepening the partnerships, communication, and continuous learning that connect individual programs into a more cohesive regional pathway.

XI. RECOMMENDATIONS

SBCSS has developed a substantial regional foundation for high school pre-apprenticeship by connecting CTE programs across two counties with registered apprenticeship opportunities and industry expectations. The findings suggest that the next stage of this work to support student transitions to apprenticeship is to build upon that foundation by strengthening the supports surrounding students as they move from classroom participation toward post-graduation opportunities.

The recommendations below distinguish among actions primarily owned by participating schools and districts, actions that benefit from regional stewardships, and actions required shared responsibility across the apprenticeship ecosystem. They reflect themes emerging from this exploratory study rather than findings from a causal or longitudinal study, and therefore identify evidence-informed opportunities for continued development rather than prescribed interventions. Some may already be underway to varying degrees, while others may require resources or capacity not currently available; they are offered as starting points grounded in the study's findings and prior research on effective pre-apprenticeship pathways.

Recommendation 1. Define the Core Experiences and Information Students Should Receive Through Every Registered Pre-Apprenticeship Pathway

Primary Ownership: Participating districts and schools, supported by SBCSS

Only a small proportion of surveyed students identified themselves as registered pre-apprenticeship candidates,

even though the actual proportion was likely considerably higher given the CTE pathways through which the survey was distributed. Interview participants similarly described instances in which students completed program requirements without fully understanding their pre-apprenticeship status, the value of the designation, or how it connected to opportunities after graduation. Teachers also reported variation in how clearly the pre-apprenticeship experience is meaningfully distinguished from the broader CTE course in which it is embedded.

This recommendation is particularly important given teachers' central role in students' apprenticeship knowledge. Establishing a common informational foundation would not only help ensure that candidates receive essential information, but also better equip teachers and other trusted adults to explain the pathway consistently, reinforce its value, and help students interpret what participation means for their postsecondary options.

Participating districts and schools could clarify the core information and experiences students should receive as registered pre-apprenticeship candidates while retaining flexibility across industries and local contexts. At a minimum, students should understand:

1. That they are participating in a registered pre-apprenticeship pathway;
2. How pre-apprenticeship differs from and builds upon their broader CTE coursework;
3. What requirements they must complete and what recognition they will receive;
4. How their coursework connects to registered apprenticeship and related careers; and
5. What options and next steps are available to them after graduation.

Schools and districts may also consider how enrollment as a registered pre-apprenticeship candidate, classroom instruction, supplemental opportunities, completion recognition, and family communication can reinforce the program's identity throughout the student experience. While some efforts to create a more distinct pre-apprenticeship experience may require additional time, resources, or coordination, smaller practices could also help reinforce students' understanding of their participation and its value. For example, teachers could provide candidates with a simple certificate or classroom acknowledgment when they register as a pre-apprenticeship candidate, formally recognizing their status and the additional requirements and opportunities they are working toward. SBCSS could support these efforts through shared guidance and creating further opportunities for participating educators and administrators to exchange local implementation practices.

Recommendation 2. Create a Centralized Regional Information Hub for Apprenticeship Pathways and Opportunities

Primary Ownership: SBCSS and regional apprenticeship partners

Fewer than half of surveyed students correctly understood what an apprenticeship is, while interview participants described difficulty locating current information about available programs, eligibility requirements, application processes, and related post-graduation opportunities. These challenges were not limited to students: educators and administrators for both pre-apprenticeship and apprenticeship programs reported difficulty keeping pace with information that varies across industries, institutions, and geographic areas and changes over time.

Building upon existing IEConnect resources, SBCSS and its partners may consider developing a centralized regional information hub that serves as a one-stop resource and consistent point of reference for students, fami-

lies, educators, administrators, and employers. As suggested by interview participants, the hub could organize pathway-specific information in one accessible location, including but not limited to:

- Registered apprenticeship opportunities connected to each pathway;
- Application periods, processes, and entry requirements;
- Relevant community college, bridge, and intermediary programs;
- Minimum-age, documentation, licensing, and transportation requirements;
- Current program contacts; and
- Potential next steps when an apprenticeship opening is not immediately available.

The hub would be most useful not simply as a resource students are expected to navigate independently, but as a shared tool for the trusted adults helping them make decisions. Teachers, counselors, family members, and intermediary staff could use the same pathway-specific information to explain options, compare next steps, and provide consistent guidance.

Because apprenticeship opportunities and requirements change, the hub would benefit from a defined process through which sponsors, colleges, intermediaries, and other partners provide regular updates. Student- and family-facing materials could present the most essential information in accessible language, while more detailed resources could support the educators and administrators helping students navigate the transition.

Recommendation 3. Provide Interested Students with Direct Pre-Graduation Handoff to their Next Program or Contact

Primary Ownership: Shared across schools, SBCSS, apprenticeship sponsors, and intermediary partners

A centralized information hub can help students understand their options, but the findings suggest that information alone may not be sufficient to move interested students into the next stage of the pathway. Interview participants repeatedly described graduation as a point at which students may lose momentum, particularly when they are expected to navigate multiple organizations, timelines, and application requirements independently.

Currently, interviewees explained that students are often provided the name of a relevant contact but are generally responsible for initiating and navigating the connection themselves. At the same time, some accounts indicate that SBCSS staff are already facilitating more direct connections between students and apprenticeship partners. One apprenticeship representative explained, “A lot of times it’s through [SBCSS staff] that we work. [They] will connect with us—‘Hey, team, we have a presentation,’ or, ‘These students have been doing automotive CTE, and five want to move forward after high school.’” Participants also recognized that elements of a more structured transition process are underway, including efforts by SBCSS and the Riverside County Office of Education to develop a summer bridge program connecting students more directly with employers and apprenticeship opportunities.

Participating schools and apprenticeship partners could build upon these emerging efforts by creating a more consistent warm handoff before graduation. Apprenticeship-side instructors and administrators expressed interest in “reaching in” to classrooms as graduation approaches to identify interested students and establish direct

connections that support them through the required next steps. Each interested student could therefore leave high school connected directly—not only referred—to a named contact at an apprenticeship program, community college, or similar organization.

This connection could serve more than an administrative function. Establishing a relationship with an instructor, coordinator, mentor, or current apprentice before graduation could give students someone who can model the pathway, answer questions as they arise, provide encouragement, and help them navigate unfamiliar requirements. In this way, the handoff would begin building the social capital students may need to move from general interest to application and entry.

Because available opportunities, entry requirements, and recruitment timelines vary considerably across pathways, a warm handoff will not always result in immediate apprenticeship placement. Depending on the student and pathway, the connection may support an application, entry into an applicant pool or bridge program, or continued engagement until an opening becomes available. Families and students could also receive concise information about the student's next step, anticipated timeline, and likely transportation, training, or financial considerations so they are better prepared to support the transition.

Recommendation 4. Provide Students with Recurring Exposure to Employers, Apprenticeship Sponsors, and Current Apprentices

Primary Ownership: Shared across districts, SBCSS, employers, sponsors, unions, and colleges

Survey findings indicate that students who learned about apprenticeships from teachers, family members, employers, and community organizations expressed greater interest in applying. Among self-identified registered pre-apprenticeship candidates, information from teachers, family members, and employers or community organizations remained associated with intent, while exposure through teachers and school presentations or events was also associated with taking or planning more preparatory steps. Interview participants similarly described direct interaction with employers, apprenticeship sponsors, instructors, and current apprentices as one of the most effective ways to make apprenticeship careers understandable, credible, and tangible.

These relationships may serve complementary functions. Teachers can help students understand and navigate the pathway; employers and sponsors can provide credible, career-specific information; current apprentices and program alumni can model what participation and success look like; and family members can offer encouragement and practical support. This pattern closely aligns with prior research documenting that parents and teachers often provide sustained guidance and psychosocial support, while mentors, near-peers, and employers extend students' networks and provide access to career-specific information, connections, and opportunities (Boat et al., 2022; Marcionetti & Zammitti, 2025; Mason et al., 2022; Song et al., 2022).

Regional and local partners could thus consider incorporating multiple industry-connected experiences into each pathway before graduation. Depending on local capacity, these might include classroom presentations, worksite or training-center visits, current-apprentice or alumni panels, employer-developed instructional materials, structured mentorship, opportunities to observe apprenticeship training, or recurring contact with an industry representative. Establishing a small number of expected touchpoints in each pathway could provide greater consistency while allowing districts and schools flexibility in how they deliver them.

Earlier and more sustained involvement could also create a two-way exchange: students and families would gain a more realistic understanding of apprenticeship careers, while sponsors and employers could become more familiar with what registered pre-apprentices learn and offer feedback about their preparation and emerging workforce needs.

Recommend 5. Establish a Recurring Regional Process for Identifying Transition Barriers and Connecting them to the Appropriate Partners

Primary Ownership: SBCSS and regional partners

Transportation, financial pressure, family responsibilities, age restrictions, documentation requirements, and apprenticeship availability often intersect, and many of these barriers extend beyond the authority of an individual school or program. Building upon the partnerships supporting IEConnect, SBCSS could convene a recurring review of the barriers affecting students' transitions and identify which organizations, resources, or policy discussions are best positioned to address them. A coordinated process could also help the adults closest to students respond more effectively. Teachers, mentors, family members, and program contacts may be well positioned to recognize when a student is losing momentum, but they need clear referral pathways and regional partners capable of addressing needs that extend beyond the classroom.

The process could help regional partners distinguish among:

- Barriers that may be reduced through clearer, upfront student or family information (e.g. uncertainty about application requirements, fluctuating employment during apprenticeship, training commitments);
- Individual needs that can be connected to existing services or resources (e.g. assistance obtaining required identification, supervised driving experience)
- Programmatic issues requiring action by a district, sponsor, college, or employer (e.g. unclear referral processes, limited communication between pre-apprenticeship and apprenticeship programs);
- Capacity, transportation, or regulatory constraints requiring longer-term regional or state-level attention (e.g. limited apprenticeship openings, geographically distant training sites, or age and workplace eligibility requirements).

The purpose would be to clarify ownership and facilitate connections, rather than place responsibility for resolving every barrier with the regional coordinator. The process could initially focus on a small number of frequently reported challenges within particular pathways or geographic areas, document available resources and unresolved gaps, and revisit progress periodically. Over time, these discussions could inform partnership development, resource alignment, and local or state policy priorities.

Recommendation 6. Track Student Next Steps Alongside the Availability of Apprenticeship Opportunities

Primary Ownership: SBCSS with participation from districts and apprenticeship partners

The regional system currently has limited information about what occurs after students complete registered pre-

apprenticeship. This limitation mirrors a broader gap in apprenticeship research. Compared with traditional college pathways, relatively few longitudinal systems track movement from pre-apprenticeship through application, entry, persistence, and completion, making it difficult to determine where transitions break down or why students leave the pathway (Dorsett & Stokes, 2022; Laporte & Mueller, 2013; Powers & Watt, 2021). Thus, it is not clear which students enter apprenticeship, pursue another pathway by choice, remain interested but encounter a barrier, or are waiting for an opportunity to become available.

SBCSS and its partners could explore a feasible set of shared follow-up measures addressing:

- Pre-apprenticeship completion;
- Intended post-graduation pathway;
- Application or referral activity;
- Apprenticeship entry;
- Participation in a bridge program, related college coursework, or relevant employment;
- Reasons an intended transition did not occur;
- Early apprenticeship persistence, where information is available.

Student outcomes should be interpreted in light of both the broad enrollment practices currently used—which means that not every registered pre-apprentice is likely to view apprenticeship as an intended postsecondary pathway—and the number, timing, location, and eligibility requirements of available apprenticeship openings. This would help distinguish among patterns associated with student interest and preparation, the handoff process, structural barriers, and the capacity of the apprenticeship system to receive students.

A phased approach could begin with a small number of pathways or limited follow-up checkpoints. Over time, the resulting information could support continuous improvement, identify promising local practices, guide partnership development, and provide a more complete account of pre-apprenticeship outcomes than immediate apprenticeship placement alone.

XII. STUDY IN SUMMARY

SBCSS has built and stewarded a substantial regional pre-apprenticeship system that connects thousands of students across two counties with industry-aligned education and career pathways that may otherwise receive limited attention in high school. In doing so, SBCSS and its partners have created shared infrastructure across schools, districts, apprenticeship sponsors, employers, community colleges, and workforce organizations at a scale few high school pre-apprenticeship systems currently reach. The findings suggest that the next opportunity is to build upon this foundation by extending the connections surrounding students beyond program participation and completion and helping those who are interested navigate what comes next.

The study also identifies meaningful strengths upon which this work can build. Teachers emerged as especially influential sources of apprenticeship information, while school-based presentations and events were associated with students taking or planning more concrete steps toward apprenticeship. Interviews similarly highlighted ed-

ucators who are building alumni networks, arranging industry exposure, maintaining relationships with former students, and connecting interested students with apprenticeship partners. Stakeholders across the system expressed enthusiasm for deeper engagement, and some local programs and industry partners are already implementing elements of the more relational, industry-connected approach supported by the findings. The opportunity is therefore not to create an entirely new model, but to learn from and extend promising practices that are already producing stronger connections in parts of the region.

At the same time, successful transitions are shaped by a sequence of related conditions. Students must understand what apprenticeships are and recognize their own participation in pre-apprenticeship; receive accurate guidance from trusted adults; connect with employers, sponsors, and current apprentices; and navigate application processes, eligibility requirements, and the practical demands of participation. Even well-informed and motivated students may then encounter transportation challenges, financial and family responsibilities, age or documentation requirements, or a lack of available apprenticeship openings. Because these conditions frequently overlap, students with fewer resources or supports may experience compounding disadvantages across successive stages of the pathway. The licensing findings illustrate this dynamic: students interested in apprenticeship appeared more likely to prioritize and make progress toward obtaining a license, yet many also cited financial, vehicle-access, scheduling, and adult-supervision barriers that could constrain their ability to do so. These findings underscore why no single intervention—including transportation assistance, additional information, or student preparation alone—is likely to resolve the transition challenge.

Strengthening the pathway will require complementary action at the local and regional levels. Participating schools and districts are best positioned to make the pre-apprenticeship experience visible and meaningful within their classrooms. SBCSS, in turn, is well positioned to continue exercising the regional stewardship needed to develop the shared information, relationships, handoff processes, and learning infrastructure that no individual school or district can readily create alone. Better outcome and capacity data will be essential for determining where interested students lose momentum, where existing practices are working, and which barriers require longer-term attention. By commissioning this study and inviting a close examination of the pathway's least-developed components, SBCSS has taken an important step toward the continuous learning and coordination required to strengthen the system as it grows.

In this respect, the I.E.'s experience reflects a broader challenge emerging across pre-apprenticeship systems nationally. Recent research similarly finds that immediate entry into registered apprenticeship is only one of several post-program outcomes and that successful transitions depend upon career navigation, employer engagement, supportive relationships, practical assistance, and the availability of apprenticeship opportunities (JFF, 2026). Thus, pre-apprenticeship provides value beyond immediate apprenticeship entry through career exploration, skill development, and preparation for other educational and employment pathways. The central challenge is ensuring that students who wish to pursue apprenticeship understand their next steps and remain connected to those who can support them. By building upon the system's scale, partnerships, promising practices, and stakeholder commitment, SBCSS and its regional partners can create a more continuous pathway from high school into apprenticeship and high-quality employment.

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TECHNICAL APPENDIX

Table TA-1. Actual and Self-Reported Registered Pre-Apprenticeship Participation by School, San Bernardino County

School	Registered Pre-Apprenticeships (Administrative Count)	Total Survey Respondents	Survey Respondents Self-Reporting as Pre-Apprenticeship Candidates
Academy for Academic Excellence	0	1	0
Alta Loma High	0	1	1
Apple Valley	44	9	2
Arroyo Valley	81	0	0
Arroyo Valley	28	0	0
Baker High	0	6	0
Big Bear High	0	1	0
Bloomington High School	40	85	1
Cajon	95	453	14
Carter	43	41	11
Chaffey High	0	17	0
Chino Hills High	0	1	0
Citrus / Eric Birch	43	68	6
Citrus Valley High School	49	48	0
Colony High	0	132	0
Colton	80	58	8
Eisenhower	17	20	5
Eisenhower High School	38	0	0
Entrepreneur High Fontana	0	1	0
Fontana A.B. Miller High	0	82	2
Fontana High School	44	213	19
Grand Terrace High School	10	127	6
Granite Hills	30	198	14
Henry J. Kaiser High	0	199	6
Hesperia High School	225	223	1
Indian Springs HS	41	1	0
Jurupa Hills High	0	103	2
Mojave High	0	18	4
Montclair HS	56	31	15
Mountain High	0	1	0
Oak Hills High School	243	216	14
Oak View High School	2	0	0
Ontario	78	120	20
Pacific	27	0	0
Provisional Accelerated Learning Academy	0	1	0
Rancho Cucamonga High	0	2	0
Redlands	36	0	0
Redlands East Valley High	16	179	9
Redlands Senior High	0	80	1

Table TA-1. Actual and Self-Reported Registered Pre-Apprenticeship Participation by School, San Bernardino County (continued)

School	Registered Pre-Apprenticeships (Administrative Count)	Total Survey Respondents	Survey Respondents Self-Reporting as Pre-Apprenticeship Candidates
Rialto HS	64	326	9
Rim of the World High	0	131	5
San Andreas HS	14	26	1
San Bernardino High School	41	2	0
San Gorgonio	64	37	7
Serrano High	0	1	0
Sierra	17	22	0
Slover Mountain High School	19	0	0
Sultana High School	297	125	31
Summit	12	62	6
Twentynine Palms High	0	34	1
Upland High	18	419	11
Yucaipa High School	105	130	20
Yucca Valley High	0	14	0

Table TA-2. Actual and Self-Reported Registered Pre-Apprenticeship Participation by School, Riverside County

School	Registered Pre-Apprenticeships (Administrative Count)	Total Survey Respondents	Survey Respondents Self-Reporting as Pre-Apprenticeship Candidates
Abraham Lincoln Continuation	0	1	1
Amistad HS	52	37	16
Beaumont Senior HS	70	1	1
California Military Institute	0	2	0
Cathedral City HS	41	0	0
Centennial HS	23	0	0
Chaparral HS	59	0	0
Citrus Hill HS	26	143	6
Corona HS	76	2	0
Desert Hot Springs HS	34	0	0
Desert Mirage HS	26	0	0
Eleanor Roosevelt HS	75	0	0
Elsinore HS	16	21	0
Great Oak HS	89	0	0
Hillcrest High	0	0	0
Indio High	0	80	1
Jurupa Valley HS	79	54	24
JW North HS	64	18	0
La Qunita HS	25	406	17
La Sierra HS	43	0	0
Lakeside HS	29	21	2
Lee Pollard HS	70	0	0
Liberty High	0	1	0
Lincoln HS	5	0	0
MLK HS	34	0	0
Moreno Valley HS	130	0	0
Murrieta Mesa HS	54	20	2
Murrieta Valley HS	132	29	1
Norco HS	30	0	0
Norte Vista HS	74	0	0
Orange Grove HS	21	0	0
Orange Vista HS	21	90	4
Palm Desert High	0	132	5
Palm Springs HS	5	0	0
Palo Verde High	0	5	0
Paloma Valley HS	22	0	0
Patriot HS	259	163	2
Perris HS	38	0	0
Pivot Charter High School	0	1	1
Poly HS	43	13	0

Table TA-2. Actual and Self-Reported Registered Pre-Apprenticeship Participation by School, Riverside County (continued)

School	Registered Pre-Apprenticeships (Administrative Count)	Total Survey Respondents	Survey Respondents Self-Reporting as Pre-Apprenticeship Candidates
Ramona HS	88	0	0
Rancho Mirage HS	94	0	0
Rancho Verde HS	17	81	4
River Springs Charter	66	1	0
Riverside STEM Academy	0	1	0
Rubidoux HS	17	31	2
San Jacinto HS	95	0	0
Shadow Hills High	0	198	2
Summit Hills High	0	1	0
Temecula Valley HS	99	0	0
Temescal Canyon High	0	16	4
Val Verde High	0	41	21
Valley View HS	51	0	0
Vista Del Lago	31	0	0
Vista Del Lago HS	67	0	0
Vista Murrieta HS	101	53	18
West Valley High	0	1	0

Table TA-3. Factors Associated with Correctly Identifying What an Apprenticeship Is Among Registered Pre-Apprenticeship Candidates

Student characteristic or experience	Reference Group	Adjusted odds ratio	95% confidence interval	p-value
Student characteristics				
Grade level	Each one-grade increase	1.09	0.77–1.56	0.623
Gender identity: Woman	Men	1.24	0.63–2.47	0.533
School county: San Bernardino	Riverside County	1.64p [†]	0.92–2.95	0.093
Currently has a paid job	No paid job	1.12	0.58–2.14	0.737
College-credit course enrollment				
Currently taking a college-credit	Never took a college-credit course	0.76	0.44–1.33	0.34
Previously took a college-credit		0.88	0.36–2.17	0.775
Sources of apprenticeship information				
Teacher or career pathway instructor	Did not hear from this source	2.47**	1.29–4.85	0.007
Counselor		0.53*	0.29–0.95	0.034
School presentation or event		1.14	0.61–2.14	0.681
Parent, guardian, or family member		1.77	0.89–3.60	0.107
Social media		0.73	0.35–1.49	0.388
Website or online search		2.52 [†]	0.93–7.24	0.075
Employer or community organization		0.7	0.22–2.23	0.544
Registered pre-apprenticeship pathway				
Automotive	Child development/early education	1.6	0.59–4.48	0.36
Masonry or construction		10.47***	3.79–30.93	<.001
Culinary		2.66*	1.04–7.09	0.045
Emergency medical services or public safety		2.80*	1.16–7.01	0.024
Mechatronics		2.66	0.77–9.45	0.125
Certainty about plans after high school				
Certain	Uncertain	0.76	0.36–1.62	0.476

Note. Results are from a multivariable binary logistic regression predicting whether students correctly identified what an apprenticeship is. The analysis includes 322 registered pre-apprenticeship candidates. Odds ratios are adjusted for all other variables shown in the table. The reference-group column identifies the group or condition against which the odds are calculated. For example, the odds ratio for women shows their odds of correctly identifying what an apprenticeship is relative to men. Values above 1 indicate higher odds than the listed reference group or condition, while values below 1 indicate lower odds. Respondents categorized as another gender were excluded from this model because of the small number of observations. Asterisks indicate statistical significance: $p < .1$ (†), $p < .05$ (), $p < .01$ (**), and $p < .001$ (***).*

Table TA-4. Factors Associated with Students' Likelihood of Applying for an Apprenticeship Within One Year of High School Graduation

Student characteristic or experience	Reference Group	Adjusted odds ratio	95% confidence interval	p-value
Student characteristics				
Grade level	Each one-grade increase	0.97	0.89–1.05	0.389
Gender identity: Woman	Compared with men	1.23**	1.09–1.38	0.001
Gender identity: Nonbinary		0.94	0.25–2.89	0.915
Gender identity: Other		0.75	0.34–1.51	0.445
School county: San Bernardino	Compared with Riverside County	0.95	0.83–1.08	0.404
Currently has a paid job	Compared with no paid job	1.07	0.90–1.26	0.46
College-credit course enrollment				
Currently taking a college-credit course	Compared with never having taken one	1.15*	1.01–1.30	0.034
Previously took a college-credit course		1.08	0.87–1.34	0.495
Apprenticeship knowledge				
Correctly identified what an apprenticeship is	Compared with an incorrect response	1.52***	1.36–1.71	<.001
Sources of apprenticeship information				
Teacher or career pathway instructor	Did not hear from this source	1.43***	1.27–1.62	<.001
Counselor		0.95	0.81–1.11	0.521
School presentation or event		0.98	0.83–1.16	0.834
Parent, guardian, or family member		1.55***	1.34–1.80	<.001
Social media		1.19*	1.03–1.38	0.017
Website or online search		1.21*	1.01–1.46	0.042
Employer or community organization		1.56**	1.21–2.01	0.001
Note. Results are from a multivariable binary logistic regression predicting high intent to apply for an apprenticeship within one year. Odds ratios are adjusted for all other variables shown in the table. The comparison column identifies the group or condition against which the odds are calculated. For example, the odds ratio for women shows their odds of intending to apply for an apprenticeship relative to men. Values above 1 indicate higher odds than the listed comparison group or condition, while values below 1 indicate lower odds. Asterisks indicate statistical significance: $p < .05$ (*), $p < .01$ (**), and $p < .001$ (***).				

Table TA-5. Factors Associated with Registered Pre-Apprenticeship Candidates' Likelihood of Pursuing an Apprenticeship Within One Year of High School Graduation

Student characteristic or experience	Reference Group	Adjusted odds ratio	95% confidence interval	p-value
Student characteristics				
Grade level	Each one-grade increase	1.22	0.88–1.70	0.24
Gender identity: Woman	Compared with men	1.15	0.61–2.16	0.673
School county: San Bernardino	Compared with Riverside	1.24	0.72–2.15	0.432
Currently has a paid job	Compared with no paid job	1.24	0.68–2.29	0.483
College-credit course enrollment				
Currently taking a college-credit course	Compared with never having taken one	0.83	0.49–1.38	0.462
Previously took a college-credit course		1.26	0.55–2.93	0.581
Apprenticeship knowledge				
Correctly identified what an apprenticeship is	Compared with an incorrect response	1.4	0.86–2.28	0.177
Registered pre-apprenticeship pathway				
Automotive	Compared with child development/early education	0.78	0.31–1.95	0.589
Masonry or construction		0.79	0.30–2.01	0.615
Culinary		0.69	0.28–1.66	0.406
Emergency medical services or public safety		1.09	0.47–2.50	0.848
Mechatronics		0.39	0.11–1.26	0.121
Sources of apprenticeship information				
Teacher or career pathway instructor	Did not hear from this source	1.92*	1.05–3.56	0.036
Counselor		0.83	0.48–1.44	0.507
School presentation or event		1.62	0.90–2.94	0.107
Parent, guardian, or family member		2.14*	1.12–4.18	0.023
Social media		0.72	0.37–1.38	0.324
Website or online search		0.99	0.37–2.59	0.981
Employer or community organization		3.35*	1.10–11.72	0.042
<i>Note. Results are from a multivariable binary logistic regression predicting high intent to apply for an apprenticeship within one year. The analysis includes 334 registered pre-apprenticeship candidates. Odds ratios are adjusted for all other variables shown in the table. The comparison column identifies the group or condition against which the odds are calculated. For example, the odds ratio for women shows their odds of intending to apply for an apprenticeship relative to men. Values above 1 indicate higher odds than the listed comparison group or condition, while values below 1 indicate lower odds. Respondents categorized as another gender were excluded from this model because of the small number of observations. Asterisks indicate statistical significance: $p < .05$ (*), $p < .01$ (**), and $p < .001$ (***).</i>				

Table TA-6. Factors Associated with the Number of Steps Registered Pre-Apprenticeship Candidates Have or Anticipate Taking Toward Pursuing an Apprenticeship

Student characteristic or experience	Reference Group	Adjusted difference in number of steps	95% confidence interval	p-value
Student characteristics				
Grade level	Each one-grade increase	0.13	−0.14–0.40	0.349
Gender identity: Woman	Men	−0.08	−0.60–0.43	0.748
School county: San Bernardino	Riverside County	0.38 [†]	−0.07–0.82	0.09
Currently has a paid job	No paid job	−0.17	−0.66–0.32	0.495
College-credit course enrollment				
Currently taking a college-credit course	Never took a college-credit course	0.21	−0.21–0.63	0.333
Previously took a college-credit course		0.42	−0.25–1.10	0.216
Apprenticeship knowledge				
Correctly identified what an apprenticeship is	Incorrect response	0.09	−0.31–0.50	0.653
Registered pre-apprenticeship pathway				
Automotive	Child development/early education	0.12	−0.64–0.88	0.751
Masonry or construction		0.35	−0.43–1.12	0.378
Culinary		0.42	−0.31–1.15	0.259
Emergency medical services or public safety		0.5	−0.19–1.20	0.155
Mechatronics		1.17 [*]	0.20–2.14	0.019
Sources of apprenticeship information				
Teacher or career pathway instructor	Did not hear from this source	1.00 ^{***}	0.51–1.50	<.001
Counselor		0.08	−0.38–0.52	0.744
School presentation or event		0.81 ^{**}	0.33–1.29	0.001
Parent, guardian, or family member		0.45 [†]	−0.09–0.98	0.099
Social media		0.37	−0.16–0.90	0.168
Website or online search		0.6	−0.17–1.37	0.125
Employer or community organization		−0.33	−1.21–0.54	0.455

Table TA-6. Factors Associated with the Number of Steps Registered Pre-Apprenticeship Candidates Have or Anticipate Taking Toward Pursuing an Apprenticeship (continued)

Apprenticeship application intent				
Likely to apply for an apprenticeship within one year of graduation	Not likely to apply	0.63**	0.25–1.02	0.001
<i>Note. Results are from a multivariable linear regression predicting the number of steps students had taken toward pursuing an apprenticeship. The analysis includes 334 registered pre-apprenticeship candidates. The adjusted differences are linear regression coefficients and account for all other variables shown in the table. The reference-group column identifies the group or condition against which each difference is calculated. Positive values indicate that students reported a greater number of steps they might take to pursue an apprenticeship than the listed reference group, while negative values indicate fewer steps. For example, the coefficient for students who heard about apprenticeships from a teacher or career pathway instructor indicates that they identified approximately one additional step, on average, compared with students who did not hear about apprenticeships from that source. Respondents categorized as another gender were excluded because of the small number of observations. $R^2=.215$; adjusted $R^2=.165$. Asterisks indicate statistical significance: $p < .1$ (²), $p < .05$ (*), $p < .01$ (**), and $p < .001$ (***)</i>				

Table TA-7. Factors Associated with Students Identifying a Driver's License as a Priority

Student characteristic or experience	Reference Group	Adjusted odds ratio	95% confidence interval	p-value
Student characteristics				
Grade level	Each one-grade increase	1.13†	0.99–1.30	0.07
Gender identity: Woman	Men	1.06	0.87–1.30	0.56
Gender identity: Nonbinary		0.48	0.12–3.14	0.345
Gender identity: Other		1.24	0.43–4.70	0.718
School county: San Bernardino	Riverside County	1.27*	1.02–1.58	0.03
Currently has a paid job	No paid job	1.1	0.78–1.58	0.593
School located in the High Desert	School not located in the High Desert	1.53*	1.07–2.26	0.026
College-credit course enrollment				
Currently taking a college-credit course	Never took a college-credit course	0.91	0.74–1.12	0.379
Previously took a college-credit course		1.29	0.86–1.99	0.237
Apprenticeship application intent				
Likely to apply for an apprenticeship within one year of graduation	Not likely to apply	1.31 *	1.04–1.66	0.024
Reason for delaying or potentially delaying getting a driver's license				
Cost of getting a license	No reason to delay	0.52**	0.32–0.83	0.008
Cost of buying and maintaining a car		0.46**	0.28–0.73	0.001
No access to a car		0.43**	0.25–0.72	0.001
No adult available to help with practice		0.52*	0.30–0.87	0.014
Scheduling conflicts		0.64†	0.40–1.01	0.059
Does not feel ready to drive		0.18***	0.11–0.28	<.001
Not interested in driving		0.03***	0.02–0.06	<.001
Has other transportation options		0.23***	0.13–0.39	<.001
Difficulty obtaining required paperwork		0.7	0.30–1.92	0.442
Parent or guardian does not allow driving		0.50*	0.28–0.92	0.023
Other reason		0.44**	0.25–0.78	0.004
Waiting until age 18		0.69	0.19–4.45	0.63
Currently in the process of getting a li- cense		0.38*	0.19–0.84	0.012
Waiting until eligible at age 16		0.99	0.33–4.25	0.986

Note. Odds ratios are adjusted for all other variables shown in the table. The reference-group column identifies the group or condition against which the odds are calculated. For example, the odds ratio for students attending school in San Bernardino County shows their odds of identifying a driver's license as a priority relative to students attending school in Riverside County. Values above 1 indicate higher odds than the listed reference group or condition, while values below 1 indicate lower odds. Asterisks indicate statistical significance: $p < .1$ (†), $p < .05$ (*), $p < .01$ (**), and $p < .001$ (***).

Table TA-8. Factors Associated with Students' Driver's License and Learner's Permit Status

HAS A DRIVER'S LICENSE				
Student characteristic or experience	Reference Group	Adjusted odds ratio	95% confidence interval	p-value
Student characteristic				
Grade level	Each one-grade increase	1.50***	1.26–1.78	<.001
Gender identity: Woman	Men	0.81	0.63–1.03	0.085
Gender identity: Nonbinary		0.11	0.01–1.20	0.07
Gender identity: Other		0.68	0.20–2.38	0.55
School county: San Bernardino	Riverside County	0.78	0.59–1.03	0.082
Currently has a paid job	No paid job	5.19***	3.48–7.74	<.001
School located in the High Desert	School not located in the High Desert	0.84	0.56–1.25	0.385
College-credit course enrollment				
Currently taking a college-credit course	Never took a college-credit course	2.22***	1.70–2.88	<.001
Previously took a college-credit course		2.10**	1.34–3.28	0.001
Apprenticeship Application Intent				
Likely to apply for an apprenticeship within one year of graduation	Not likely to apply	1.45**	1.10–1.91	0.008
HAS A LEARNER'S PERMIT				
Student characteristic or experience	Reference Group	Adjusted odds ratio	95% confidence interval	p-value
Student Characteristics				
Grade level	Each one-grade increase	0.74***	0.62–0.87	<.001
Gender identity: Woman	Men	1.07	0.84–1.36	0.578
Gender identity: Nonbinary	Men	0.27	0.04–1.69	0.163
Gender identity: Other	Men	0.81	0.24–2.72	0.727
School county: San Bernardino	Riverside County	0.96	0.73–1.27	0.778
Currently has a paid job	No paid job	2.31***	1.52–3.50	<.001
School located in the High Desert	School not located in the High Desert	1.08	0.73–1.59	0.703
College-credit course enrollment				
Currently taking a college-credit course	Never took a college-credit course	1.87***	1.44–2.42	<.001
Previously took a college-credit course		1.95**	1.25–3.06	0.003
Apprenticeship Application Intent				
Likely to apply for an apprenticeship within one year of graduation	Not likely to apply	1.32*	1.00–1.74	0.05

Table TA-8. Factors Associated with Students' Driver's License and Learner's Permit Status (continued)

DOES NOT HAVE A LICENSE OR PERMIT, BUT PLANS TO OBTAIN ONE PRIOR TO GRADUATION				
Student characteristic or experience	Reference Group	Adjusted odds ratio	95% confidence interval	p-value
Grade level	Each one-grade increase	0.53***	0.46–0.62	<.001
Gender identity: Woman	Men	1.34**	1.08–1.67	0.008
Gender identity: Nonbinary		0.33	0.08–1.28	0.109
Gender identity: Other		0.7	0.24–2.09	0.527
School county: San Bernardino	Riverside County	0.89	0.69–1.14	0.351
Currently has a paid job	No paid job	1.36	0.91–2.02	0.129
School located in the High Desert	School not located in the High Desert	1.23	0.87–1.74	0.239
College-credit course enrollment				
Currently taking a college-credit course	Never took a college-credit course	1	0.80–1.26	0.992
Previously took a college-credit course		1.15	0.76–1.72	0.513
Apprenticeship Application Intent				
Likely to apply for an apprenticeship within one year of graduation	Not likely to apply	1.31*	1.02–1.69	0.033
<i>Note. The outcome reference group for all three sections is students who do not have a driver’s license or learner’s permit and do not plan to obtain one before graduating from high school. Thus, each odds ratio represents the odds of being in the license or permit category named in that section relative to being in the outcome reference group. For example, students with a paid job had 5.19 times the odds of having a driver’s license, rather than having no license or permit and no plans to obtain one before graduation, compared with students without a paid job. Odds ratios are adjusted for all other variables shown. Values above 1 indicate higher odds of being in the named category relative to the outcome reference group, while values below 1 indicate lower odds. The reference-group column identifies the comparison group for each student characteristic or experience. Asterisks indicate statistical significance: $p < .1$ (²), $p < .05$ (*), $p < .01$ (**), and $p < .001$ (***).</i>				