HIGH SCHOOL TO POSTSECONDARY:

IMPROVING OUTCOMES THROUGH INCLUSIVE SCHOOL-BASED INQUIRY

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WASHINGTON
S T E M

EXECUTIVE SUMMARY

Over the past four years, Washington STEM has formed research-practice partnerships with schools and systems-level partners throughout Washington State to create a scalable approach to assessing and creating a plan for improving postsecondary readiness for all students. Most recently, in 2021, Washington STEM expanded a pilot project with four schools to understand persistent inequities in college and career readiness along the lines of race, income, gender, and geography.

In this technical report, we discuss our aggregated quantitative and qualitative findings that helped school partners understand how educator knowledge and perceptions influence students' affordability beliefs on postsecondary education, knowledge of scholarships and financial aid, and course-taking patterns. We also share the collective action steps our school partners are taking to deepen and add nuance to the understanding of their findings. Given the equity gaps we learned from the findings, we consider the opportunities for creating more equitable systems in our next steps. Additionally, we share best practices for successfully undertaking a postsecondary readiness project that engages multiple stakeholders. We end our paper by providing an update on our initial project with Eisenhower High School.

Quantitative Survey Findings
- educator and student postsecondary beliefs
- educators' knowledge about requirements for postsecondary pathways
- students' knowledge about requirements for postsecondary pathways
- educators' knowledge of financial aid and scholarships
- students' knowledge of admissions requirements, scholarships, and financial aid
- educators and students' postsecondary affordability beliefs
- educator dual credit beliefs and knowledge
- educators' most recommended dual credit programs and factors considered
- information about dual credit received based on student demographics
- plans to enroll in dual credit based on student demographics

Qualitative Survey Findings
- student responses
  - provide in-depth college-going support
  - provide accessible postsecondary information
  - provide information about postsecondary requirements in earlier grades
  - provide information about rigorous course-taking in earlier grades
- educator responses
  - more professional development to support students' career and college course-taking
  - leverage internal resources for learning and sharing information about dual credit
  - more training on financial aid applications

Collective Action Steps
- action steps for deepening and adding nuance to the schools' findings
  - follow-up interviews with students
  - examine dual credit course-taking patterns
  - co-develop a suite of dual credit resources
  - receive direct feedback from families
  - second round of staff and student surveying

Washington STEM's Conclusions and Next Steps
- ongoing data coaching and technical assistance to STEM Network and school partners
- findings complemented a **statewide policy win** related to dual credit data and reporting
- supporting 10 STEM Networks throughout the state to scale a community-centered, co-design process to improve postsecondary readiness opportunities

Lessons Learned from the Field
- shorter staff and student surveys have higher completion rates
- co-creation of data tools and research processes need to be made alongside and with community partners
- agree to common data collected and aggregated

Appendix
- Eisenhower High School: Initial Project Overview and Second Cycle of inquiry

BACKGROUND: THE CASE FOR EQUITABLE DUAL CREDIT AND POSTSECONDARY READINESS

With the increased workforce demands of the innovation economy, state and institutional policymakers have focused on a reform agenda that ensures all students graduate high school with the necessary college and workforce skills to succeed in their postsecondary education (Bragg & Taylor, 2014; Carnevale et al., 2018). Dual credit can play a critical role in this effort by preparing students for the transition from high school to multiple pathways after graduation. Research points to extensive evidence of the advantages of students earning dual credit as a significant accelerator of momentum towards postsecondary degree attainment. Dual credit[1] allows students to simultaneously earn high school and college credit by completing college courses or by completing standardized exams that can lead to a postsecondary credential (Adelman, 2006; Bragg & Kim, 2006). In addition to providing high school students the opportunity to earn college credits, dual credit courses can provide students with better academic and workforce preparation, early exposure to a rigorous curriculum, easier transition to higher education, significant savings in both money and time invested in postsecondary education, and increased college retention and completion rates (Bailey, Hughes, & Karp, 2003; Blankenberger, Lichtenberger, & Witt, 2017).

Washington State has adopted dual credit as a policy strategy for expanding pathways to postsecondary enrollment and improving higher education completion, especially for systemically underrepresented students. Washington State considers six[2] kinds of programs as "dual credit" according to the state education agency, the Office of Superintendent of Public Instruction (OSPI). Washington's Launch Year Act, signed into law in 2011, requires all public high schools in Washington to work toward increasing the number of dual credit courses offered to high school students. Despite the state's best policy efforts, however, the state's dual credit course completion and access rates remain inequitable for many student populations. For this reason, Washington STEM has formed research-practice partnerships (RPPs) with several systems-level leaders throughout Washington State to collaboratively investigate persistent challenges and create local solutions for improving educational outcomes in K-12 education (click **here** to view our toolkit on the inquiry process).

SCALING AND EXPANDING PROJECT

In 2020, Washington STEM formed a **research-practice partnership** with a leadership team at Eisenhower High School, in Yakima, WA, to identify, assess, and act upon barriers to dual credit programs. This work was funded primarily through an **OSPI _Building Equitable,Sustainable Dual Credit_** grant that called for partners to build accountability through data, use funds to cover student and program costs, and facilitate collaboration and local expertise. The team from Eisenhower High School and Washington STEM co-created a process that connected a broad set of quantitative and qualitative data with community input to help the school leadership team identify and implement changes in practice at the school and district levels to increase equitable access to dual credit programs.

The multimethodology included examining dual enrollment course-taking patterns and postsecondary outcomes, administering staff and student surveys, and conducting student empathy interviews. With a clear

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[1] In some national literature, _dual credit_ is differentiated from exam-based college preparatory courses (e.g., Advanced Placement). However, in the context of Washington state, _dual credit_ includes exam-based programs _and_ course-completion-based programs (e.g., College in the High School). Other terms used in the field are _concurrent enrollment_ or _dual enrollment_ which include college-level courses that students take with college faculty and courses taught by college-approved high school teachers in a secondary environment.

[2] The types of dual credit programs recognized in Washington and in this project include Advanced Placement (AP), Cambridge International (CI), College in the High School (CHS), Career and Technical Education (CTE), International Baccalaureate (IB) and Running Start (RS).

understanding that dual credit is situated in the broader context of making postsecondary readiness more equitable, the following year Washington STEM expanded this pilot project with four schools to understand persistent inequities in college and career readiness along the lines of race, income, gender, and geography. Research shows that minoritized students often have differential access to college and career readiness curricula and programs, with Students of Color, first-generation, rural students, students of lower socioeconomic status, and students with disabilities having fewer options and opportunities (Bragg & Taylor, 2014; Lombardi et al., 2013; Monahan et al., 2020).

This second cycle of investigations included 317 educators and 4,681 students from various demographics and regions across Washington State. Using a research and data justice framework,[3] Washington STEM ensured that community partners had the right to the research process including co-developing and providing feedback on staff and student surveys. School staff—counselors, teachers, coaches, and others working directly with students—completed a survey administered via SurveyMonkey to help school partners understand how educator knowledge and perceptions influence students' beliefs about the affordability of postsecondary education, knowledge of scholarships and financial aid, and course-taking patterns. Similarly, student surveys helped schools understand student awareness of the steps needed to enact postsecondary goals. The project team was able to elicit responses from 70% of educators and 70% of students, with an equal distribution of educators and students across grade levels.

SALIENT SURVEY FINDINGS - QUANTITATIVE

Postsecondary Beliefs

The aggregated survey results (click **here** for entire data findings) showed a significant discrepancy between student aspirations for postsecondary plans compared with staff perceptions of student aspirations. That is, K-12 professionals believed, on average, that 48% of students aspired to attend postsecondary education or training compared to 88% of students who indicated they intended to go into higher education. While there was not a significant difference in aspirations rates across racial and grade level demographics, there *was* a difference based on gender. Female students had higher aspirations, 91%, than male students' aspirations, 84%, for obtaining a postsecondary education.
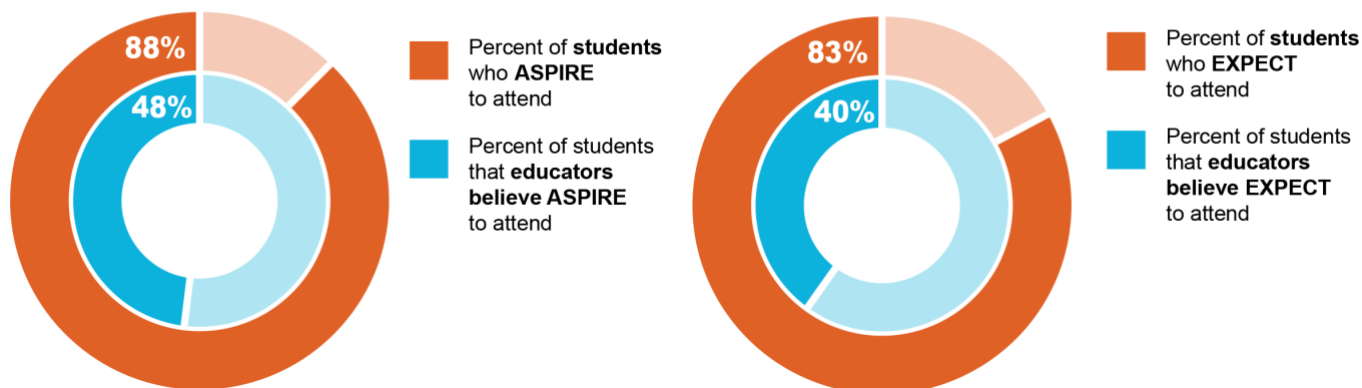
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[3] Washington STEM adopted this framework from the Coalition of Communities of Color, an alliance of culturally specific community-based organizations that supports racial justice efforts to improve outcomes for Communities of Color through culturally appropriate data and research.

POSTSECONDARY ASPIRATIONS
Aspiration vs Expectation

88%
48%

Percent of **students**
who ASPIRE
to attend

Percent of students
that **educators
believe ASPIRE**
to attend

83%
40%

Percent of **students**
who EXPECT
to attend

Percent of students
that **educators
believe EXPECT**
to attend

Educators' Knowledge about Requirements for Postsecondary Pathways

Relying mostly on personal experience to provide information about postsecondary requirements to students, educators on average specified being more knowledgeable about the requirements to be admitted into a 2-year and 4-year college program than a 1-year certificate or apprenticeship program. Given that most certified educational roles require advanced education, it is not unusual that staff had a greater understanding of 2- or 4-year degree programs. However, male educators were more knowledgeable about the requirements for 1-year certificate programs and apprenticeship programs than female educators.

Students' Knowledge about Requirements for Postsecondary Pathways

Mirroring educators' understandings, students were more knowledgeable about the admissions requirements to a 2-year and 4-year college program than a 1-year certificate or apprenticeship program. Male students were more knowledgeable about the requirements for 1-year certificate programs and apprenticeship programs than female students, however, female students were more knowledgeable about 2-year and 4-year college programs than male students. Overall, students in higher grade levels had more knowledge about the requirements for different postsecondary programs than students in earlier grades.

Across racial student demographics, Asian American[4] students were more knowledgeable about the requirements to be admitted into a 4-year college program than all other racial groups. Whereas Latinx[5] students were more knowledgeable about 1-year certificate requirements than other racial groups, and Black students had the least knowledge about 2-year and 4-year admissions requirements than any other racial group.
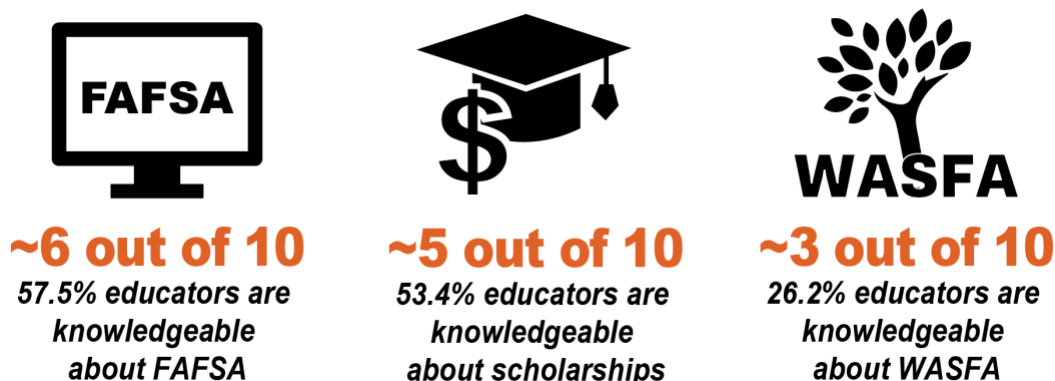
Educators' Knowledge of Financial Aid and Scholarships

With the complexity of paying for college, students rely on teaching staff to help navigate the financial aid process. In our sample size, we learned that 6 out of 10 educators were knowledgeable about the Free Application for Federal Student Aid (FAFSA)—financial aid from the federal government to help for post-

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[4] Does not include data on Pacific Islander students which were categorized under their own separate racial category.

[5] We use the term *Latinx* to refer to students with Latin American ancestry and as an alternative to gender binary terms such as *Latino* or *Latina*. However, we recognize that the term *Latinx* has been largely used by an academic community in the United States of America and that not all communities from Latin American ancestry would refer to themselves as Latinx.

secondary education through grants, scholarships, federal or private loans, or work-study and other programs. We also learned that 5 out of 10 educators were knowledgeable about scholarships and that only 3 out of 10 educators had knowledge about the Washington Application for State Financial Aid (WASFA)—state financial aid for DREAMers (students who are undocumented or who do not have recognized US citizenship).

~6 out of 10
57.5% educators are knowledgeable about FAFSA

~5 out of 10
53.4% educators are knowledgeable about scholarships

~3 out of 10
26.2% educators are knowledgeable about WASFA

Students' Knowledge of Admissions Requirements, Scholarships, and Financial Aid

As most students in our sample intend to go into higher education, we learned that 5 out of 10 students were knowledgeable about postsecondary admissions requirements including knowledge about college entrance exams (SAT/ACT), writing college application essays, or grades in academic courses. And similar to educators, 5 out of 10 students were knowledgeable about scholarships, and 3 out of 10 were knowledgeable about FAFSA or WASFA.

~5 out of 10
53.9% students are knowledgeable about postsecondary admissions requirements

~5 out of 10
49.9% students are knowledgeable about scholarships

~3 out of 10
33.1% students are knowledgeable about FAFSA/WASFA
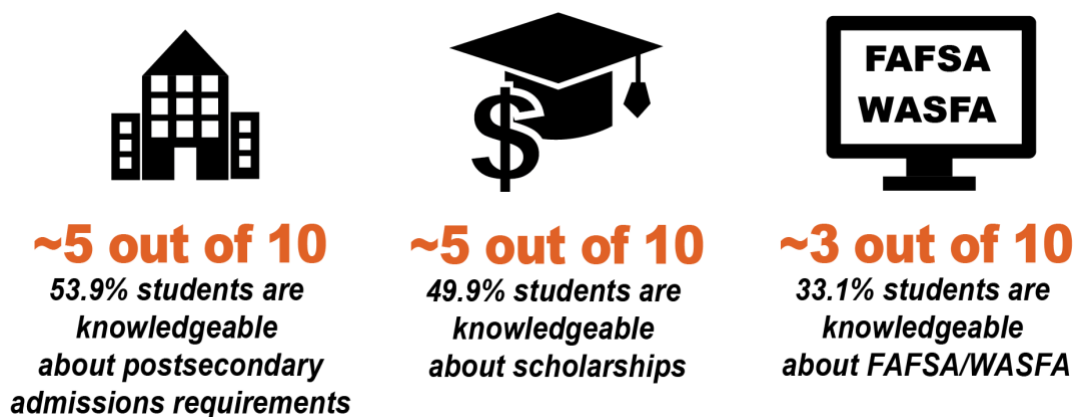
However, based on student demographics, Asian American students were significantly less knowledgeable about admissions requirements, scholarships, and financial aid than any other racial student group. Whereas Black students were more knowledgeable about scholarships than any other racial student group. Male students were slightly more knowledgeable than female students about postsecondary admissions requirements. Moreover, students in 12th grade were significantly more knowledgeable about financial aid and postsecondary admission requirements than other grade levels.

Educators' and Students' Affordability Beliefs

With escalating tuition costs in recent years and the impacts of COVID-19, over 50% of educators believed that students could afford to attend an apprenticeship program, 1-year vocational program, and 2-year college program, but less than 45% of educators believed that students could afford to attend a 4-year college

program. Mirroring educator beliefs, over 50% of students believed they could afford to attend an apprenticeship program, 1-year vocational program, and 2-year college program, while 45% of students believed that they could afford to attend a 4-year college program.

In contrast, across student demographics, over 50% of Asian American students believed they could afford to attend a 4-year college program; all other racial groups have less than a 45% belief that they can afford to attend a 4-year college program. Female students believed they could afford to attend a 2-year and 4-year college program at significantly higher rates than male students. Lastly, students in 9th and 10th grades have lesser belief rates than students in higher grades that they could afford to attend any type of postsecondary program.
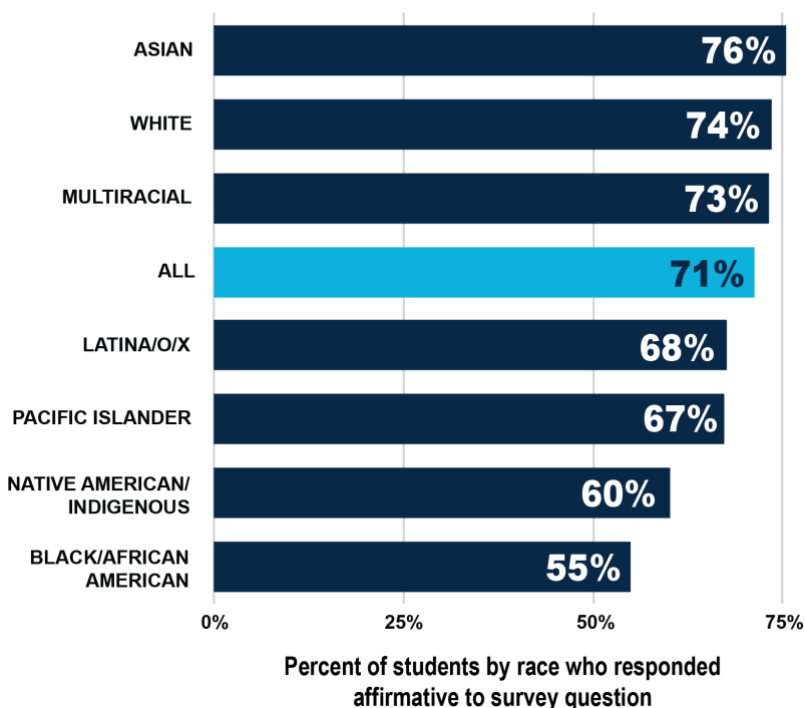
Educator Dual Credit Beliefs and Knowledge

Aggregated findings suggest that school staff do not agree that students understand the different types of dual credit or that they understand the value of dual credit courses. In fact, less than 55% of educators agree that all students who meet the eligibility criteria for dual credit courses can take a dual credit course. Even though 58% of educators indicated having a good familiarity with the different types of dual credit offered in their respective schools— Advanced Placement, Running Start, College in the High School, Career and Technical Education— less than 40% agreed having adequate training to provide information to students.

Educators' Most Recommended Dual Credit Programs and Factors Considered

While staff recommends and provides information to students about the four different types of dual credit, over 75% recommend and provide information on Advanced Placement (AP) courses and Career and Technical Education (CTE) courses. The most important factor (78.5%) reported when recommending students to dual credit courses is students' goals and interests. Although a small portion, 16% of female teachers compared to 3.5% of male teachers consider a student's family resources a very important factor when recommending them to dual credit courses which can cause disparities for low-income students accessing dual credit coursework. Similarly, 14% of female educators compared to 5% of male educators consider a student's mastery of the English language a very important factor when recommending them to dual credit programs which can cause disparities for immigrant and emerging multilingual language learners.

Has anyone from your school ever spoken with you about the availability of dual credit programs?

ASIAN	76%
WHITE	74%
MULTIRACIAL	73%
ALL	71%
LATINA/O/X	68%
PACIFIC ISLANDER	67%
NATIVE AMERICAN/ INDIGENOUS	60%
BLACK/AFRICAN AMERICAN	55%

Percent of students by race who responded affirmative to survey question

Students Receiving Information about Dual Credit

Student survey results show students across all grade levels rely on teaching staff the most for learning about dual credit course opportunities, this is particularly true for Students of Color. However, in comparison to the overall 71% of student responses that indicated someone from school had provided information about dual credit programs, Latinx, Black, and Indigenous students are underrepresented in accessing dual credit
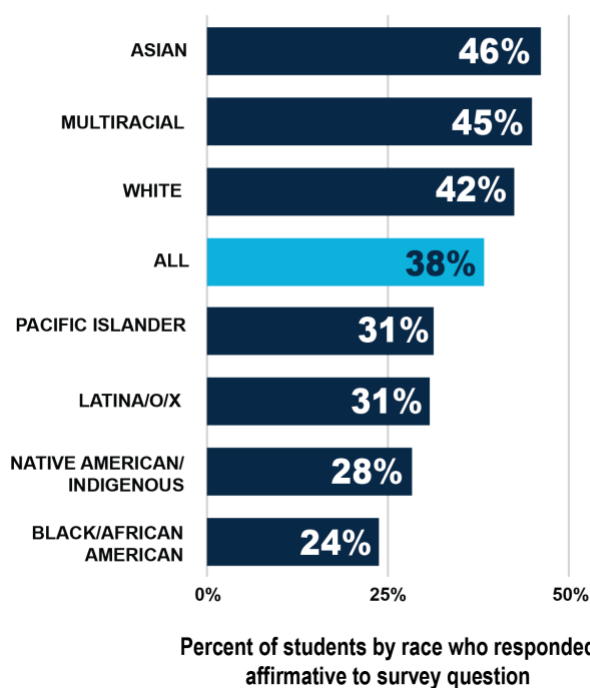
information. For instance, only 55% of Black students reported that they were given information about any type of dual credit program. In contrast, 73.5% of White and 75.5% of Asian students reported having been provided information about dual credit programs.

Student survey findings also point to inequities in receiving dual credit information along lines of gender and grade level. Over 75% of female students indicated having received information about the various types of dual credit compared to less than 65% of male students. Except for Career and Technical Education (CTE) dual credit courses, female students were more aware than male students of the three different types of dual credit programs offered in school. Students in higher grades such as 11th and 12th grade indicated having been spoken to about the different types of dual credit more so than students in earlier grades such as 9th and 10th grade. For instance, 82% of seniors (12th grade) reported having been provided information about dual credit by school staff compared to 58% of freshmen (9th grade).

Plans to Enroll in Dual Credit - Student Demographics

Over 35% of students reported having plans to enroll in dual credit courses as incoming 9th graders or transfer students. Among racial student groups, Asian American students—46%— indicated having the most plans to enroll in dual credit programs in comparison to Black students, 24%, Latinx students, 31%, Indigenous students, 28%, and Pacific Islander students, 31%. Female students—47%— also indicated having more plans to enroll in dual credit programs in comparison to male students, 30.5%. Students in higher grades reported having more plans to enroll in dual credit than students in earlier grades.

When you first came to your high school, did you plan to enroll in one or more dual credit courses?

Race	Percent
ASIAN	46%
MULTIRACIAL	45%
WHITE	42%
ALL	38%
PACIFIC ISLANDER	31%
LATINA/O/X	31%
NATIVE AMERICAN/INDIGENOUS	28%
BLACK/AFRICAN AMERICAN	24%

Percent of students by race who responded affirmative to survey question

SALIENT SURVEY FINDINGS – QUALITATIVE

Student Responses
Provide In-Depth College-Going Support
For many students without access to college-going knowledge and career preparation at home, and in particular for students who have been historically excluded from higher education, school staff serve as conduits for postsecondary information and guidance. This was reflected in the overall student responses about wanting teachers to provide comprehensive support on college-going knowledge and readiness, including access to rigorous coursework, support with college planning, financial aid, and navigating college life. Students indicated that one designated school space, such as advisory, to learn about postsecondary options was not sufficient in both the delivery of information and length to provide college knowledge.

> *"As someone who only has few [sic] knowledge about these things, maybe **conduct a seminar for students** to learn about advanced coursework"*

*"**Teach us about the steps to take to go to college** or other things like that instead of just expecting us to know. And, if we are meant to be learning about that stuff in advisory, then **have advisory more often instead of for 15 minutes once a month**."*

Provide Accessible Postsecondary Information

While school partners informed our research team that postsecondary information to attend vocational and career schools, two- and four-year colleges, and universities was provided to students through various means—school website, advisory sessions, college, and career fairs— students still felt that the information available was not accessible. Namely, students drew attention to the dominance of English in communicating information about college resources with limited regard to other home languages. Students also felt overwhelmed by the disarray of information provided through multiple platforms rather than a centralized location. Additionally, students shared that a stand-and-deliver approach to learning about postsecondary requirements was not effective, instead, they preferred interactive learning in which teachers modeled how to complete college applications and fill out other postsecondary-related forms.

> *"[G]ive more detailed information [about college] **in the language of the person**"*

*"I think that the [postsecondary] information should be a lot **more organized and simple to access**. The directions, information, and requirements are spread out across what seems like a hundred different websites, documents, and videos. It would be really nice if there was **one document with instructions and information** and an index or something to all of the other resources and explanations…Currently, it **feels like a big mess**."*

Provide Information about Postsecondary Requirements in Earlier Grades

Contrary to what several staff believed about students in earlier grades not having an interest in learning about college and career requirements, especially as they still have four to three years before graduation, freshman and sophomores indicated that they wanted postsecondary information provided to them from the onset. Even though most of them were unclear on the exact profession they wanted to pursue, they shared that a good foundation early on would place them in a valuable position to make informed college and career choices as a senior. They emphasized the importance of financial literacy and developing skills to make informed financial decisions about postsecondary education and training.

*"Share more about scholarships **even to students who are not juniors or seniors**. It is a big stress on students even before senior year to plan out college and future plans when you have no idea on how financially stable you are or if you can even plan out your future if you live in a low-income house."*

*"I wish there was a financial health or real-world class that was a graduation requirement. This class would go through all these things: post-secondary options, budgeting, financial aid, HS dual credit options, etc. **This class would be taken in 9th grade** and would help explain all this stuff to us kids."*

Provide Information about Rigorous Course-Taking in Earlier Grades

Students understood the value of enrolling in high-level, rigorous courses such as Advanced Placement (AP) and other dual enrollment courses. They recognized that these rigorous courses could help them develop college-level academic skills and career skills such as critical thinking and problem-solving. Yet, they also understood the value of learning about these courses *early on* as they lead to better college and career preparation. As with postsecondary information, students in earlier grades felt that their high schools targeted juniors and seniors by providing information about high-level coursework while little attention was paid to students in freshman and sophomore grades.

> "If I could give any advice to adults in my school about how they could better support my learning about **rigorous courses** and achieving my postsecondary goals, I would say to start teaching us about them **as early as possible** so that we have more time to learn and be more knowledgeable about them."

> "Instead of talking about college requirements so much and repeating the same thing over and over, **show us what to do and show us how to fill things out**."

STAFF/EDUCATOR RESPONSES

More Professional Development to Support Students' Career and College Course-taking

The strongest link impacting students' college-going knowledge and career preparation is through teaching staff, however, most educators indicated not having sufficient professional development opportunities and other resources to support students' career and college course-taking. Staff advised having professional development aimed at supporting students' career pathways and training through academic coursework in various content areas with the potential for advanced knowledge and college credit.

> "**Professional development** that is aimed at preparing Advisory teachers to know all of the **Career Pathways and what classes and number of credits** are required for each pathway, including dual credit courses."

> "It would be helpful to have **a series of staff meetings talking about…dual credit options** and how to get their content curriculum covered in dual credit if it isn't currently [and] CTE options as they have expanded!"

Leverage Internal Resources for Learning/Sharing Information about Dual Credit

Several educators acknowledged that a range of materials and resources existed within their schools to share information about dual credit programs. Rather than tackling the dual credit knowledge gap alone, staff proposed making the best use of existing resources and leveraging new ones where needed to support their learning. They suggested pooling ideas for getting students interested in dual credit classes such as creating promotional videos or having staff guest speakers provide more detailed information about dual credit programs. Leveraging these internal resources would support educators' knowledge about the various dual

credit programs offered at their schools and delineate the link between student course-taking and postsecondary pathways.

> "I would like to **brainstorm ideas** to get more students interested in taking AP classes with previews from teachers to use with Forecasting. Maybe a **pre-recorded video** of exciting lessons and student interaction. Like a district promotional video."

> "**Representatives should come to our rooms and speak to the students** about available programs and then teachers can learn more about them as well."

More Training on Financial Aid Applications

FAFSA completion is a critical step in the college financing process that allows students and families to access federal aid. A key player in helping students complete their FAFSA applications is school staff who can help students navigate the financial aid process and provide individualized support. Our qualitative survey results revealed that staff felt they had insufficient training to provide comprehensive information about financial aid to students or had the capacity to provide targeted outreach and support to students who had minimal exposure to higher education processes.

> "Definitely **more information about the FAFSA**, so I can help students who express interest in college. I think we expect students to be proactive and sign themselves up for a [one-on-one] meeting, yet some aren't sure how to even start the process."

AGGREGATED NEXT STEPS
(COLLECTIVE ACTION STEPS FOR 4 SCHOOLS)

After analyzing quantitative and qualitative survey data for each school, we created individual Tableau dashboards for each partner and walked them through their specific findings. School staff had time to digest and process their practices that were supporting all students or creating differential preparation for postsecondary readiness. Based on their data needs, our Washington STEM team helped them each think of next steps for deepening and adding texture to the understanding of their findings:

- *Follow-up interviews* — Several schools indicated wanting to conduct follow-up interviews with students to learn how they can support their postsecondary readiness.

- *Course-taking patterns* — Systems-level partners wanted to dig deeper into their dual credit course-taking patterns to learn about overrepresentation or underrepresentation based on student demographics.

- *Suite of dual credit resources* —Examine co-developing a suite of dual credit resources for advertising and promoting dual credit via multimodal means.

- *Family feedback* – Since families were not part of their inquiry, several partners are exploring focus groups as an approach to receive direct feedback from families on the types of postsecondary supports and information they are receiving (or not receiving) from their schools.

- *Second round of surveys* — All schools indicated an interest in following up with another round of staff and student surveying in a year from the initial project to assess the impact of their implementations and other data-driven changes.

WASHINGTON STEM'S CONCLUSIONS AND NEXT STEPS

As a result of our expansion pilot, we found many schools, districts, and partners do not have basic access to dual credit data to inform their work toward equitable outcomes. Although systems-level partners have strong hunches about inequities in dual enrollment and are ready to engage in a community-centered, co-design process, they need the data coaching and support to examine student postsecondary outcomes. Our research-practice partnerships with four additional schools complemented and undergirded a statewide policy win related to dual credit data and reporting, via **HB 1867,** which Washington STEM helped to draft and for which we and our partners advocated throughout 2021. As of July 1, 2022, the state's longitudinal data system agency must provide transparent, disaggregated data on dual credit course enrollment, completion, and credit translation for all students across Washington, by demographic, region, and school/district. Prior to this, schools and communities were able to access little to no data about dual credit course outcomes of their students, especially when it comes to disparities in outcomes by student demographic. This legislation and its resulting transparent data and information will help inform state policy recommendations for closing dual credit gaps by providing a complete picture, from the moment students attempt a course all the way through to postsecondary progress.

We are supporting 10 STEM Network partners throughout the state to scale a co-design inquiry process to improve postsecondary readiness opportunities for students in their schools. Through this inquiry process, we center community voice using both qualitative and mixed data collection methods that include listening, learning, and leading with students, staff, and families to hold systems accountable for achieving equitable outcomes. As we continue to iterate on our process and refine our inquiry model, we will share the process and make sure that any other schools interested in this equity work can have a roadmap to do so through our open-source data and measurement tools.

LESSONS LEARNED: BEST PRACTICES FOR FORMING RESEARCH-PRACTICE PARTNERSHIPS

In the course of investigating inequitable practices in postsecondary readiness with our STEM network partners, we accumulated nuggets of wisdom or best practices for successfully undertaking a multi-district project that engages multiple stakeholders. We learned that shorter staff and student surveys have higher completion rates, which means we collect higher quality data. In other words, we learned that we do not need to ask dozens of questions to obtain actionable data. Another important lesson is that the co-design and co-creation of data tools and research processes need to be made alongside and with community partners (school leaders/staff and families). Co-creation ensures buy-in, trust, and multiple rounds of user testing; it also ensures that there is a sustainability plan for each data tool we create. While we honor the co-creation of data tools (e.g., surveys) with partners and understand that there are place-based issues in every community, we also understand the importance of agreeing to common data collected. In our most recent data cycle, a school partnership fell through because they wanted to change too many survey questions that would significantly change our aggregated data and findings. These are just a few lessons we have learned as we sought to cultivate community-centered partnerships.

APPENDIX A
INITIAL PROJECT WITH EISENHOWER HIGH SCHOOL

Pilot Study: Equitable Dual Credit Project
Eisenhower High School's goal for forming a research-practice partnership with Washington STEM was to improve its school practices for students who have been systematically disadvantaged in dual enrollment. Specifically, they had a hunch that Latinx students were experiencing inequities in the four types of dual credit offered in their school. In their first cycle of inquiry, Eisenhower High School **co-led a multimethod investigation**[6] with Washington STEM examining dual credit course-taking data and enrollment outcomes, conducting staff and student surveys, and organized student empathy interviews to illuminate equity gaps such as over-or underrepresentation of student populations in various types of dual credit courses. Washington STEM co-created a process to investigate quantitative and qualitative dual credit data that prioritized community voice and feedback that helped school administrators identify and implement changes in practice at the school and district level.

Course-Taking Patterns and Survey Results
Findings indicated that Latinx students were not receiving the same dual credit experiences as white students. Namely that Latinx students were underrepresented in dual credit math-based courses. In fact, Latinx male students were overrepresented in lower-level CTE Career and Technical Education (CTE) offerings, such as in fields related to agriculture. White students, however, were overrepresented within CTE courses in fields that lead to wage-sustaining careers such as technology, health care, and engineering. Along the lines of language (ELL status), students who predominantly spoke Spanish experienced disparity in accessing dual credit information. That is, in comparison to English-speaking students, Spanish-speaking students reported not having learned about all dual credit programs offered at their school. Only 16% of Spanish-speaking students had learned about Running Start. Even more alarming, only 4% of Spanish-speaking students had learned about Advanced Placement (AP).

Postsecondary Outcomes
By looking across high school enrollment patterns and postsecondary data, it was clear that students who enrolled in dual credit matriculated and completed their postsecondary pathways at a greater rate than students not taking any dual credit coursework. For instance, course-taking data showed that students enrolled in AP and College in the High School (CHS) had a higher persistence and completion rate in postsecondary education, regardless of demographics. More specifically, enrollment in AP Math and CTE STEM correlated with higher postsecondary persistence and completion rates.

Centering and Leveraging Student Voice
Student interviews further deepened our understanding of dual credit inequities and provided us with a whole new perspective on how to improve dual credit programs and expand participation across underrepresented groups. Youth, speaking from their unique lived experiences, illuminated some of the root causes of disparities and reminded us that students play an active role in school change efforts—a role where their experiences matter, their narratives matter, and where their voices matter.

Change in School Practice: Data-Informed Shifts
The Washington STEM team walked through equity gaps with Eisenhower High School leaders and staff which helped them come up with a plan for closing equity gaps in their school. To increase access to dual enrollment, and as a result of this project, Eisenhower High School partners are working to expand the number of dual credit offerings in their master schedule to increase the number of students, from all demographics, enrolling in

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[6] The webinar to this presentation can be found **here**.

dual credit courses. The administration is reviewing recently offered honors classes for potential development into College in the High School (CHS) courses, especially among math offerings. They are also organizing peer-to-peer information sessions that are led by 11th and 12th graders that help students in 9th and 10th grades learn about dual credit.

Next Round of Inquiry: Family Voice

In their second cycle of inquiry (2021-2022), Eisenhower High School's Career Technical Education Specialist, with support from Washington STEM's Community Partner Fellow, organized interviews and focus group sessions with Latinx (im)migrant[7] families to learn about the institutional barriers preventing Latinx youth from enrolling in dual credit courses. The school administration recognized that one voice had been missing in helping shape their agenda for creating equitable access to dual enrollment: families whose children are most impacted by inequitable school practices. Therefore, this parent voice project aimed to develop a set of recommendations that reflected the particular priorities and interests of culturally and linguistically diverse families that could be shared throughout the district. We centered the experiential knowledge of Latinx (im)migrant families to build upon their values to address historical and ongoing inequities.

Structural Barriers to Dual Credit and Postsecondary Information

Interviewing a small but critical number of 8 parents allowed a baseline understanding of their individual knowledge of postsecondary information and dual credit. The purpose was to understand what the barriers were to accessing information about dual credit and accessing career and college readiness resources. As seen in the first cycle of investigations with students, Latinx parents shared that information on career and college pathways, including dual enrollment, was not made accessible. In fact, all of the parents we spoke with indicated that no one from Ike High School had informed them about school opportunities to learn about the postsecondary education process, such as college entrance exams, financial aid applications (FAFSA/WASFA), or scholarship information. Similarly, they shared that information about dual enrollment was never provided to them. Parents described several structural barriers that contributed to knowledge gaps and the absence of appropriate information and support that are seemingly inherent to school systems. For instance, parents acknowledged that the school website and Skyward[8] provided information about college-going resources or that text messages were sent to inform parents about college and career fairs,[9] yet these forms of communication were never relayed in Spanish. For parents whose migrant labor conditions interrupt their children's educational continuity throughout the academic year, they expressed that the lack of cross-school partnerships often means their children slip through the cracks in the education system. That is, parents felt that since their children entered schools at different times throughout the year, schools needed a better cross-district system for identifying migrant students who had transferred to provide them with institutional support. They also believed that staff may have some implicit biases when it comes to sharing information about financial aid, such as purposely not providing information to undocumented youth. While they recognized that the pandemic had recently complicated parent-school relations, some parents shared that prior to COVID-19 they still did not feel welcomed at the school. Namely, mothers explained experiencing microaggressions when visiting the school to drop off scholarship applications or other school forms.

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[7] We use "(im)migrant" rather than just "migrant" or "immigrant" to denote the intersectional lived experiences that immigrant and migrant farmworkers face in agribusiness communities.

[8] A school management and student information system used by educational institutions and school districts to manage student records, curriculum, attendance, grades, discipline, reporting and more.

[9] To consolidate multiple communication avenues that Eisenhower High School was using to provide information about school events and other available resources, they switched to ParentSquare as their main communication platform. Yet none of the parents had heard about the communication tool and therefore were missing out on pertinent information.

Parent Recommendations for Creating Equitable Access to Dual Enrollment

Leveraging and honoring the lived experiences of (im)migrant families as starting points for creating racial equity in education, we designed weekly virtual focus group sessions with 5 parents[10] to co-develop a set of dual credit recommendations.[11] The purpose of our sessions was for parents to make collective sense of the dual credit data from last year and to come up with a set of recommendations for making dual credit information accessible, and, ultimately, revealing untapped expertise for addressing inequity. Families provided direct feedback on the types of dual credit supports and information they and their children needed. For instance, families recommended that Eisenhower High School provide information in Spanish about each type of dual credit program to students and their families prior to course registration and provide information about any financial aid available to reduce dual enrollment costs (e.g. fee waivers for Running Start program courses). In one of the focus group sessions, parents had learned through the Community Partner Fellow that our state legislators were deliberating on House Bill 1760 *Expanding Access to Dual Credit Programs* which outlined the aforementioned propositions, however, regardless of whether it was approved by legislation, parents wanted their school to commit to these changes. Another recommendation made by parents involved specific and targeted professional development and supports for migrant specialists who work closely with migrant students and families. While parents may have had strained relationships with other staff members, they had cultivated meaningful relationships with migrant specialists whom they felt comfortable asking about institutional information. Holding space with administrative staff, in our last focus group session, parents shared their recommendations with school leaders and shared how their lived experiences shaped these collective strategies for creating more equitable dual credit opportunities. Parents were framed as active agents in schools whose voices serve as a compelling lever for change. Taking these recommendations into consideration, Eisenhower High School is working with advisors from the College Success Foundation to implement their recommendations.

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[10] Due to work constraints, only 5 out of the 8 parents could commit to the 8 weekly focus group sessions.

[11] Analysis on the parent voice project is still ongoing, therefore, we do not yet have an exhaustive recommendation list to share.

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