



PERFORMANCE ASSESSMENT CASE STUDY SERIES

Using Performance Assessments to Support Student Learning in Oakland Unified School District

Charlie Thompson, Dion Burns, and Anna Maier

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Executive Summary

It's a good feeling after you finish your [graduate] capstone.... It feels rewarding. All the effort you put into it paid off, and ... knowing that you're doing a project that might have a chance of changing the community feels good.

These words come from an Oakland Unified School District (Oakland Unified) student, who was describing her experience completing a performance assessment called the graduate capstone. Performance assessments encompass a wide variety of activities, all of which require students to show what they know, rather than selecting answers from predetermined options on a multiple-choice test. For the graduate capstone, Oakland Unified seniors conduct original research, write a paper based on the findings, and reflect upon their learning process. Students then present their research and analysis to a panel of judges and an audience of peers and community members.

Oakland Unified built its graduate capstone work on an existing, though loosely defined, district graduation requirement called the senior project. All Oakland Unified graduates are required to complete this senior project, but students who complete a graduate capstone to fulfill this requirement experience two key differences. First, their teachers assess their work using shared rubrics grounded in a districtwide vision for an Oakland Unified graduate. Second, their teachers attend an optional professional learning series provided by the central office that aims to support instructional improvement and align teachers' expectations for high-quality student work. The number of teachers who elect to participate in the graduate capstone has grown since it was introduced in 2015. Around 15 teachers participated when it was introduced, and by 2018, more than 30 were participating.

The graduate capstone approach is grounded in research on how performance assessments can reliably assess student learning and also help students and educators strive for meaningful learning goals. Recent reviews of the literature show that well-designed performance assessments provide the opportunity for students to demonstrate readiness through a wide range of activities and under conditions that mirror those that students will face in their work beyond secondary school. Further, these reviews demonstrate that performance assessments can measure outcomes for students of different racial and ethnic groups. Performance assessments, therefore, can have implications for curriculum, instruction, and school design.

This report is part of a series of three case studies examining the key district-, school-, and classroom-level conditions necessary to support high-quality performance assessment practices. All three districts actively participate in the California Performance Assessment Collaborative (CPAC), a community of educators, researchers, and technical assistance providers who are working to study and advance the use of performance assessments throughout the state. A cross-case study that accompanies this report provides insights across all three case study districts, as well as recommendations for district policymakers interested in implementing well-designed performance assessments within their own context.

The Oakland Unified case study draws on data from a range of sources, including documents, district administrative data, interviews with a range of personnel at the district and school levels, focus groups with teachers and students, observations of student performance assessments, and

observations of professional learning opportunities for teachers. The study is not an evaluation of Oakland Unified as a whole or of the success of the graduate capstone initiative within the district. Instead, it provides an in-depth description of how Oakland Unified has worked to advance districtwide implementation of the graduate capstone.

Our data analysis identified the following conditions as key to Oakland Unified’s graduate capstone practices:

- Supportive policy and practice environment
- Teacher-centered, opt-in professional learning
- Strong teacher leadership
- Instructional leadership that personalizes students’ learning experiences

Further, data from student and teacher interviews and focus groups show that:

- access to deeper learning opportunities helped prepare students to complete rigorous research and increased both their social-emotional and communication skills; and
- the graduate capstone process supported teacher collaboration and instructional alignment within and across grade levels.

Based on these findings related to system supports and perceived outcomes, we identify five emerging implications of Oakland Unified’s performance assessment practices for student learning and teacher practice:

- **Districts can establish a strong and shared vision for why performance assessments matter.** Establishing a strong vision for why performance assessments like the graduate capstone matter, and what learning outcomes students should achieve, can be particularly beneficial to teachers. In Oakland Unified, the Linked Learning Office led the effort to establish this shared vision and reinforced it through district-led professional learning sessions. These sessions emphasized the graduate capstone as both a district priority and a cumulative experience of schooling, rather than just a 12th-grade project. This helped teachers to develop a shared understanding of the desired learning outcomes for graduating students.
- **Teachers and schools need supports to implement the vision.** These supports can include professional learning opportunities, on-site coaching, additional staff time, and supportive policies at the site level. To implement the graduate capstone well, the teachers and staff at the sites we studied devoted substantial time to mentoring students. The administrators at these schools also directed resources toward the effort, such as site-level professional learning opportunities, shifts in master schedules to accommodate common planning time for teachers, and staff time to support the work—including the creation of the position of a graduate capstone teacher or coordinator. In turn, the central office provided supports to schools, including district-led professional learning opportunities and shared rubrics. Taken collectively, the data show that implementing rigorous performance assessments in districts requires support for both teachers and schools.

- **Gradually cultivating buy-in can generate strong support for this work among early adopters.** Oakland Unified has built the graduate capstone through an opt-in approach to professional learning that leverages teacher leadership. This approach has garnered buy-in for the graduate capstone through word of mouth among teachers who encourage their colleagues to attend the district-led professional learning opportunities and adopt the district rubrics. This approach has thus far generated authentic and sustained buy-in among participating teachers. Participation has grown at different rates throughout the graduate capstone’s implementation, especially as the district has messaged a number of competing priorities to teachers and site leaders. Districts implementing similar approaches should recognize that an opt-in approach may be useful when deepening implementation among a set of willing teacher leaders, as it has been in Oakland Unified, and that the district may decide to implement additional approaches to adoption if it wants to scale the initiative more broadly.
- **Districts can allow sufficient flexibility for schools to make the work their own.** Site-level instructional leaders (i.e., principals, instructional coaches, and teacher leaders) in Oakland Unified were instrumental in establishing the graduate capstone. These individuals owned the work by directing efforts to improve implementation at their school sites. In doing so, they held the logistical and conceptual knowledge for the graduate capstone, while driving innovation and coordinating supports that were responsive to the needs of their student population. Central office staff supported this work by reinforcing a shared vision for student success through the district graduate profile and common rubrics. They recognized that a focus on compliance distracted from the ultimate goal of driving instructional improvement. They also acknowledged the professionalism and expertise of instructional leaders by allowing for flexible implementation while maintaining common parameters for quality.
- **Participating in performance assessments can shift teacher practice when effective supports are in place.** Engaging with a high-quality graduate capstone can make student learning visible, which can illuminate ways to improve teaching practice. Coupling this visible learning with supports such as collaborative time and professional learning can shift teaching practice. Oakland Unified educators felt that participating in the graduate capstone helped them align instruction to a shared vision of long-term student outcomes and plan interdisciplinary learning activities that build on one another. Teachers also reflected that the graduate capstone supports have helped them to provide a rigorous, coherent learning experience for students, as well as innovative teaching practices that are responsive to students’ needs.

Taken together, these practices in Oakland represent a shift in assessment, teaching, and learning from more traditional teacher-directed activities in autonomous classrooms toward collaboration and shared responsibility with colleagues, as well as with students themselves.

Introduction

The goal for an Oakland Unified School District (Oakland Unified) graduate is to be “college, career, and community ready” and able to collaborate with teammates, creatively solve problems, and think critically.¹ To help each graduating senior reach this goal, Oakland Unified uses performance assessments, a hands-on approach to supporting and assessing student learning that can range from essays and open-ended problems on tests to classroom-based projects. In Oakland Unified, teachers and district leaders collaboratively built a performance assessment called the graduate capstone—a yearlong original research project and presentation. This performance assessment is the result of iterative development within the district that stems from Oakland Unified’s move toward increasingly student-centered learning practices in the late 2000s. Currently, Oakland Unified supports the graduate capstone through district-led professional learning opportunities that are optional for teachers and are grounded in student learning outcomes that are established at the district level. These professional learning opportunities also encourage teacher leadership and differentiated implementation in participating schools.

Oakland Unified’s approach is grounded in research on how performance assessments not only reliably assess student learning, but also help students and educators strive for meaningful learning goals.² A substantial body of research suggests that well-designed performance assessments can provide an opportunity for students to demonstrate their readiness to progress in their education under conditions that mirror those that students will face in their work beyond secondary school.³ Oakland Unified’s performance assessment emphasizes teaching and assessing real-world, relevant, and transferable skills that students will need to employ after high school, which is aligned to the research findings on high-quality assessment.⁴ Further, the research suggests that performance assessments can reliably measure learning outcomes for individual students and trends in outcomes for different student racial/ethnic groups.⁵ This style of assessment does so while also informing shifts in curriculum, instruction, and school design toward student-centered learning practices and greater vertical alignment of curriculum, as well as continuous improvement.⁶

Unlike many pencil-and-paper tests, a performance assessment like Oakland Unified’s graduate capstone provides students with opportunities to demonstrate complex thinking by conducting original research, writing a paper based on the findings, and reflecting upon the learning process. Students then communicate this research and analysis in a well-rehearsed presentation to a panel of judges and an audience of peers and community members. The graduate capstone process can both enhance student learning and support teachers in understanding where to address instructional gaps for future student cohorts. The graduate capstone in Oakland Unified is also designed to assess the depth of students’ knowledge of a variety of skills that indicate readiness to move on to the next step in their schooling or career and to provide students with access to real-time feedback that can support their learning.

In its work on the graduate capstone, Oakland Unified draws on the support of a statewide community of practice, the California Performance Assessment Collaborative (CPAC). Launched in 2016 in response to the suspension of the standardized California High School Exit Exam, CPAC has brought together more than 300 educators, technical assistance partners, researchers, and funders to learn with and from each other about implementing well-designed performance assessments

in schools and districts throughout California. As of May 2019, the CPAC network had engaged 68 schools, 6 school districts, 6 school networks, and 5 technical assistance partners throughout the state. Altogether, this group represents thousands of California students.

This report is part of a series of three case studies of districts participating in CPAC. The study examines the key district-, school-, and classroom-level conditions necessary to support high-quality performance assessment practices. The other two cases focus on Pasadena Unified School District and Los Angeles Unified School District. Our research team also analyzed data across the three cases in the accompanying cross-case report, *Using Performance Assessments to Support Student Learning: How District Initiatives Can Make a Difference*.⁷ Individual research teams collaborated on the design of each district case study, as well as on the broader cross-case study. The case study draws on interviews, focus groups, and observations. The Oakland Unified research team visited three schools during the course of this study, which together represented a range of experience with implementing the graduate capstone. The study is not an evaluation of Oakland Unified as a whole or of the success of the initiative within the district. Instead, the study provides an in-depth description of how Oakland Unified has attempted to advance districtwide implementation of the graduate capstone. (See Appendix A for more information on the research methodology.)

This report begins with a description of the district context and a brief history of how the graduate capstone became a key element of Oakland Unified's vision of a high school graduate. It then describes the components that define Oakland Unified's graduate capstone practices and key conditions supporting that system. Next, we explore participants' perceptions of student and teacher outcomes based on one-on-one interviews and focus groups. Based on these findings related to system supports and perceived outcomes, we conclude by identifying some of the emerging implications of Oakland Unified's performance assessment practices for student learning and teacher practice.

The cross-case study that is related to this report provides insights across all three case study districts, as well as recommendations for district policymakers interested in implementing well-designed performance assessments within their own context.⁸

District Context for Performance Assessments

The graduate capstone in Oakland Unified is the result of district initiatives that began with an initial push from community organizers in the early 2000s to move Oakland Unified toward increasingly student-centered, community-based learning practices. The work persisted over the years despite a variety of structural hurdles, such as changes in leadership and governance.⁹ The resulting shifts in educational practice have been iterative in nature due to ongoing feedback from the Oakland Unified community and have led to the current performance assessment work. The work continues within a broader landscape of changes in leadership, funding challenges, collective bargaining negotiations, and many other factors that influence the implementation of any district program. This study addresses these broader issues only to the extent that they influence implementation of the performance assessment initiative itself.

About Oakland Unified School District

Like many urban districts, Oakland Unified serves predominantly students of color, many of whom are from low-income families. Oakland Unified houses 123 schools and slightly over 50,000 students in Oakland, CA.¹⁰ The district's student population is majority Latino/a (46%) and African American (24%), and students from low-income families comprise 74% of the student population.¹¹ (See Table 1.) Though Oakland's demographics have shifted toward greater wealth and more White residents with rising housing prices in the San Francisco Bay Area, Oakland Unified continues to serve a higher proportion of students of color and students from low-income families than the state average.¹² Forty-eight percent of the district's teachers are White, with African American teachers as the next-largest demographic group (21%).¹³ Standardized test scores in both math and English language arts (ELA) are lower than the statewide average,¹⁴ as is the district graduation rate of 72%, compared to the state's graduation rate of 88%, although the district's graduation rate increased by 4% from 2017 to 2018¹⁵ and by 13% over the past 8 years.¹⁶ Oakland Unified's graduation rate for socioeconomically disadvantaged students is closer to the graduation rate for these students statewide.¹⁷

Table 1
Oakland Unified School District and California, at a Glance (2018–19)

	Oakland Unified School District	Statewide
Student Enrollment	50,202	6,186,278
Schools	123	10,521
Race/Ethnicity	<ul style="list-style-type: none"> • 46% Latino/a • 24% African American • 14% Asian, Filipino/a, or Pacific Islander • 10% White • 6% Other or Not Reported 	<ul style="list-style-type: none"> • 55% Latino/a • 23% White • 12% Asian, Filipino/a, or Pacific Islander • 5% African American • 5% Other or Not Reported
Students From Low-Income Families^a	74%	61%
English Learners^b	31%	19%
Students With Disabilities	12%	13%
4-Year Adjusted Cohort High School Graduation Rate	72%	88%
11th-Grade Smarter Balanced Assessment Performance (non-charter students)	<ul style="list-style-type: none"> • 30% proficient for English language arts • 13% proficient for mathematics 	<ul style="list-style-type: none"> • 58% proficient for English language arts • 33% proficient for mathematics
Graduates Meeting A-G Course Requirements for UC/CSU Admission	50%	50%

^a Percentage of students who were classified by the California Department of Education as “socioeconomically disadvantaged,” meaning that they were eligible for free or reduced-price meals or had parents or guardians who did not receive a high school diploma.

^b Does not include English learners who have been reclassified as “fluent English proficient.”

Notes: For high school–level data only, we excluded charter schools (and students enrolled in charter schools) because the district performance assessment initiatives do not include charter schools. We included students enrolled in both charter and non-charter schools when reporting overall district demographics.

Data source: California Department of Education, DataQuest, 2019.

The Development of Student-Centered, Authentic Learning

Oakland Unified has long included performance assessments in its curriculum, although its approach has evolved over time. It began with Oakland Unified’s small schools movement, a student-centered learning model within Oakland Unified schools, and the establishment of a performance assessment–based graduation requirement called the senior project, which later became the graduate capstone (described in greater detail throughout this case). The district subsequently implemented Linked Learning, a cohort-based, career and technical

education–embedded, and hands-on approach to high school education, which included the creation of a graduate profile that describes what the district believes graduates should know and be ready to demonstrate at and after graduation.

Small schools

Oakland Unified began emphasizing performance assessments with its implementation of small schools in the late 1990s.¹⁸ The small schools movement was led by community-based organizers who were deeply concerned by systemic inequities within the district.¹⁹ Organizers hoped that smaller learning environments would support relationship-building between teachers and students, encourage authentic learning, and increase motivation for students to graduate armed with tangible skills.²⁰ In 1984, the California State Assembly had expanded a successful pilot program called California Partnership Academies, which use a career academy model featuring themed small learning communities (SLCs) that are housed within larger schools.²¹ In 1999, when Oakland Unified’s dropout rate was 33%, compared with 10% statewide, local community organizations in Oakland leveraged this statewide California Partnership Academies movement to advocate for Oakland Unified to create small schools and SLCs.²²

Oakland Unified passed the New Small Autonomous Schools policy in 2000, which stipulated that the district would create 10 new small schools in 3 years.²³ Connecting academic subjects, career themes, and student readiness proved to be a lever for student success, which bolstered community support.²⁴ This helped to move Oakland Unified priorities further toward the current district mission of “serving the whole child, eliminating inequity, and providing each child with excellent teachers.”²⁵ Educating the whole child and implementing student-centered learning practices also required that schools broaden their assessment systems to include methods that allow students to actively demonstrate their knowledge and skills.

Senior project graduation requirement

To help deliver on the district’s mission, Oakland Unified adopted the senior project as a graduation requirement in 2005. The senior project, which provided the foundation for the graduate capstone, was a district mandate designed as a vehicle for students to demonstrate “achievement of schoolwide learning goals and designated key content standards” through a “serious research project or exhibition.”²⁶ The district did not issue any guidelines that delineated what constituted a serious research project or exhibition. Although educators at individual school sites recognized the potential for a well-implemented senior project to prepare students for college and career, different schools required varying levels of rigor in both process and final product. Language and expectations surrounding the senior project remained decentralized for nearly 10 years, leaving teachers and students with little guidance about what to do, until an opportunity to better codify expectations for SLCs and graduation requirements arose through Oakland Unified’s participation in the Linked Learning district initiative.²⁷

The Linked Learning district initiative

Linked Learning is an approach to instruction that emphasizes relevant, project-based learning as well as performance assessments. Linked Learning originally piloted in 2009 with nine California districts and has since expanded to more than 500 schools across 100 school districts in California.²⁸ Linked Learning is designed to prepare college- and career-ready high school graduates through

a high-quality program of study that integrates a college preparatory curriculum with a rigorous career technical education sequence and work-based learning opportunities. When fully developed, a Linked Learning pathway provides a hands-on curriculum that allows students to demonstrate breadth, depth, and application of learned skills. The “tasks and projects in Linked Learning pathways are often multidisciplinary and problem-based, and connections to the real world aim to be authentic and transparent.”²⁹ Linked Learning is an effort to combat a previously hierarchical approach to career and technical education in which students prepared for either college or vocational training—but not both.

Oakland Unified piloted the Linked Learning approach in 2010 and began building Linked Learning pathways, which soon became a district priority.³⁰ Linked Learning pathways offered schools the opportunity to expand upon the existing approach to SLCs by adding a career theme—such as Health Science and Medical Technology or Arts, Media, and Entertainment—that aligned with a college preparatory curriculum, a sequence of career and technical education courses, and work-based learning to facilitate students’ engagement in school and ability to complete high school.³¹ The California Center for College and Career (now ConnectED: The National Center for College and Career) and the James Irvine Foundation supported Oakland Unified’s Linked Learning implementation until June 2015.³²

Oakland Unified’s 2010 pilot began with four pathways³³ and, by the 2018–19 school year, had grown to 28 pathways in 14 high schools. In 2018–19, 87% of Oakland Unified sophomores were enrolled in a pathway or SLC, with a district goal of enrolling 80% of all high school students and 100% of 10th-grade students in a Linked Learning pathway in the 2020–21 school year.³⁴

Oakland Unified passed a parcel tax called Measure N in 2014, which funds Linked Learning implementation at the site level. In 2016, the district reorganized its central office so that the high school and Linked Learning offices were one and the same. Both Measure N and the central office reorganization signal a commitment to Linked Learning implementation throughout the district.³⁵

The graduate profile

The expansion of Linked Learning provided a natural opportunity to strengthen the senior project graduation requirement through a central feature of Linked Learning: the graduate profile. Linked Learning aligns its instruction, which features performance assessments and project-based learning, to a shared vision of student readiness called the graduate profile. In addition to each pathway’s individual graduate profile, Oakland Unified chose to define a districtwide graduate profile, in an effort to create a common understanding of what the district’s graduates should know and be able to do.

Once Oakland Unified committed to implementing Linked Learning districtwide, members of the Linked Learning Office convened teachers to discuss and determine a graduate profile for the entire district.³⁶ This team featured a selection of members from different school contexts, including schools of varying sizes and schools educating historically underserved students. The resulting district graduate profile highlighted academic proficiency, civic engagement, and communication as among the essential skills for a prepared graduate. (See Figure 1.) The graduate profile is one of several guidelines created by the Oakland Unified Linked Learning Office, and it is available to all educators throughout the district. The graduate profile is intended to serve as a north star, orienting curricula and performance assessments toward this idea of a “college-, career-, and community-ready” Oakland Unified graduate.³⁷

Figure 1

Oakland Unified School District's Original Graduate Profile

Oakland Unified School District Graduate Profile

"Career is the goal - Education is the path"



Source: Meeting slides, Oakland Unified School District professional learning session, 09/11/18.

The graduate capstone

In 2013, shortly after Oakland Unified established its graduate profile, the Linked Learning Office convened a group of educators to envision the senior project graduation requirement to align with the district graduate profile. This initiative reframed the senior project, referring to it instead as the graduate capstone. This group used the vision of what an Oakland Unified graduate should know and be able to do—as described in Figure 1—to determine the competencies that a senior project, called the graduate capstone, and its related rubric should assess to determine students' eligibility for graduation. This initially resulted in a sustained research project with two common district rubrics—one for writing and one for oral presentations—for teachers to use to assess Oakland Unified seniors on their projects. In 2018, the district shared a third rubric—field research—with educators implementing the graduate capstone. The field research rubric aligns to the “community-ready” aspect of the graduate profile. Educators typically use it to assess the community-based and often civically engaged research that students do as part of the graduate capstone. The graduate capstone is described in further detail throughout the rest of this case study.

An Opt-In Approach to District Implementation

According to the original 2005 board-approved policy, all Oakland Unified students must complete a senior project to graduate. However, teachers are not required to use the graduate capstone rubrics. Rather, the Linked Learning Office in the district's central office encourages teachers to use them and offers support through professional learning sessions, which it has provided since 2015. Schools that implement the graduate capstone use the districtwide graduate capstone rubrics as the shared standard against which they assess students' graduate capstone work. The professional learning around using the rubric and supporting aligned instruction across the district has evolved over time.

During the summer of 2015, before the first year of implementation, a small number of teachers chose to attend professional learning sessions on the emerging graduate capstone. These teachers led the implementation of much of this work, which began with using two rubrics developed through a partnership between the Stanford Center for Assessment, Learning and Equity (SCALE) and Envision Learning Partners.³⁸ In calibration exercises during the professional learning sessions, teachers experienced the scoring process and, during debriefing discussions with peers, connected that work to critical learning outcomes. These teachers provided feedback on the process to members of the Linked Learning Office, who in turn used this feedback and their own observations of the professional learning series to finalize the district rubrics in the 2015–16 school year.

To generate genuine buy-in among teachers, members of the Linked Learning Office carefully messaged this rubric districtwide as something strongly encouraged rather than mandated. As an incentive to implement, the team shared the positive feedback from teachers who participated in the calibration sessions with other teachers throughout the district.

This approach paid off. Over the past 3 years, participating teachers have become advocates for these rubrics and brought additional colleagues on board. Teacher participation in professional learning sessions continues to grow each year, with teachers from 65% of Linked Learning pathways having attended the 2018–19 sessions, an increase of nearly 10% from the previous year.³⁹ Strong attendance and an increasing number of participants, along with positive teacher feedback, all indicate that the learning sessions are valuable to those attending and support graduate capstone implementation.

Teacher participation in professional learning sessions continues to grow each year, with teachers from 65% of Linked Learning pathways having attended the 2018–19 sessions, an increase of nearly 10% from the previous year.

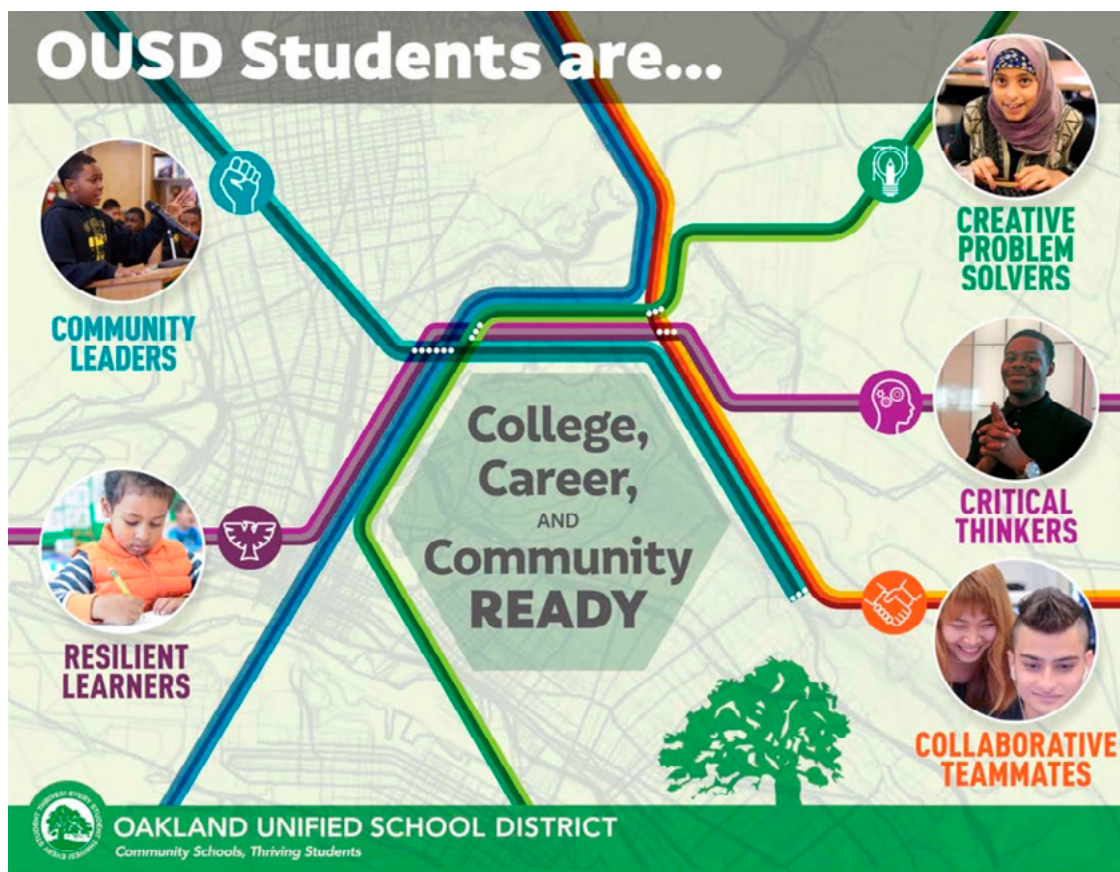
Oakland Unified continues to work to engage all students in the aligned, coherent graduate capstone experience, and central office staff support all Linked Learning pathways in choosing to adopt this policy. During the 2018–19 school year, 1,186 Oakland Unified 12th-graders—roughly 66% of the 1,800 seniors enrolled in a district Linked Learning pathway—participated in the process.⁴⁰ The number of students experiencing both Linked Learning and the graduate capstone is expected to increase in the coming years as the district grows its number of Linked Learning pathways and invites more educators to participate in implementation. Students who did not

complete the graduate capstone still completed a senior project as part of their learning experience; however, 1,567 seniors in the district’s non-charter high schools were not evaluated using the districtwide rubrics, including those who were not enrolled in a Linked Learning pathway.⁴¹

Reinvigorating the Graduate Profile to Align Instruction

In 2019, the district updated the graduate profile and, in so doing, attempted to reinvigorate its use throughout the district. The new graduate profile emerged from collaboration between members of the district and ConnectED: The National Center for College and Career, and it was informed by the community. The revised profile now describes an Oakland Unified graduate as a community leader, creative problem solver, critical thinker, collaborative teammate, and resilient learner. (See Figure 2.)

Figure 2
The Updated Oakland Unified School District Graduate Profile



Source: Oakland Unified School District Linked Learning Office.

In fall 2019, this graduate profile was reviewed and then approved by the Oakland Unified Board of Education as part of the district’s instructional focus plan.⁴² This update may also influence the district graduate capstone rubrics, although there were no plans to change the rubrics in the 2019–20 school year. The Oakland Unified Linked Learning team hoped that the new benchmarks included in this iteration would incentivize implementation.

How the Graduate Capstone Works

Empowered to Make Change Through the Graduate Capstone

Senior high school student Elena⁴⁵ stands at the front of the room, dressed professionally and emanating an impressive calm. She is about to present the findings of her graduate capstone project, a rigorous, yearlong investigation into teen tobacco use. The project was inspired by her experience with tobacco marketing after she moved to the United States 4 years ago. Four people walk into the library, take seats alongside the facilitator, and introduce themselves. One is a teacher, and the other three are current students or recent high school graduates.

Elena introduces her research question with visuals and data: Four years ago, she moved to Oakland from Latin America and faced a new community with new problems. One of the biggest problems she observed: flavored-tobacco products everywhere that were affecting the health of her new community. Elena describes her summer internship with a local tobacco control program, which prompted her interest in researching this issue in greater depth and developing a potential solution. She presents her thesis for the research project, explaining, “Tobacco companies intentionally target teens with their marketing. This means teens are more likely to start smoking [early], leading to an overall less healthy community.” She points out that the companies’ goal is to make money, and so they target young people, using “kid-friendly flavors” to hook them early on nicotine. Her proposed solution? Ban the sale of tobacco products at grocery stores. She notes that these grocery stores are often close to schools, making the products easily accessible to young people. To support her thesis, Elena presents data from a reputable local news source, as well as visuals of a smoker’s lung, to highlight the negative impacts of e-cigarettes on users’ health.

Elena also describes the original research that she conducted, an action research project in which she surveyed 75 students from her high school to learn how frequently they are exposed to tobacco products and marketing. As part of her graduate capstone, she wrote a paper that shared her research question, research process, and findings, and made a presentation of the findings to a 9th-grade class to promote awareness of e-cigarette marketing and the negative health consequences of smoking.

Finally, as she wraps up the presentation to the panelists, she reflects on the scope of this work with pride, saying, “At the beginning of the year, I thought it would be impossible because my first language is not English. At the start, I was scared ... of how it would be and of asking for help. Now I’m here. Two of the skills I have improved through this process [are] my public speaking skills and my writing skills.” She began the year believing the graduate capstone project to be an impossible feat, and yet she emerged with the tools to be a strong, skilled advocate for her community. Because Elena is a recent English learner, the high level of writing, presentation, and research that the graduate capstone requires felt initially insurmountable, and yet she successfully completed the project.

The lights in the library flicker on and Elena stands poised, ready to respond to the panelists’ questions with confidence. The facilitator, an English teacher and 12th-grade advisor, begins by asking Elena, “What would you say to people who say that you should be able to buy whatever you want?” The question is tricky, posing the counterargument that free will is more important than protecting people from unhealthy choices, but Elena reframes the issue. She responds confidently,

saying, “[Teens] are not buying because they want to, but because they have to. Tobacco companies are getting to us by selling in grocery stores. I wanted to try [flavored tobacco products] because they look like candy. People say they have free will, but they don’t have it.... It’s suicidal, consuming products that will make them die in the future.”

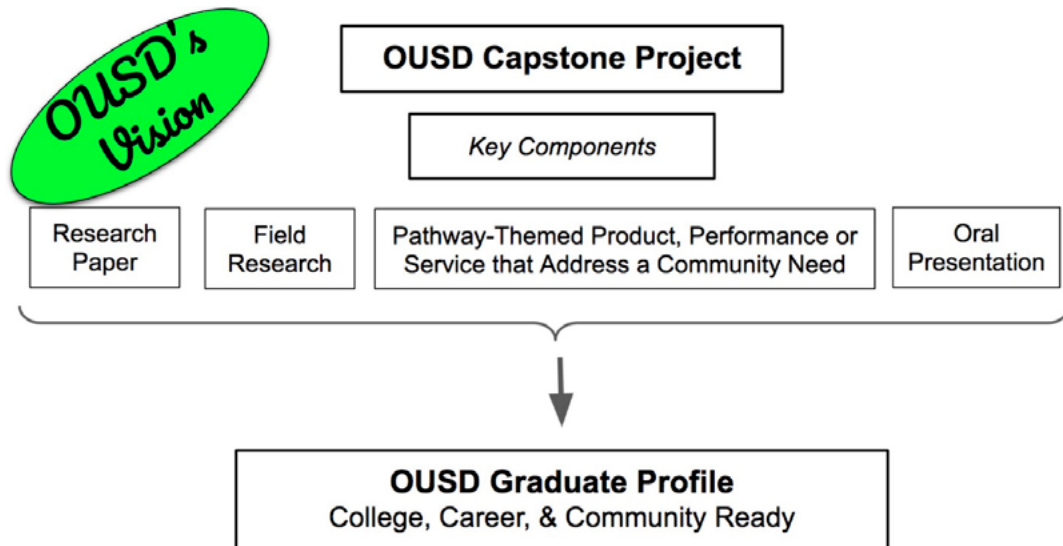
Elena uses this opportunity to reiterate the argument she honed throughout her year of research: Tobacco marketing targets teens and children who are too young to be discerning consumers. These companies are not selling tobacco; they are selling addiction, and they are targeting students like her.

Once Elena leaves, the four panelists and facilitator discuss the strength of her presentation, using the districtwide rubric domains as a guide. They reflect on her poise in responding to questions, highlighting her ability to respond thoughtfully while off-script. One of the panelists shares that it was his 9th-grade class that heard Elena’s presentation and that his students were impressed and informed by her passionate presentation. Finally, the panelists reflect on her response to the question about free consumer choice. Some panelists enjoyed her reframing of the issue, while others wanted her to respond more directly to the question; the whole panel, however, agrees that she is a knowledgeable, passionate advocate for this issue. She will graduate, continue to grow her impressive skill set, and engage deeply with her community and the world beyond.

This is the kind of graduate that Oakland Unified works to create through the graduate capstone process: a student who can communicate complicated concepts deftly, using credible evidence and critical thinking to support an argument. Performance assessments such as this emphasize students’ higher-order thinking skills, support the development of students’ deep content knowledge, and drive high-quality instruction that supports 21st-century learning.⁴⁴ Oakland Unified’s graduate capstone project asks students to study authentic challenges in their communities, identify and analyze contributing factors, and present that information to invested stakeholders. Throughout this process, students engage deeply with their topics; challenge their expectations for themselves; and emerge college, career, and community ready.⁴⁵

As just described, the graduate capstone gives seniors the opportunity to demonstrate what they have learned and the skills they have developed throughout their time in Oakland Unified. To complete the graduate capstone, Oakland Unified seniors engage in four central steps. They (1) define a research question, (2) conduct literary and/or field research, (3) write a formal research paper, and (4) present their process and findings. (See Figure 3.) In addition, in the 2018–19 school year, a subset of seniors was asked to complete a project for their graduate capstone that was tailored to their Linked Learning pathway theme (such as Engineering and Architecture or Energy, Environment, and Utilities) and that addressed a community need. One school also required its students to collaborate in small groups to create a mobile application that addressed a community need. The Linked Learning Office hopes that this project can support students’ readiness to be active in their communities, in addition to preparing students for college and career, which is aligned to both the district’s vision and the districtwide graduate profile.

Figure 3
Oakland Unified School District Vision for the Graduate Capstone Project



Source: Meeting slides, Oakland Unified professional learning session, 09/11/18.

The research and writing tasks and associated instruction are designed to provide students with a rigorous and college-relevant learning experience. The graduate capstone is structured to give students the opportunity to learn and apply real-world skills that are ultimately tied back to the graduate profile, a vision of readiness for Oakland Unified students. The graduate capstone process can emphasize teaching and assessing real-world, relevant, and transferable skills that students will need to employ after high school.

Oakland Unified freshmen enter high school with varying levels of familiarity with research skills, such as asking open-ended and multipart questions that lead to an in-depth research product, gathering survey and interview data, and assessing the credibility of sources. Students have likely written multipage papers before their senior year, but few have faced the challenges of a long-term research and writing process of this length, scope, and rigor. The graduate capstone oral defense, which combines rehearsed and unrehearsed presentation skills, is the most intensive presentation that most students will give in their high school careers. Given that students' writing and presenting skills can vary significantly within each classroom, teachers must offer differentiated instruction to prepare students to deliver on the many rigorous components of their graduate capstone by the spring of their senior year. Each school has flexibility in how it adapts the graduate capstone elements to fit its context.

Defining a Research Question

Students and teachers collaborate to generate research questions that are both specific enough that students can tackle them within a single school year and broad enough to support sustained inquiry throughout a full school year. Often, students' research questions are tied to issues within their community, topics aligned with their Linked Learning pathway themes, or concepts they are exposed to in internships. Students may start with a question that is either too specific or too broad, and then they refine their idea through a combination of teacher and peer feedback.

Schools take different approaches to support their students in defining a research question that has the appropriate scope and relevance. Some schools ask students to begin brainstorming at the end of their junior year, providing a list of possible topics and assigning a smaller paper to generate a body of research that students can build on the following year. One Oakland Unified high school used additional grant funding to pilot a junior retreat in the spring, during which juniors heard from seniors about the process, generated ideas for potential topics through various activities, and workshopped preliminary research questions. It is also common for students to draft a letter of intent at the beginning of their senior year in which they outline a question or series of questions to guide their research. Their teachers and peers then provide feedback. Many graduate capstone teachers prioritize providing feedback on students' research questions as early in the process as possible to guide students to conduct deep and engaging research.

Conducting Research

The research element of the paper is similarly adaptable to context. Ideally, students are working toward integrating “*extensive* and *comprehensive* evidence from various types of sources” into their papers, and they must both synthesize the ideas from these sources and indicate the credibility of the research they have found.⁴⁶

Teachers scaffold students' understanding of what constitutes extensive and comprehensive evidence in a variety of ways. Most teachers begin by asking students to find a certain number of credible news articles and academic sources on their topic of choice. From there, students extend their research by conducting interviews or focus groups, observing or participating in community events, distributing surveys, or engaging with other field research that fits their topic. This process exposes some students to challenges with collecting data that they will continue to encounter in their undergraduate and, potentially, their graduate school experiences, such as securing confidentiality agreements and verifying personal accounts.

Connecting students with community members to support authentic research is a key element of the graduate capstone. Teachers encourage students to reach out to multiple experts for interviews. They also support students in generating questions, probing for relevant resources, and writing thank-you notes afterward. Throughout the research process, students engage with a variety of sources and stakeholders and thereby practice analyzing complex issues from multiple perspectives. Students also investigate authentic challenges facing their communities, and because of that immediate relevance to the students, they are motivated to find workable solutions that can involve taking civic action. One teacher explained the value of this exposure to the research process as follows:

[The graduate capstone] is a learning experience [in which students] use the real world, use their own resources instead of being given a list [of resources], because when you go into the real world and you need help with something, sometimes there's a list of resources, but sometimes you just have to find someone.

Both Linked Learning Office leaders and graduate capstone teachers said that students continue to require increased support in identifying credible sources and examining issues from multiple perspectives.

Writing the Research Paper

The research paper component of the graduate capstone allows students to share what they have learned about their topic; it also gives them an opportunity to engage with sustained writing. The expectations for the research paper vary across school sites, with some requiring students to write two short papers on their research topic and others just one long research paper. The Linked Learning Office provides advice on the structure of the research paper through a sample outline that is between 8 and 10 pages; however, there is no formally mandated page count or formal structure. This allows teachers to make the process responsive to student needs, such as the need to develop technical writing skills. Teachers use both the writing rubric domains and student needs to guide writing instruction for the research paper.

At one high school in this study, teachers addressed the writing process by breaking the written product into two papers: a problem paper and a solution paper. The teacher who initiated this change said it was one of her “proudest moments” and that it helped her students organize their thoughts and dive deeper into both aspects of their topic. In addition, she and her teaching partners scaffolded the papers by having students keep a process journal, which they framed as “the building blocks of their [problem] paper,” and by outlining a theory of change, which helped students organize their thoughts for their solution paper. This teaching team capitalized on Oakland Unified’s flexibility in graduate capstone implementation to mold the experience in response to their students’ needs, while still assessing students using the district writing rubric and holding them to high standards.

Other teachers required that students write a single, longer paper that integrated both problem and solution. Their students reported that they found the single, longer paper exceptionally challenging both because it was the first time they had been required to write this type of paper and because the assignments leading up to the paper coincided with college application deadlines. Their students also reported feeling a great sense of accomplishment in finishing the longer paper and believed that this experience prepared them for college-level work.

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The graduate capstone writing process takes many months, during which students write and receive feedback on multiple drafts of each section of the paper as well as the final paper as a whole. The writing component is time-consuming, but it exposes students to a complex writing process that prepares them to write longer, more in-depth pieces in college and in future careers.

Giving an Oral Presentation

The oral presentation is the culminating event in the graduate capstone experience and serves as an opportunity for students to communicate their research, process, and findings to an authentic audience. Students present to a panel of judges consisting of teachers and community members, and sometimes their peers, while using a multimedia component (such as a PowerPoint) to enhance their presentation. Some schools provide a more formal atmosphere with targeted questions, minimal back-and-forth, and a silent recording of scores. Others allow for a lively back-and-forth

conversation, with open-ended questions and an oral discussion of scores. Students spend, on average, 15 minutes on their formal presentation, often followed by a Q&A session. Some pathways choose to provide immediate, in-person feedback, whereas others provide written feedback at a later date. The latter can be more prevalent in larger pathways, in which there are more scheduling constraints and more students to assess, and therefore less time to provide in-person feedback.

Panelist selection for graduate capstone presentations can vary. Some judging panels consist of two to three teachers who worked directly with the students, while others may include community members, principals or other school staff, district administrators, and even parents or peers. Although the teacher panelists, who often participate in districtwide calibration exercises, ultimately decide each student’s score, community partners and peers contribute an outside perspective that can enhance a student’s learning experience. Teachers are also able to provide opportunities for students to receive feedback and redo their presentations if the panel determines they have not met the graduation requirement.

Scoring and Feedback

Oakland Unified currently shares two central rubrics for teachers to use in assessing student learning outcomes: one geared toward written analysis and the other toward oral presentation. For Linked Learning pathways that use the district rubrics, each domain is scored moving from Emerging to Advanced in terms of students’ skill proficiencies (for examples of the rubrics, see [Appendix B](#) and [Appendix C](#)). For example, the writing rubric features seven domains, and the oral presentation rubric features eight domains.⁴⁷ (See Table 2.)

Table 2
Oakland Unified School District Graduate Capstone Rubric Domains

Research Writing	Oral Presentation
<ul style="list-style-type: none"> • Argument • Multiple Perspectives • Evidence • Analysis • Organization • Language Use • Source Citation 	<ul style="list-style-type: none"> • Argument • Multiple Perspectives • Evidence & Analysis • Organization • Language Use • Use of Digital Media • Presentation Skills • Questions and Answers

Source: 2018–19 Oakland Unified School District research writing and oral presentation rubrics, provided by the Oakland Unified School District Linked Learning Office.

Aligning expectations to a common rubric can be a lever for teachers to reflect on the rigor of their instruction, as well as on the extent to which all students have access to consistent instruction across classrooms.⁴⁸ The districtwide rubrics follow research-based best practices, consisting of a set of well-constructed tasks within specified genres and using teacher-moderated scoring processes.⁴⁹ During the 2018–19 school year, 19 of the 28 total Linked Learning pathways, slightly more than two thirds, used the two districtwide rubrics to assess their students on the graduate capstone project (while the remaining pathways defined their own expectations for scoring students on the

senior project).⁵⁰ As scoring calibration exercises with Linked Learning pathway teachers continue, the district aims to increase the consistency and reliability of teacher scoring on the rubrics within and across pathways.

All rubrics assess student readiness on a scale that moves from Emerging to Developing, then Proficient, and finally Advanced, with incremental steps along the way (Figure 4, Appendix B, and Appendix C).⁵¹ By using district-generated rubrics, Linked Learning pathways have a standard with which to align their goals—one that they can use to set student expectations throughout the year. The Linked Learning Office does not provide suggested weights for each domain; instead, schools adapt the weighting based on their curricular goals and priorities. For example, some Linked Learning pathways might choose to weight the analysis domain more heavily within the research writing rubric (Figure 4), which requires students to summarize, elaborate, and synthesize ideas based on the evidence they found. Negotiating various weights for different rubric elements allows Linked Learning pathways to both utilize a student-centered lens and integrate the rubric into their existing context, rather than relying on a top-down policy mandate to enforce implementation.

Moving forward, Oakland Unified is piloting the use of additional rubrics and has already provided a “field research” rubric to teachers. This field research rubric was created by a team of teachers at one high school and measures how well students articulate the purpose of their research, who their intended respondents are, and the quality of the questions that they ask during their research. Like the other district rubrics, the field research rubric aligns to domains derived from the graduate profile. The Linked Learning Office is developing an “action project” rubric for pathways that want to pilot a version of the graduate capstone that is aligned with an industry theme and addresses a community need, in addition to the research paper and presentation ([Appendix D](#)).

Figure 4
Oakland Unified School District Research Writing Rubric

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Argument <i>What is the evidence that the student can develop an argument?</i>	Element not yet present	<ul style="list-style-type: none"> • Has a <i>general</i> argument • Explains a <i>little</i> background and context of topic/issue • Draws <i>superficial</i> connections or conclusions 		<ul style="list-style-type: none"> • Makes an argument and <i>develops</i> it in the paper • Explains <i>some</i> background and context of topic/issue • Draws <i>general</i> or <i>broad</i> connections or conclusions 		<ul style="list-style-type: none"> • Makes a clear and <i>well developed</i> argument/thesis • Explains background and context of topic/issue • Makes <i>specific</i> connections and draws <i>meaningful</i> conclusions 		<ul style="list-style-type: none"> • Makes a clear, well developed, and <i>convincing</i> argument/thesis • <i>Thoroughly</i> explains background and context of topic/issue • Makes <i>insightful</i> connections, draws meaningful conclusions, and <i>raises important implications</i>
Multiple Perspectives <i>What is the evidence that the student considers other perspectives?</i>	Element not yet present	<ul style="list-style-type: none"> • <i>Mentions</i> questions or alternative interpretations 		<ul style="list-style-type: none"> • <i>Acknowledges and briefly responds</i> to questions or alternative interpretations when appropriate 		<ul style="list-style-type: none"> • Acknowledges and responds to questions or alternative interpretations when appropriate 		<ul style="list-style-type: none"> • Acknowledges and responds to questions or alternative interpretations <i>to explore the complexity of the topic</i> when appropriate
Evidence <i>What is the evidence that the student can support the argument?</i>	Element not yet present	<ul style="list-style-type: none"> • Refers to <i>at least one</i> piece of evidence relevant to the argument 		<ul style="list-style-type: none"> • Refers to <i>some</i> evidence relevant to argument/thesis 		<ul style="list-style-type: none"> • Refers to <i>sufficient</i> and <i>detailed</i> evidence from various types of sources, which are relevant to argument/thesis 		<ul style="list-style-type: none"> • Refers to <i>extensive</i> and <i>comprehensive</i> evidence from various types of sources, which are relevant to argument/thesis
Analysis <i>What is the evidence that the student can analyze evidence?</i>	Element not yet present	<ul style="list-style-type: none"> • <i>Restates</i> information from multiple sources • Presents a <i>few</i> sources in a way that shows consideration of relevance, credibility, or potential bias 		<ul style="list-style-type: none"> • <i>Summarizes</i> evidence from multiple sources related to the argument • Presents <i>some</i> sources in a way that shows consideration of relevance, credibility, or potential bias 		<ul style="list-style-type: none"> • <i>Elaborates on the significance</i> of evidence from multiple sources in support of the argument • Presents <i>most</i> sources in a way that shows consideration of relevance, credibility, or potential bias 		<ul style="list-style-type: none"> • Elaborates on the significance of evidence and <i>synthesizes ideas</i> from multiple sources in support of the argument • <i>Consistently</i> presents sources in a way that shows consideration of relevance, credibility, or potential bias

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Organization <i>What is the evidence that the student can organize and structure ideas for effective communication?</i>	Element not yet present	<ul style="list-style-type: none"> A few ideas are logically sequenced A few transitions are used 		<ul style="list-style-type: none"> Some ideas are logically sequenced Some transitions connect ideas 		<ul style="list-style-type: none"> Ideas are logically sequenced Transitions connect ideas 		<ul style="list-style-type: none"> Ideas are logically sequenced to <i>present a coherent whole</i> Transitions guide the reader through the <i>development of the argument</i>
Language Use <i>What is the evidence that the student can use language skillfully to communicate ideas?</i>	Element not yet present	<ul style="list-style-type: none"> Has <i>some</i> control of syntax and vocabulary Language and tone are <i>somewhat</i> appropriate to the purpose and audience Grammar, usage, and mechanics are <i>somewhat</i> accurate 		<ul style="list-style-type: none"> Has control of syntax and vocabulary Language and tone are <i>mostly</i> appropriate to the purpose and audience Grammar, usage, and mechanics are <i>mostly</i> accurate 		<ul style="list-style-type: none"> Demonstrates <i>varied</i> syntax and <i>effective</i> word choice; <i>uses rhetorical techniques</i> Language and tone are appropriate to the purpose and audience Grammar, usage, and mechanics are <i>accurate</i> 		<ul style="list-style-type: none"> Has a <i>fluent</i> style with varied syntax, <i>precise</i> word choice, and <i>skillful</i> use of rhetorical techniques Language and tone are <i>tailored</i> to the purpose and audience Grammar, usage, and mechanics are <i>free from error</i>
Cites Sources <i>What is the evidence that the student can cite sources appropriately?</i>	Element not yet present	<ul style="list-style-type: none"> A few in-text citations and/or elements of the works cited page are accurate 		<ul style="list-style-type: none"> Some in-text citations and elements of the works cited page are accurate 		<ul style="list-style-type: none"> In-text citation and works cited page are <i>mostly</i> accurate 		<ul style="list-style-type: none"> In-text citation and works cited page are <i>accurate</i>

Source: 2018–19 Oakland Unified School District Writing Rubric.

Systems of Support

The success of many new initiatives often depends on how well implementation is supported, and performance assessments are no different.⁵² Research suggests that the success of performance assessments depends on how teachers are trained, supported, and engaged, and on what structures are in place to support students.⁵⁵ Oakland Unified has a number of supports in place for both teachers and students to help improve implementation of the graduate capstone in Linked Learning pathways throughout the district. The district relies strongly on its professional learning series (a train-the-trainer model that teachers can opt in to) and the instructional supports available through site-level leadership to spread implementation among teachers in Oakland. Individual schools also have flexibility to determine support structures that will best meet the needs of their student population.

Study participants identified the structures and resources that they felt best supported graduate capstone implementation. Teachers highlighted the importance of flexibility in implementation and key instructional supports provided through both districtwide and site-level professional learning sessions. School administrators who saw the initiative as a key district priority were able to direct resources to support the graduate capstone, and instructional leaders also provided the administrators with insights into how best to support implementation. Students found individual teachers' supports helpful in adapting to the rigor of the graduate capstone requirement, including the development of key skills—such as research, writing, and communication—before students' senior year. Many of the structures that facilitated implementation were supported with funding and technical assistance from external organizations.

Teacher Supports

Professional Learning Through Productive Struggle

It is 4:00 p.m. on a Thursday afternoon in mid-November in a high school near Lake Merritt in Oakland. The air is thick with smoke from the recent wildfires, and the Manager of Performance Assessments thanks the 10 teachers (and one teacher's child) in attendance, noting his surprise that their numbers are so robust considering some schools are closed due to the smoke. The attendees begin with a brief community-building exercise, responding to the prompt, "One thing that I disagree with family/friends on is...." The prompt ties in with the professional learning theme for this year: examining issues from multiple perspectives.

The outcomes for this professional learning session are clearly identified on the board:

- Have a clear target in mind of what it looks like to effectively address multiple perspectives (grounded in student examples).
- Practice writing and thinking moves needed to effectively respond to multiple perspectives in order to explore the complexity of one's topic.
- Build a network of support to teach the graduate capstone effectively.

Participants first discuss President Barack Obama's 2008 speech on race at the National Constitution Center, titled "A More Perfect Union," identifying which elements of the speech acknowledge multiple perspectives and reflecting on how he crafted and delivered his message. The facilitator, the Manager of Performance Assessments, uses this speech as inspiration; crafting and

delivering this quality of speech, he believes, is what Oakland Unified would like every student to be able to do someday. For now, educators in this professional learning session split into three groups and assess three separate examples of essays provided to them. They use Obama’s speech as the bar for excellence. One group focuses on an essay scored as “Developing/Proficient,” i.e., the cusp of proficient. The essay is on Measure N funds that go to support Linked Learning, and the student’s work received varying scores in how effectively it addressed a counterargument. The teachers in this group are similarly split on how to score this work.

The teachers are stuck on where they should limit the counterargument in student work. One teacher shares that her school has avoided this element of the rubric in practice because they felt they were teaching students to use a straw man defensive argument, particularly when students’ topics are personal.

For example, one teacher notes that it is hard to encourage a student to investigate the counterargument in favor of gentrification when that gentrification is pushing students in Oakland Unified out of their homes. Other teachers in this group express similar frustration—their students want to grapple with authentic questions that impact their lives, and yet these questions are multilayered, complex, and hard to analyze unemotionally. The teachers all want to build their students’ critical and analytic skill sets while also helping them feel safe and supported. It is a delicate balance that they negotiate every day.

One teacher says, “We don’t have to ask them to investigate a perspective that directly opposes what they believe in. We could give them different perspectives of people who are also tied to this issue and might also invite more complexity.” Another teacher at the table notes, “Or you could also ask them to read about the issue from different sources and then evaluate the message of those sources and critique how those sources were created.”

This point leads to examples of sources and topics that this teacher has used with her students to scaffold the analysis of multiple perspectives and of multiple sources. She shares these resources, provides tips for teaching some of the resources, and encourages the table group to reach out if they have questions.

Then, they transition to the main activity: a mini-lesson on “writing moves” (ideas for how to support students with writing high-quality reports) with sentence frames that support students in asking deeper questions to make more convincing and nuanced arguments. In short, an activity developed to support the very question that the group was discussing.

This group of teachers did not reach a decision on a definitive approach to supporting students’ engagement with counterarguments. Instead, they supported one another, pushed each other to go a little further with students, and shared resources that could help to teach counterarguments in a more nuanced way. This small interaction built community, pushed teachers’ thinking, and provided a foundation on which to continue implementing a rigorous graduate capstone experience. Following this interaction, teachers then broke out into their teaching teams and shared their learning with their colleagues.

The district’s opt-in professional learning series for teachers, detailed above, is key to supporting graduate capstone implementation. Members of the Linked Learning Office guide these sessions. The professional learning series features a mix of explicit and inquiry-based instruction intended to provide teachers with a solid foundation of content while also leaving room for them to adapt their instruction to students’ needs. One instructional coach highlighted the importance of careful planning to effectively target instructional needs by explaining:

[Graduate] capstone work is not something that can be done via email or via a 30-minute download. It’s something that we need consistent professional learning around, especially at a school site or in a district like Oakland, where we do see a high level of teacher turnover.... We often need to do a little bit of repeat or at least review.

To help students complete a graduate capstone that is both rigorous and differentiated, teachers benefit from robust supports. Students may enter their senior years with different levels of exposure to research. Teachers must help them develop essential research skills, from generating a substantial research topic to synthesizing research into a formal paper. Instructional coaches in Linked Learning pathways (who are alternately called career and technical education coaches or pathway coaches) also guide teachers in appropriately supporting students with the graduate capstone. One instructional coach described the process as follows:

It takes so much time for teachers to do this well and time for teachers to be able to provide the individualized support, because even when students get to senior year, we see such a range of academic skills.... Teachers need time to be able to come together and say, “How can we, as a pathway team of teachers, wrap our arms around the students who need the most support or provide opportunities for students who might need more enrichment?”

Professional learning that models consistency

Oakland Unified’s strategy has been to provide educators with opt-in professional learning that targets specific learning needs for the graduate capstone and to compensate teachers for their time if they choose to participate. Professional learning sessions have occurred four times throughout the school year, for 2 hours each session, and for a week during the summer. The professional learning has focused on calibrating teachers’ scoring of performance assessments, which creates shared expectations of rigor among participants, and has acknowledged teachers’ time and professionalism.

The professional learning sessions are open to any teacher in the district and have been attended by teachers from a variety of content areas, including teachers who do not directly teach the graduate capstone. Teachers who attended but did not directly teach a course for the graduate capstone were often recruited by colleagues in their pathway who were involved in teaching it.

The district professional learning sessions follow a similar formula each time, beginning with introductions and norm-setting and followed by a mini-lesson led by members of the Linked Learning Office and some combination of experiential learning, often through breakout small-group activities. The session then transitions to a whole-group share-out and reflection. Each session finishes with 1 hour of common planning time, during which teaching teams from each school meet to synthesize what they have learned and plan next steps for their work. Teachers who are there without teams may use this time to connect with coaches or Linked Learning staff to synthesize information and troubleshoot perceived barriers to implementation.

For example, the district’s Manager of Performance Assessments, who coordinates the professional learning, facilitated a session at the beginning of the 2018–19 school year aimed at scaffolding students’ ability to identify and use credible sources. The session opened with a demonstration mini-lesson before teachers participated in small-group discussion on credibility, bias, and academic expectations.

Both small-group and whole-group discussions were lively, with one teacher noting that “bias isn’t bad; it just has to be known.” She explained that this understanding is important in order for students to assess a source’s credibility and decide if and how to integrate information from biased sources into their papers. Through this discussion, teachers fine-tuned their expectations for sources and how to evaluate students’ use of these sources in an academic context. A number of teachers found the activities from the session valuable enough to adapt in their classrooms.

Following the mini-lesson and discussion, teaching teams convened for an hour. In this time, they planned how to scaffold students’ source-evaluation skills; conferred on individual students’ needs; and collaborated on skill-building techniques, cross-subject engagement, and curricular expectations. The experience level in the room varied widely: Some teachers were in their first year of teaching the graduate capstone, and others had 5 or more years of graduate capstone work under their belts. All learned from one another and used the time to align expectations for both ambitious instruction and positive outcomes for Oakland Unified Linked Learning pathway graduates. One teacher said, “I appreciated the space, despite frequently coming in at the end of a long school day, exhausted.... I still get so much important work done.”

Planning professional learning with teachers’ needs in mind

The district initially offered a professional learning series that provided teachers with a foundational understanding of the graduate capstone process. In the first 3 years of the graduate capstone work, professional learning ran parallel to each step in the graduate capstone project, as students progressed from field research to writing to presentations. Each year, the final session took place 4 to 6 weeks prior to students’ presentations across the district, and teachers used this session to watch students who volunteered to present their graduate capstone projects in advance. This session enabled teachers to come to agreement on standards of quality for scoring graduate capstones and make any instructional adjustments that would further prepare their students for final presentations.

After the first 3 years, members of the Linked Learning Office shifted the focus of the professional learning sessions to target specific areas of instruction that they identified through observations and survey feedback. The district team began grounding each year’s professional learning in one scoring domain of the rubric (for example, Argument). This provided teachers with a focus when setting goals, looking at student work, and making changes to instruction. They identified the Analysis domain for the 2017–18 school year and the Multiple Perspectives domain for the 2018–19 school year.

About 20 to 25 teachers, from a variety of Linked Learning pathways, consistently attended the professional learning sessions because they appreciated the careful planning. By offering stipends to attendees for after-hours participation, providing dinner, and encouraging teachers to bring their children if needed—and, therefore, not have to arrange child care—the district made it easier for more teachers to attend and engage actively with one another at the end of a long day of

teaching. Teachers said they appreciated the opportunity to collaborate and work on emerging ideas and problems of practice across school sites and pathways. In identifying the importance of the professional learning sessions in supporting and differentiating implementation, one teacher said:

We have an excellent [graduate] capstone professional development series through the central Linked Learning [Office].... It's a really good way to calibrate what you're doing with other schools. I've been pretty pleased that there's still a lot of freedom as to how you make that work for your pathway in your school. We have a districtwide rubric [and other resources].... And there's also a lot of room for us to figure out ... how to make this work for our special needs students and how to make this work for [our specific pathway theme].

All sessions have been designed to provide a venue for educators to define expectations for students, to refine their instructional practices, and to facilitate conversations among teachers about pedagogy and practice. The district has used some of these sessions for calibration exercises, also called moderation, to train teachers and assessors to score the graduate capstones reliably and according to the rubric. Calibration exercises throughout 2017–18 featured sample work that assessors scored against the shared rubric, which they discussed until they established a common understanding of expectations. Discussing expectations for student work, grounded in concrete examples, facilitates assessors' ability to fine-tune their capacity to evaluate student work and to increase their awareness of strong student performance.⁵⁴

All sessions have been designed to provide a venue for educators to define expectations for students, to refine their instructional practices, and to facilitate conversations among teachers about pedagogy and practice.

In interviews and focus groups, teachers expressed appreciation for how each professional learning session provided both immediately implementable, explicitly guided activities and time to synthesize and personalize this learning to best serve their students. All of the professional learning opportunities the research team observed in 2018–19 modeled these learner-centered principles. (See “Professional Learning Through Productive Struggle.”)

School Administrator Supports

Oakland Unified continues to refine how it supports school administrators in building site-level capacity for this work. The district's strategy has largely consisted of targeting supports toward teachers. District-level administrators have only more recently identified ways to strengthen school administrators' capacity to support the graduate capstone. Based on data collected for this study, school administrators felt more empowered to direct resources toward the graduate capstone when they understood which resources educators needed to effectively support implementation and how it fit into a larger vision of student readiness. For example, one site administrator noted that district leaders view principals favorably if they include the graduate capstone as part of the plan for their school site that they submit to the central office each year. Another site administrator noted that the project is formally acknowledged through the district assessment calendar.

School administrators who directed resources toward the graduate capstone did so while contending with many competing priorities, which were often determined for them at the district or state level. In conversations with administrators, our research team learned that principals are required to identify 27 goals in the site plans that they submit to the district. Through these goals, administrators can decide how they will direct school resources to support graduate capstone implementation. These resources can include organizational support through intentional scheduling of the master calendar, professional learning time—sometimes compensated by the school—focused on the graduate capstone, and teaching and coaching positions that support implementation. School administrators who identified the graduate capstone as a key school priority, and who also understood why and how these resources supported high-quality implementation, were able to direct some or all of these resources toward its implementation.

Site-level instructional coaches and teacher leaders have functioned as advocates for the graduate capstone at the site level and have supported school administrators in understanding the content, resources, scheduling, and professional learning required to execute high-quality graduate capstones. A small number of instructional coaches consistently attended the districtwide professional learning sessions and collaborated with both teachers and Linked Learning central office staff to address implementation challenges. At some schools, teacher leaders took on this role instead. An instructional coach underscored the importance of advocating for the graduate capstone amid the many competing priorities and suggested that principals would benefit from professional learning opportunities focused on performance assessments:

A missing link is professional development for administrators, specifically principals and assistant principals. I think they have a very surface understanding of the [graduate] capstone work, through no fault of their own. They're holding so much from one day to the next and from one year to the next [through] the shifting tides of initiatives.... When the [graduate] capstone work is held by pathway teachers and a coach, there can be a certain level of disconnect ... because the administrators might not have a real understanding of what it takes to implement the [graduate] capstone project.

Administrators agreed that the graduate capstone continues to be one of many priorities that are communicated to them by the district and that they are interested in receiving more professional learning around it, which could support them in prioritizing its implementation.

Student Supports

How educators prepare students for the rigor of the graduate capstone project differed depending on the school, the Linked Learning pathway, and the classroom context. Some schools were newer to the process or had fewer opportunities for teachers to collaborate and align instruction, and therefore their student supports were not as robust as schools that have had more experience with the graduate capstone and time to create a vertically aligned system. In focus groups and interviews, educators expressed a continued desire to align instruction beginning in 9th grade so that students are prepared for the level of rigor expected of them by the time they begin their senior year. One of the Linked Learning pathways we studied provides an example of how teachers have used the graduate capstone project to reorganize instructional practices. (See “Promising Practices for Curricular Alignment.”)

Promising Practices for Curricular Alignment

Teachers in an environmental science-themed Linked Learning pathway within Oakland Unified set the “advanced” score on the district’s graduate capstone as their students’ ultimate goal and aligned curricular elements vertically to support this outcome. In this pathway, students completed an integrated project each year, developed and taught by an interdisciplinary team of pathway teachers from chemistry, history, English, and career and technical education. These teachers collaborated on both instruction and assessment. Here’s what vertical alignment looked like for this pathway:

- **9th grade:** Students begin learning foundational research skills.
- **10th grade:** Students use the final 6 weeks of school to investigate and research an essential question, provided by their teacher, on a nonrenewable energy source. Students are assessed using the criteria for an “emerging” score based on a version of the district rubric that teachers have modified.
- **11th grade:** Students spend this year generating their own essential question that guides them toward creating an environmentally friendly classroom design. Students are assessed using the criteria for a “proficient” score based on a version of the district rubric that teachers have modified.
- **12th grade:** Students complete the graduate capstone. Students are assessed using the criteria for an “advanced” score based on the district rubric.

When Linked Learning pathways align expectations and practices along a vertical trajectory, as they have in this context, students have a clear route to becoming proficient or advanced by their senior year.

Schools implement student supports based on available resources and educators’ understanding of students’ needs. For example, at one of the schools studied, the graduate capstone process began as a subset of the general English curriculum before teachers advocated for it to become its own class. Teachers found that students’ projects typically incorporate a variety of domains that are best supported by a robust, yearlong English language arts experience targeted at graduate capstone outcomes, rather than having these requirements compete with other learning objectives within a traditional English class. Other schools chose to allocate time in classes, such as advisories, for students to do research, to check in with faculty supports and mentors, and to practice presentations and receive feedback.

The graduate capstone is intended to be rigorous, which can be especially challenging for students with special needs and English learners. Oakland Unified schools provided a variety of specific accommodations to these students that helped prepare them to complete the graduate capstone. In some schools, teachers provided these students with increased foundational research articles or required them to provide evidence that was lower in volume or different in scope than that of their peers. Teachers also created more structured supports, such as outlines, sentence starters, or even short-answer prompts to scaffold elements of longer assignments. Oral presentations for students with special needs or for English learners sometimes looked different; students with special needs had the option to present to resource teachers rather than to the full panel, and some English learners had similar accommodations, such as having an advisor as part of their teacher panel or having flexibility with how they were required to answer during Q&A.

At one professional learning session, a teacher remarked that “the [special education] scaffolds you offer help everybody,” as she reflected on how she modified one assignment’s layout to be responsive to a student with special needs. Other students requested access to this modified layout, and in the following year she implemented this modification as an option that any student could choose to use. She found that the quality and clarity of student writing improved. This is in keeping with research on Universal Design for Learning, an approach to providing accommodations for students in a way that does not change the rigor of the assignment, but instead identifies barriers to entry and removes those so that all students can engage with meaningful learning.⁵⁵

The Oakland Unified model empowered teachers to support students by adopting and adapting the graduate capstone to fit individual needs. Teachers felt more effective in targeting these accommodations when they had the time, resources, and support to deliver a learner-centered experience.

Funding/Technical Assistance

Partnering with external organizations for funding and technical assistance has been important for Oakland Unified in establishing the graduate capstone. This work began with the district’s Linked Learning implementation, funded by a grant from the James Irvine Foundation in 2010. To sustain this work, the district received funding from the Hewlett Foundation and technical support provided by Envision Learning Partners in 2014. The district also receives funding support for Linked Learning through revenue collected out of Measure N, a citywide tax passed in 2014 that provides additional site-level funding for Linked Learning.⁵⁶ Measure N also provides school resources for implementation of the graduate capstone, such as per-pupil funding that can go toward instructional coaches who support its implementation.

Oakland Unified used some of its grant funding for technical assistance. Envision Learning Partners originally provided support in convening educators to draft the initial district rubrics. Currently, Oakland Unified benefits from both technical and financial support from Envision Learning Partners through a grant from the Evelyn and Walter Haas, Jr. Fund and the Koshland Family Foundation. The district also initially received funding from the Thomas J. Long Foundation, which has since ended. Oakland Unified has partnered with ConnectED: The National Center for College and Career to revise the graduate profile (Figure 2), which the district hopes will increase alignment toward these student outcomes districtwide.

In addition, Oakland Unified received funding from the Assessment for Learning Project (ALP) as part of a joint grant with Los Angeles Unified School District, Pasadena Unified School District, and the Learning Policy Institute. This group initially began working together in an unfunded capacity through the California Performance Assessment Collaborative (CPAC). The resources from ALP enabled each district to further develop its performance assessment initiative. In Oakland Unified, this took the form of support for the professional learning series and funding for teachers to innovate on their implementation of the graduate capstone, by providing more common planning time for teaching teams. In addition, ALP funded Envision Learning Partners and ConnectED: National Center for College and Career to provide technical assistance in support of these activities.

Conditions That Support a High-Quality Performance Assessment Initiative

Through our research in Oakland Unified, we identified a number of conditions that have supported the implementation of high-quality performance assessments in the district. These conditions helped build educators' and students' capacities to complete the graduate capstone and were present at a variety of levels throughout the system, including at the classroom, school, and district levels.

A Supportive Policy and Practice Environment

The graduate capstone began as a collaboration between educators in the district and central office staff in response to variation in the quality and scope of student work expected as part of the senior project graduation requirement. This history has impacted how the graduate capstone was received and is currently implemented.

Existing senior project policies paved the way

In 2005, the Oakland Unified School District Board of Education adopted the senior project as a graduation requirement for students. This district mandate conceived the senior project as a vehicle for students to demonstrate “achievement of schoolwide learning goals and designated key content standards” through a “serious research project or exhibition.”⁵⁷ When the graduate capstone work was introduced in 2014, educators had nearly 10 years of experience with the senior project as a graduation requirement. The existence of the senior project meant that, for educators, the graduate capstone was not a new mandate with rigorous requirements, but rather an attempt to increase the authenticity and rigor of a long-standing district requirement.

Investments in Linked Learning provided resources and structural support

Oakland Unified has committed to implementing Linked Learning in all the high schools in the district, and the graduate capstone is housed within the High School Linked Learning Office. A Linked Learning pathway emphasizes a hands-on curriculum that is tied to industry themes and that encourages students to demonstrate the breadth, depth, and application of learned skills through authentic assessment and project-based learning.⁵⁸ Importantly, learning environments transformed through the Linked Learning approach do not arise in a vacuum, but instead are enabled by reciprocal shifts in the school and district system.⁵⁹ The district's commitment to Linked Learning provided educators with an opportunity to leverage the Linked Learning structures and resources, such as the graduate profile, toward an increasingly aligned graduate capstone project.

A Linked Learning pathway emphasizes a hands-on curriculum that is tied to industry themes and that encourages students to demonstrate the breadth, depth, and application of learned skills through authentic assessment and project-based learning.

Educators used the graduate profile to improve instruction

In an effort to align expectations for graduating students, the district used the original version of the Oakland Unified graduate profile as a blueprint for the districtwide graduate capstone rubrics. The initial rubrics isolated specific elements from the graduate profile—academically proficient, civically engaged, and essential communicators—to assess student readiness to graduate. As one instructional coach explained:

One way ... it's done is really thinking about the graduate capstone as a way to support students and teachers toward a larger vision of preparing all of our students to be ready for college, career, and community.

Educators who adopted the districtwide rubrics aligned their teaching to support students in meeting the outcomes defined in the rubrics' domains. These domains emphasize a vision for an Oakland Unified graduate determined by the original graduate profile.

In 2018, ConnectED: The National Center for College and Career partnered with members of the Oakland Unified Linked Learning Office to revise the original graduate profile; support continued in the 2019–20 school year to plan and implement graduate profile–aligned pilot projects in middle and high schools. This initiative has the potential to further align instruction toward a shared goal for student outcomes, according to central office administrators. The Manager of Performance Assessments and Executive Director of Academics and Instructional Innovation convened TK–12 teachers to develop a draft of graduate profile benchmarks that articulate expectations for each of the skills in the graduate profile at the 2nd-, 5th-, 8th-, and 12th-grade levels. These benchmarks began being piloted in an 8th-grade performance task at one of the middle schools in Oakland Unified during the 2019–20 school year, at which time they were also being used to revise elements of the existing graduate capstone in an effort to increase instructional coherence in the district across schools and spanning grade levels.

An administrator within the district's Linked Learning Office held the vision

The Manager of Performance Assessments, a central office position based in the Linked Learning Office, leads the implementation of the graduate capstone at the district level. This has provided a locus for the vision and support given to teachers engaging with this work. Oakland Unified created this position in response to the evaluation of a grant-funded action research initiative that revealed that the senior project would benefit from greater curricular alignment districtwide. As the Manager of Performance Assessments explained:

I don't know that it was a secret in any way that ... senior projects were of variable quality [before this position was established]. It wasn't a well-kept secret, if it was a secret.

Since the district established this position in 2014, the Manager of Performance Assessments has led the district's opt-in professional learning series for the graduate capstone, coordinated the development of districtwide graduate capstone rubrics, and supported Linked Learning instructional coaches and teachers in aligning expectations within and across grade levels in high schools. Though many stakeholders have collaborated to make this work successful, the continuity of both the position and responsibilities of the Manager of Performance Assessments has ensured that graduate capstone implementation continues to be coherent and intentionally planned.

Teacher-Centered, Opt-In Professional Learning

The opt-in nature of the professional learning series for the graduate capstone requires that Linked Learning Office staff plan thoughtful and relevant learning activities for teachers. Each professional learning session has been designed to build educator capacity, to acknowledge educators' professionalism, and to provide opportunities for learning across different Linked Learning pathways and schools.

Professional learning helped create shared expectations

Professional learning sessions tied to the graduate capstone helped define teachers' expectations for student performance. To achieve this, Linked Learning Office staff participated in students' spring defenses to identify trends in students' needs and set priorities for the next year's professional learning series. After observing student defenses in the spring of 2018, Linked Learning Office staff identified two priority areas for professional learning in the next semester: analyzing sources and considering multiple perspectives. The staff chose the overarching theme of "multiple perspectives" for the 2018–19 professional learning series because this title allowed for discussions of the credibility of sources, author biases, and stakeholder perspectives. This approach to professional learning has helped to ensure that educators across the district have similar expectations for rigorous student work on the graduate capstone.

Professional learning acknowledged educators' professionalism

The districtwide professional learning series emphasized educators' professionalism by acknowledging the value of their time, tapping them as fonts of knowledge, and compensating them accordingly. District staff acknowledged the value of educators' time by offering stipends to attendees for after-hours participation, providing dinner, and encouraging teachers' children to attend if needed. In interviews and focus groups, teachers said that these provisions contributed to a sense of being valued by the district. The Manager of Performance Assessments explained:

The district being able to provide the teacher stipends for the work and to honor that time ... [has] been critical. I used to invite people to do things, and now I try almost never to invite [someone] to do something that I can't pay them to do. It's just a sign of respect for their time, expertise, and professionalism. These people have full-time jobs already—*beyond* full-time jobs—and so if I'm asking them to do something else, I need to be able to pay them for their time.... Teachers feel respected in the space because ... they know that it's a priority for me to make sure that they are compensated.... Those kinds of things really do matter.

The professional learning sessions have been optional, which is one of the reasons that the central office staff who plan these sessions have needed to find ways to ensure educators see them as valuable and motivating, and which has helped build buy-in for the graduate capstone throughout the district. One of the instructional coaches shared how this works in practice:

[The Manager of Performance Assessments] has a way of honoring teachers' time and trusting their own expertise about their own class, their own students, their own pathway.... He's done a great job of not only providing really clear, high-quality professional development with a lot of work time, but also acknowledging that teachers' time is valuable by paying them from district office funds rather than expecting teachers to somehow negotiate with their site administrators to get paid for a central office meeting or professional development.

By encouraging attendance through meaningful compensation and designing professional learning in a way that capitalizes on teachers' existing expertise, these district-provided sessions have supported teachers in being leaders and in building their capacity to deliver high-quality graduate capstone content.

Professional learning supported curricular coherence and sense of community

The graduate capstone professional learning series has cultivated a network of educators who learn from and with one another, which has helped to align curricular practices across the district. Educators who attended developed relationships by discussing shared problems of practice and engaging in meaningful learning together. As one teacher noted:

I appreciate the network.... I can email teachers at other sites and get resources from them and share [my] resources. And I appreciate that even if the project looks different at [other] sites, I trust that there is actual work on this happening at other schools.... I get support from that.

Educators often shared materials with one another through these sessions, either through formal presentations that were part of the sessions or through the informal networks that they built while there, which supports curricular coherence throughout the district. Professional learning sessions featured lessons, scaffolds, and master texts sourced from the educators in attendance, which allows for both immediately usable lesson plans and ideas for instructional units that teachers can adapt in the future. One school's co-principal gave an example of how these shared resources supported a teacher's growth:

I've seen an evolution in her materials or scaffolds, the ways that she's teaching the class. And I know part of that is just becoming a more experienced teacher, ... but I think the other part might have been [due to] some of those resources that ... get shared at those [professional learning sessions].

The opportunity for educators from different Linked Learning pathways and schools to learn from and with one another in these district-provided sessions has created a network of educators who can support one another in sharing best practices and resources for graduate capstone implementation. This has supported instructional alignment throughout the district.

Strong Teacher Leadership

Effective teacher leadership is a key condition for the implementation of Oakland Unified's performance assessment. The graduate capstone initiative began with teachers who took on leadership roles within the school and who wanted to improve upon the existing senior project graduation requirement. The work continued to grow both through their support and through the support of new teacher leaders who became involved. Together, these teacher leaders have taken responsibility for implementing the initiative at their school sites by offering graduate capstone courses, encouraging their colleagues to attend the districtwide professional learning series, and sharing the graduate capstone work broadly to create increased awareness and understanding of the initiative.

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Teacher leaders supported the graduate capstone work at their school sites

Many teacher leaders engaged with the district-led professional learning series before becoming graduate capstone leads at their school sites. These teacher leaders often organize their colleagues to serve on panels and to mentor students. They have a vision for the graduate capstone at their schools, sometimes shared with another teacher or instructional leader, and they hold much of the knowledge around the process, supports, and student needs. As one instructional leader shared:

[There needs to] be a point person, whether that's a [Linked Learning instructional] coach or a teacher on special assignment or an assistant principal, but an individual who's really responsible for leading that work schoolwide.... If it's multiple [individuals] who are overseeing their own class or their own [Linked Learning] pathway, there can be fragmentation and lack of consistency.

Teacher leaders who saw the graduate capstone as a culminating assessment of student readiness identified opportunities and planned how to support its implementation at their school site and advocated for resources that they felt would further this work.

Teacher leaders supported colleagues in learning about the graduate capstone requirement

Teacher leaders from several schools played a key part in both vertical alignment of the curriculum—from 9th through 12th grade—and horizontal alignment across those who teach seniors. These teachers encouraged their colleagues to attend professional learning opportunities and participate as part of a judging panel for student defenses, and they had their seniors practice presenting their graduate capstones to younger students. Finally, they used collaborative planning

time with colleagues to emphasize the graduate profile outcomes they were working toward with seniors. These interactions helped to drive curricular coherence in Linked Learning pathways. As one 9th-grade teacher explained:

I heard about [the graduate capstone] sometime near the beginning of the year.... And then I promptly forgot about it and started ignoring it, because it was a senior thing and I was teaching freshmen.... As the year went on and we got closer, it became a larger part of our meetings. We started ... watching the presentations, and I got a lot more involved with that, and then I also had seniors coming to present to my freshmen, and we went over the rubric.... It very quickly became a large part of my focus.

This teacher's experience is not isolated. In fact, the Manager of Performance Assessments sees teacher leaders as a key part of the opt-in strategy for spreading awareness of the graduate capstone and associated supports. He shared:

Teachers are the best salespeople to their own colleagues.... We've got to let them be the ones to say this is good, this is worth doing.... Figuring out who those [teachers] are [who] are naturally able to model reflective practice, [who are] willing to sit through vulnerability and risk-taking, [and who are] open to sharing ... you can really build off of that.

As he mentioned, these teacher leaders supported colleagues in building an awareness of and subsequent buy-in to the graduate capstone, which enhanced its growth throughout the district.

Instructional Leadership That Personalizes Students' Learning Experiences

Each school site has both students and teachers who need different supports in order to be successful in the graduate capstone work. This is why the Oakland Unified staff who oversee the graduate capstone emphasized the balance between a shared vision of student readiness and differentiating day-to-day instruction to meet students' needs. Therefore, instructional leaders (including principals, instructional coaches, and teacher leaders) had the latitude to advocate for professional learning related to implementing the graduate capstone at each school site.

The district did not mandate a single approach

All of the schools we observed used the district's flexible implementation guidelines to serve different student needs. Two of the schools provided a differentiated credit model by using a stand-alone graduate capstone course that could give students credit recovery, A-G credit (which is required for admission to the University of California or California State University system), or Advanced Placement credits.⁶⁰ This model gave students access to both an academic transcript optimized to their needs and the supports needed to complete the graduate capstone. The Manager of Performance Assessments said:

At the largest levels of the system of the [graduate capstone], I think that is where you want the most coherence.... That's the standard for quality [and the] highest-level understanding of the task.... As you get down into the instruction and the practices in the classroom, that's where there can be a lot of variation, and we welcome the variation there because those practices are actually what allow

us to grow and innovate and get better. If we were teaching lockstep lessons, we would never get the kind of innovation and development that we have been able to get.... We open it up for teachers to think about ... [and we] encourage adaptability.

Instructional leaders had latitude to implement supports that were equally responsive to teachers' needs. Two of the schools in our study used this latitude to provide time on the master schedule for consistent educator collaboration, which allowed teachers to align their graduate capstone-related instruction within and across grade levels. At one of the schools, educators used their collaborative time to meet one-on-one with students in the weeks prior to student defenses so that they could provide personalized instructional support to students who needed it. School sites provided teachers with professional learning time specifically targeted toward scoring calibration and toward aligning instruction to the targets on the districtwide rubrics. This flexible approach helped to build educator capacity and support students.

Site-level resources supported graduate capstone implementation

When school administrators saw the graduate capstone as a clear district priority and a cumulative experience of schooling, rather than an isolated 12th-grade project, they combined the aforementioned flexibility with site-level resources directed toward the graduate capstone. Structurally, this often meant organizing the master schedule to include common planning time for graduate capstone work and allocating time for site-level professional learning opportunities focused on implementation. This prioritization encouraged teachers and other site-level leaders to see the graduate capstone as a culminating demonstration of student learning. As one instructional coach described:

The [graduate] capstone work is not just a senior project. It's a way to assess whether or not we as a school site, we as a district, have done our job in preparing our students for college or preparing our students for a career or preparing our students to be active members of their community. This is not a one-class, one-year assignment. This is a way for us, as adults, to come together and say, "Have we lived up to our commitment to provide young people with the skills they need to determine their own future?"

School administrators who held this larger vision of the graduate capstone could justify allocating resources to the work, even in the face of many competing priorities for schools. This helped signal the importance of the graduate capstone as a cumulative demonstration of student learning.

Meaningful Learning for Students and Teachers

The Oakland Unified graduate capstone provided students and teachers the opportunity to engage with authentic, applied learning. There is ample research that highlights how high-quality performance assessments can have positive impacts on student and teacher outcomes.⁶¹ Participants in this study perceived that the graduate capstone prepared students for future success and facilitated teacher collaboration focused on aligning instructional practices.

Students' Preparation for Future Success

Both students and teachers described the ways they believe the graduate capstone impacts student learning outcomes. They said that it provided students with access to deeper learning, prepared students for college and career, contributed to students' social-emotional learning, and built students' presentation skills.

Access to deeper learning opportunities

Teachers and students felt that the graduate capstone provided an opportunity for students to develop deeper learning competencies, which require thinking critically about relevant complex problems and working collaboratively to identify and effectively communicate potential solutions. Educators had the latitude to tailor the experience, making it relevant for students and supporting them in developing deeper learning competencies. For example, in 2018–19, one school required students to complete a group project as part of the graduate capstone. This project brought together students who had exposure to different pathway themes, such as technology and social justice. Teams of five or six students collaborated to create and present an Android application that offered a solution to complex community problems, such as finding doctors for undocumented individuals and increasing positive relationships between police and the community.

Educators developed this iteration of the graduate capstone based on feedback from alumni, who identified the need to further develop their collaborative problem-solving skills. Students who completed the collaborative graduate capstone reflected that while this experience was incredibly challenging, it also pushed them to be better critical thinkers, problem-solvers, communicators, and collaborative group members.

The graduate capstone's alignment to the district graduate profile, particularly the goal of students being "community-ready," also meant that many students conducted research on topics that tangibly impacted their lives and communities. We observed students select topics such as immigration, gentrification, teen vaping, Black women's health, and police–community interactions, all of which were socially and personally relevant. This pushed students to engage deeply with relevant issues and provided them the opportunity to think critically about their topic. In doing so, they were prompted to develop a coherent argument about a complex social issue while acknowledging multiple perspectives, citing relevant evidence, and considering the bias of sources. Students and educators shared that this type of authentic, community-based research provided students with meaningful learning experiences as well as opportunities to develop important analytic skills. This pushed students to engage deeply with the complex problems that they and their peers face and provided them the opportunity to become experts on their topic and communicate that expertise.

The focus on authentic deeper learning seemed to motivate many students we spoke with. For example, students who had not given much thought to choosing their topic struggled to maintain enthusiasm for it throughout the entire school year. Students who thought deeply and critically about their topic continued to be interested in and often passionate about their issues even after they had presented. They felt the experience supported their ability to advocate for their positions and complete a high standard of work. One student shared:

It's a good feeling after you finished your [graduate] capstone.... It feels rewarding. All the hard effort you put into it paid off, and it's on something that you actually feel strongly about, an issue that's impacting you or a community that you know. Knowing that you're doing a project that might have a chance of changing the community feels good.

Ultimately, the graduate capstone provides students with access to deep, authentic learning that helps to prepare them for a high standard of work in their postsecondary context.

Preparation for college and career

Students felt that the graduate capstone expectations were similar in rigor to what they would experience after high school, particularly for those who planned to attend college. For many, the graduate capstone was the most sustained research, writing, and presenting experience they had encountered in their academic careers. For some, this was initially intimidating. Teachers' careful scaffolding and the opportunity for students to use feedback to resubmit assignments prepared seniors to complete a higher level of work than they had previously experienced.

Students identified that they learned data collection, citation, and argumentation skills that helped them better organize their research. One student reflected that the seniors at his school "all learned that [they're] capable of ... college-level work, [especially] research and presenting.... I'm pretty sure everyone could say that, even to some extent." Students also shared that they felt better prepared to encounter complex assignments after high school without being intimidated.

In the schools we studied, educators required students to complete graduate capstone activities that demanded greater independence and real-world skill application than typical assignments. Students sought out internship experiences, conducted original research in their communities, and identified and interviewed experts on their chosen subject. In some cases, seniors used their research to draft letters and place calls to local and state representatives. These experiences were designed to build the skills students will need post-high school, such as connecting with college professors, applying for jobs, or participating in civic life.

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Growth in social and emotional learning

Students shared that the graduate capstone built their capacity to persevere through tough challenges, an important element of social and emotional learning. For example, when students reached out to individuals and organizations as part of the research process, they often faced some amount of rejection or non-response. Students often felt a sense of pride and accomplishment for having overcome the challenges that were part of the graduate capstone. As one student described:

[One of the] good parts for me was finishing it, knowing that I turned it in, ... because going through it is pretty hard, but if you really put your mind to it, then it'll be okay.... That's what's satisfying about it.

When roadblocks appeared, students could ask their teachers for support. In turn, teachers could provide differentiated scaffolds based on student needs. Reflecting on the growth she had seen in her students through this process, one teacher said:

I teach 10th-grade students. So often, ... [if they don't understand something] they just want me to tell them [the answer]. It's really amazing getting to sit down with seniors.... They'll [say], "OK, I need your help with this specific thing." And they know what that is, they know what help they need, and then they know when they've got the help.... They just understand that process, ... which I think is one of the most important skills that you need in life, really: how to work out what you don't know, get someone to help you with it, and then move on from there.

Ultimately, these challenges provided students with the opportunity to manage multiple responsibilities with increased independence.

Improved communication and presentation skills

Both students and teachers felt that the graduate capstone provided more presentation opportunities than students had previously experienced. The project built students' abilities to present their work clearly, confidently, and in an organized manner. The presentation is a public demonstration of learning. Seniors often prepared for it by practicing for underclassmen, which developed younger students' awareness of the graduate capstone. Some schools also required younger students to sit on seniors' judging panels in order to increase their understanding of both the presentation requirements and how each individual presentation is scored. These practices emphasize the importance of the graduate capstone and can also encourage students to take the presentation seriously.

Educators often emphasized developing presentation skills prior to senior year. In one Linked Learning pathway, educators began inviting a variety of stakeholders into the classroom to observe student presentations beginning in 10th grade, including local scientists and community members. They also required students to present their work frequently to their classmates, which resulted in students in this pathway being very accustomed to presenting. One student explained that his social skills and presentation skills improved because presenting in other classrooms helped him learn how to "talk to [and] present in front of other people." The student noted that this practice helped him prepare for the presentation to the judges.

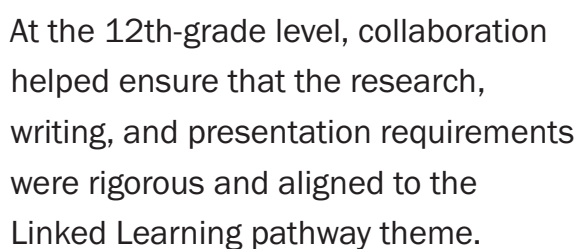
Educators in other Linked Learning pathways had different approaches to prepare students for the presentation. For example, some students completed a smaller-scale version of the graduate capstone in their junior years, which helped them preview the requirements coming up in their senior years and helped their teachers identify students' needs ahead of their senior years. The students we spoke with said that their presentation skills had improved due to their preparation for the graduate capstone defense.

Teacher Collaboration and Instructional Alignment

In interviews and focus groups, teachers said they increased their collaboration with one another and aligned assignments both from 9th through 12th grade and in an interdisciplinary way across each grade level. Teachers noted that the graduate capstone supported them in adopting a lens of continuous improvement toward their teaching practice. Teachers reflected that implementing the graduate capstone resulted in better collaboration, more horizontal alignment toward shared student outcomes, and more vertical alignment of rigorous instructional practices.

Teacher collaboration

Teachers explained that they increased both formal and informal collaboration, working together not only during designated graduate capstone planning time and professional learning sessions at the site or district level, but also during independent conversations at unscheduled times. Some schools shifted the master schedule to provide consistent collaborative time. At the 12th-grade level, collaboration helped ensure that the research, writing, and presentation requirements were rigorous and aligned to the Linked Learning pathway theme. Educators appreciated the opportunity to calibrate expectations, as one principal explained:



At the 12th-grade level, collaboration helped ensure that the research, writing, and presentation requirements were rigorous and aligned to the Linked Learning pathway theme.

[The site-level professional learning] that people really liked was the ability to align around, “What does make a rigorous [graduate] capstone?” ... In fact, that work could’ve been done 10 more times, and I think people still would’ve felt like it was a valuable process because the standard for what was proficient and what wasn’t was so different across the board.

Teachers also used district-level professional learning sessions to share best practices and connect with colleagues who were grappling with similar problems of practice at different school sites or in different Linked Learning pathways. The graduate capstone provided an opportunity for teachers to bolster their connections with their peers, both at their own school sites and districtwide.

A framework for continuous improvement

At year's end, teachers shifted instruction based on the skills they felt students needed to strengthen delivery of a high-quality graduate capstone. The graduate capstone presentation illuminated their students' gains and the areas in which they needed improvement; the graduate profile and graduate capstone rubrics provided established outcomes to work toward; and the professional learning provided resources that helped them reflect on and shift instruction. One principal explained the process as follows:

We collaboratively grade [the graduate capstone] research papers, and that allows staff in general to see how kids [are] achieving now compared to 5 years ago, [and] what writing errors [we] still see that we have not worked through with the kids. It allows them to hold a perspective of the whole school at a certain point.

Teachers also reported that they continuously reflect on their practice throughout the year through the lens of the graduate capstone. One teacher shared how participating in the graduate capstone has shifted the way she approaches her work:

Going through this process has definitely made me a better teacher.... Thinking about [student learning outcomes and] the skills that we're teaching.... I [also] think [in a] more interdisciplinary [way] ... now than I did before.

The Linked Learning Office also supplemented teachers' classroom- and site-level reflections by observing students' graduate capstone presentations and planning the district-led professional learning sessions based on what they observed. Taken collectively, these practices and resources supported teachers in reflecting on and continuing to improve their instruction.

Alignment toward a shared vision of student outcomes and rigorous instructional practices

Educators who engaged with the graduate capstone reflected that the experience shifted their instructional practice. The graduate capstone experience supported these teachers in aligning instruction to the outcomes articulated in the district rubrics, as well as the skills highlighted during the district-led professional learning sessions. This theme was echoed by district administrators and some students. Schools that implement the graduate capstone use the district's rubrics as the shared standard against which they assess student work. Teachers in the schools studied planned the instructional units of their graduate capstone courses to target the skills that these rubrics required students to demonstrate.

Teachers throughout the schools studied highlighted the importance of preparing seniors to apply interdisciplinary skills in their graduate capstone. For example, at one of the schools studied, seniors were required to address an environmental science theme in their graduate capstone. At this school, humanities teachers emphasized the importance of coordinating with the graduate capstone and senior science teachers to align instruction for analytical skills.

Teachers in 9th, 10th, and 11th grade who have an awareness of the graduate capstone requirements reported shifting their instruction to build students' skills to meet the competencies assessed during the graduate capstone. District administrators and some students noted these shifts in instruction as well. As teachers of younger grades gain an awareness of the graduate capstone, and as resources are allocated toward this cumulative instructional goal, instructional coherence

leading up to the graduate capstone may continue to increase. At one school, a teacher shared how the site-level provision of collaboration time to support the graduate capstone has impacted her efforts to align instruction vertically across grade levels:

In our 9th-grade team, for a couple of years we've talked about CER [claim, evidence, reasoning] in various forms [and] how it looks in our different subjects. I've started doing more of that [when teaching math]. If [a student is] talking about a situation and [they] made a table and a graph for it, how can [they] use that to predict something? How do [they] write out that prediction? ... [This] helps students with analysis when they do their [graduate] capstone project or whenever they're doing research.

Teachers felt that implementing the graduate capstone pushed them to assign more interdisciplinary projects, presentations, and research papers in younger grades. For example, some 10th- and 11th-grade teachers reported using modified versions of the district graduate capstone rubrics to assess their students' work. This helped build their students' skills toward the expectations of the graduate capstone.

Lessons Learned

This case study of the graduate capstone in Oakland Unified found that several key conditions strengthened implementation: the presence of a supportive policy and practice environment; effective, opt-in professional learning opportunities; strong teacher leadership; and latitude for instructional leadership at the school level. Evidence from the case study also indicated that these conditions were associated with positive results for students and teachers. In particular, engaging in relevant and authentic research helped prepare students to complete rigorous research while growing both their social-emotional and communication skills. Communities of practice also supported teachers in aligning instruction throughout and across grade levels.

The lessons we learned through our research on Oakland Unified's graduate capstone implementation may be of value to other districts considering a similar initiative. The report has implications for district leaders and other local policymakers who are building capacity for performance assessments through opt-in, district-led professional learning opportunities grounded in a shared vision for student readiness and differentiated at the site level. The report suggests that:

- 1. Districts can establish a strong and shared vision for why performance assessments matter.** Establishing a strong vision for why performance assessments such as the graduate capstone matter, and what learning outcomes students should achieve, can be particularly beneficial to teachers. In Oakland Unified, this vision was expressed in a collaboratively developed district graduate profile that communicates the district's goal for each graduate to be prepared for college, career, and community engagement, which is aligned with the student competencies included in the graduate capstone rubrics. The Linked Learning Office led the effort to establish this shared vision and reinforced it through district-led professional learning sessions. These sessions emphasize the graduate capstone as both a district priority and a cumulative experience of schooling, rather than just a 12th-grade project. This helps teachers to develop a shared understanding of the desired learning outcomes for graduating students.
- 2. Teachers and schools need supports to implement the vision.** These supports can include professional learning opportunities, on-site coaching, additional staff time, and supportive policies at the site level. To implement the graduate capstone well, the teachers and staff at the sites we studied devoted substantial time to mentoring students. The administrators at these schools also directed resources toward the effort, such as site-level professional learning opportunities; shifts in master schedules to accommodate common planning time for teachers; and staff time to support the work, including the creation of the position of graduate capstone teacher or coordinator. In turn, the central office provided supports to schools, including district-led professional learning opportunities and documents such as the graduate profile and the graduate capstone rubrics. Taken collectively, the data show that implementing rigorous performance assessments in districts requires support for both teachers and schools.
- 3. Gradually cultivating buy-in can generate strong support for this work among early adopters.** Oakland Unified has built the graduate capstone through an opt-in approach to professional learning that leverages teacher leadership. This approach has garnered buy-in for the graduate capstone through word of mouth among teachers, who encourage

their colleagues to attend the district-led professional learning opportunities and adopt the district rubrics. This approach has thus far generated authentic and sustained buy-in among participating teachers. Participation has grown at different rates throughout the graduate capstone's implementation, especially as the district has messaged a number of competing priorities to teachers and site leaders. This means that the implementation of the graduate capstone, and students' experiences of the process, can vary widely. Districts implementing similar approaches should recognize that an opt-in approach may be useful when deepening implementation among a set of willing teacher leaders, as it has been in Oakland Unified, and that the district may decide to implement additional approaches to adoption if it wants to scale the initiative more broadly.

4. **Districts can allow sufficient flexibility for schools and Linked Learning pathways to make the work their own.** Site-level instructional leaders (i.e., principals, instructional coaches, and teacher leaders) in Oakland Unified were instrumental in establishing the graduate capstone. These individuals continue to own the work by directing efforts to improve implementation at their school sites. In doing so, they hold the logistical and conceptual knowledge for the graduate capstone, while driving innovation and coordinating supports that are responsive to the needs of their student population. Central office staff support this work by reinforcing a shared vision for student success through the district graduate profile and common rubrics. They recognize that a focus on compliance distracts from the ultimate goal of driving instructional improvement. They also acknowledge the professionalism and expertise of instructional leaders by allowing for flexible implementation while maintaining common parameters for quality.
5. **Participating in performance assessments can shift teacher practice when effective supports are in place.** Engaging with a high-quality graduate capstone can make student learning visible, which in turn illuminates ways to improve teaching practice. Coupling this visible learning with supports such as collaborative time and professional learning can shift teaching practice. Oakland Unified educators felt that participating in the graduate capstone helped them align instruction to a shared vision of long-term student outcomes and plan interdisciplinary learning activities that build on one another. Teachers also reflected that the graduate capstone supports have helped them provide a rigorous, coherent learning experience for students and have promoted innovative teaching practices that are responsive to students' needs.

Conclusion

Oakland Unified School District built its capacity to implement a high-quality performance assessment practice—the graduate capstone—on more than 10 years of focusing on student-centered learning. The graduate capstone began as an effort to increase the consistency of the senior project graduation requirement across schools. In 2013, central office administrators developed the district graduate profile and the graduate capstone—a yearlong applied research, writing, and oral presentation requirement in which students are assessed against the district-provided rubrics in an effort to align expectations for the senior project. Educators who participate in the graduate capstone use the district rubrics as instructional targets that can help them prepare Oakland Unified graduates to take leadership roles in their colleges, careers, and communities. In the 2018–19 school year, 66% of students enrolled in Linked Learning pathways were assessed using these rubrics.

Our study found that Oakland Unified invested in teacher professional knowledge and skills through opt-in professional learning opportunities that focused on the graduate capstone. Teacher leadership and flexibility to modify the graduate capstone experience at each site contributed to the opt-in strategy. Educators built a community of practice through district-led professional learning opportunities, which resulted in sharing resources and discussions of similar challenges and solutions across school sites.

Students and teachers described positive outcomes from their participation in the graduate capstone. They said the graduate capstone’s research and oral presentation requirements helped prepare students for rigorous postsecondary expectations in college and careers, as well as in their communities. The graduate capstone also helped students to develop social-emotional learning skills, such as perseverance. For teachers, the collaboration associated with the graduate capstone experience led to alignment within and across grade levels within Linked Learning pathways.

Based on these outcomes, we identified some lessons that other districts can take from Oakland Unified’s experience. We learned that teachers and students benefited from a strong district vision about why performance assessments such as the graduate capstone matter and what learning outcomes students should achieve; that teachers and students needed strong support to implement culminating performance assessments; that schools benefited from flexibility in implementing district-led performance assessments; and that participating in this type of assessment shifted teacher practice toward shared student learning outcomes. We also learned that the opt-in approach was effective for cultivating buy-in, especially at the initial stages of implementation.

Implementation of the Oakland Unified graduate capstone continues to evolve. In particular, central office and school staff are engaged in a collaborative process to revise the district graduate profile, which may have future implications for the graduate capstone rubrics. Given the ongoing expansion of Linked Learning pathways within the district, teacher participation in the graduate capstone throughout the district is expected to increase. It will be important to balance the benefits of an opt-in strategy with the need to ensure that all students have equitable access to a high-quality graduate capstone experience. In addition, the state of California is in the process of implementing a State Seal of Civic Engagement.⁶² The State Board of Education adopted criteria for awarding the Seal in September 2020 and has considered whether the Seal of Civic Engagement might one day be included within the state accountability system as one measure of college and career readiness,

as the State Seal of Biliteracy currently is. As it currently stands, the draft guidance criteria include a requirement that students complete an “informed action civics project,” for which the graduate capstone would qualify.⁶³ By providing the opportunity for Oakland students to be recognized for their graduate capstone with the award of the State Seal of Civic Engagement, the Seal could provide incentive to further expand the implementation of the graduate capstone throughout the district. Ultimately, educators responsible for the graduate capstone within Oakland Unified hope to continue to leverage this initiative to prepare all students in Oakland Unified to be college, career, and community ready.

Appendix A: Methodology

The goal of this study was to understand Oakland Unified’s implementation of a districtwide senior project graduation requirement, which is now referred to as the graduate capstone. This individual case study is part of a larger multiple case study of the implementation of performance assessments in three California districts: Los Angeles Unified School District, Oakland Unified School District, and Pasadena Unified School District.⁶⁴ This case study is accompanied by a cross-case report.⁶⁵

Site Selection

The Learning Policy Institute (LPI) chose Oakland Unified because this district represented an approach that was grounded in a decade of previous work on authentic student assessments. Oakland Unified was also actively engaged with the California Performance Assessment Collaborative (CPAC) and, therefore, had the support of this community of practice to reflect on its implementation and use the case study for continuous improvement.

To inform this case, we also selected three schools within Oakland Unified (School A, School B, and School C). The schools are not named in this study in order to protect the anonymity of the educators and students we interviewed. These school sites were selected in consultation with the district administrators most familiar with each school’s work around performance assessments. The researchers and these administrators chose school sites that represented the range of performance assessment work being carried out by schools in the district. In defining the range, the research team considered factors such as the amount of time a school site had been implementing performance assessments as well as existing schoolwide structures (such as strong Linked Learning pathways). In selecting the sample, the research team also selected a range of school sizes and selected schools whose student demographics did not significantly vary from those of the district at large.

In Oakland Unified, the selected schools varied in terms of size and approaches to implementing the graduate capstone. School A was a combined middle and high school that operated as a small learning community, with Linked Learning pathways that served 500 students. The school had implemented a yearlong research project as a graduation requirement for a number of years but was piloting a new approach by asking students to complete group projects in addition to individual presentations. School B was a comprehensive high school that served 1,600 students and had recently gone “wall-to-wall” by implementing the graduate capstone across all the Linked Learning pathways within the school. In School B, we observed graduate capstone implementation in one of the more established Linked Learning pathways, which had implemented the graduate capstone for nearly 5 years, and in the newest Linked Learning pathway, which was in its first year of graduating seniors using the graduate capstone. School C had a midsize population of 800 students and had multiple Linked Learning pathways. In School C, we observed a pathway that had implemented the graduate capstone for more than 5 years. Importantly, due to Oakland Unified’s history of small learning communities, each school in our study, even the largest, could be considered small- or medium-size compared to other districts.

Research Questions

LPI collected data to address the following research questions:

- What are some of the external factors that influence these three districts' ability to develop and scale high-quality performance assessments?
- How do these districts build the infrastructure for developing, implementing, and scaling high-quality performance assessments?
- How are participating schools building the systems and structures for developing, implementing, and scaling high-quality performance assessments?
- How are participating teachers using high-quality performance assessments to support student learning through their curriculum and classroom practices?
- What are the perceived outcomes for teachers of participating in high-quality performance assessments?
- What are the perceived outcomes for students of participating in high-quality performance assessments?

Data Collection

We used a case study approach to address these research questions. Case studies allow researchers to investigate real-life phenomena in context, generating understandings of a phenomenon and its interplay with its environment.⁶⁶ The majority of the data were collected from October 2018 to June 2019 by a three-person team. In addition, the research team conducted interviews with educators in April 2020 to understand how schools in the district responded to the COVID-19 pandemic (Appendix E). We used data from a range of sources, including documents, district administrative data, interviews with a range of personnel at the district and school levels, focus groups with teachers and students, observations of student performance assessments, and observations of professional learning opportunities for teachers (Table A1).

Table A1
Study Interviewees, Focus Groups, and Observations

Interviewee Roles	Total Participants
District Administrator and Staff Interviews	5
Principal and Assistant Principal Interviews	3
Teacher Leader and Instructional Coach Interviews	4
Teacher Focus Groups	3
Student Focus Groups	3
Observations of Students' Graduate Capstone Defenses	49
Observations of Teacher Professional Learning Sessions	4

To develop protocols for data collection, we conducted a review of the literature. We also drew on the researchers' experiences in supporting the districts through the California Performance Assessment Collaborative (CPAC) network. With this work as a base, we identified factors we wanted to inquire about during data collection (e.g., professional learning opportunities available to teachers). We next constructed semi-structured interview, focus group, and observation protocols to help us better understand the previously identified factors and to surface any other conditions that might emerge as necessary to support implementation of district performance assessment initiatives at the district, school, and classroom levels.

To analyze the data, the researchers engaged in a multistep process. First, we drafted a preliminary code list based upon the key conditions identified in the literature review. Next, we transcribed all interview, focus group, and observation data. One researcher then coded the data independently in Dedoose, a web-based application for qualitative analysis. This coding included deductive codes based on the literature, as well as inductive codes that emerged during the coding process.

The research team then refined the codes based on the themes present in the data. Once the codes were refined, all three members of the Oakland Unified research team engaged in a series of calibration exercises to ensure that we held a shared understanding of each of the codes. After these calibration exercises, researchers applied the codes in Dedoose to interview and focus group transcripts and field notes about observations. To increase inter-rater reliability, researchers met weekly or biweekly to discuss and compare decisions about the coding process. Document review supplemented the analysis of interviews, focus groups, and observations, serving to describe the district processes.

Ultimately, the research teams triangulated findings across multiple data sources and sought both confirmatory and disconfirmatory evidence to develop illustrations of the key conditions and findings that emerged as well-grounded from the evidence. Each case study draft was reviewed internally by two or three members of the research team, checked by a district leader for accuracy, and revised based on expert peer review.

Appendix B: Oakland Unified Graduate Capstone Research Writing Rubric

2018–19 Graduate Capstone Research Writing

NOTE: When using this rubric, the in-between categories (i.e., “E/D”) are meant for work that falls between the other categories either as a matter of degree or as a matter of satisfying only some of the required criteria within that domain.

NOTE: Please consider weighting the various domains based on relative importance. For example, “Cites Sources” might be weighted as only 5% of the total score as opposed to “Argument,” which might merit 15% or 20%.

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Argument <i>What is the evidence that the student can develop an argument?</i>	Element not yet present	<ul style="list-style-type: none"> Has a <i>general</i> argument Explains a <i>little</i> background and context of topic/issue Draws <i>superficial</i> connections or conclusions 		<ul style="list-style-type: none"> Makes an argument and <i>develops it</i> in the paper Explains <i>some</i> background and context of topic/issue Draws <i>general</i> or <i>broad</i> connections or conclusions 		<ul style="list-style-type: none"> Makes a clear <i>and well developed</i> argument/thesis Explains background and context of topic/issue Makes <i>specific</i> connections and draws <i>meaningful</i> conclusions 		<ul style="list-style-type: none"> Makes a clear, well developed, and <i>convincing</i> argument/thesis <i>Thoroughly</i> explains background and context of topic/issue Makes <i>insightful</i> connections, draws meaningful conclusions, and <i>raises important implications</i>
Multiple Perspectives <i>What is the evidence that the student considers other perspectives?</i>	Element not yet present	<ul style="list-style-type: none"> Mentions questions or alternative interpretations 		<ul style="list-style-type: none"> Acknowledges <i>and briefly responds</i> to questions or alternative interpretations <i>when appropriate</i> 		<ul style="list-style-type: none"> Acknowledges and responds to questions or alternative interpretations when appropriate 		<ul style="list-style-type: none"> Acknowledges and responds to questions or alternative interpretations <i>to explore the complexity of the topic</i> when appropriate
Evidence <i>What is the evidence that the student can support the argument?</i>	Element not yet present	<ul style="list-style-type: none"> Refers to <i>at least one</i> piece of evidence relevant to the argument 		<ul style="list-style-type: none"> Refers to <i>some</i> evidence relevant to argument/thesis 		<ul style="list-style-type: none"> Refers to <i>sufficient and detailed</i> evidence from various types of sources, which are relevant to argument/thesis 		<ul style="list-style-type: none"> Refers to <i>extensive and comprehensive</i> evidence from various types of sources, which are relevant to argument/thesis

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Analysis <i>What is the evidence that the student can analyze evidence?</i>	Element not yet present	<ul style="list-style-type: none"> Restates information from multiple sources Presents a few sources in a way that shows consideration of relevance, credibility, or potential bias 		<ul style="list-style-type: none"> Summarizes evidence from multiple sources related to the argument Presents some sources in a way that shows consideration of relevance, credibility, or potential bias 		<ul style="list-style-type: none"> Elaborates on the significance of evidence from multiple sources in support of the argument Presents most sources in a way that shows consideration of relevance, credibility, or potential bias 		<ul style="list-style-type: none"> Elaborates on the significance of evidence and synthesizes ideas from multiple sources in support of the argument Consistently presents sources in a way that shows consideration of relevance, credibility, or potential bias
Organization <i>What is the evidence that the student can organize and structure ideas for effective communication?</i>	Element not yet present	<ul style="list-style-type: none"> A few ideas are logically sequenced A few transitions are used 		<ul style="list-style-type: none"> Some ideas are logically sequenced Some transitions connect ideas 		<ul style="list-style-type: none"> Ideas are logically sequenced Transitions connect ideas 		<ul style="list-style-type: none"> Ideas are logically sequenced to present a coherent whole Transitions guide the reader through the development of the argument
Language Use <i>What is the evidence that the student can use language skillfully to communicate ideas?</i>	Element not yet present	<ul style="list-style-type: none"> Has some control of syntax and vocabulary Language and tone are somewhat appropriate to the purpose and audience Grammar, usage, and mechanics are somewhat accurate 		<ul style="list-style-type: none"> Has control of syntax and vocabulary Language and tone are mostly appropriate to the purpose and audience Grammar, usage, and mechanics are mostly accurate 		<ul style="list-style-type: none"> Demonstrates varied syntax and effective word choice; uses rhetorical techniques Language and tone are appropriate to the purpose and audience Grammar, usage, and mechanics are accurate 		<ul style="list-style-type: none"> Has a fluent style with varied syntax, precise word choice, and skillful use of rhetorical techniques Language and tone are tailored to the purpose and audience Grammar, usage, and mechanics are free from error
Cites Sources <i>What is the evidence that the student can cite sources appropriately?</i>	Element not yet present	<ul style="list-style-type: none"> A few in-text citations and/or elements of the works cited page are accurate 		<ul style="list-style-type: none"> Some in-text citations and elements of the works cited page are accurate 		<ul style="list-style-type: none"> In-text citation and works cited page are mostly accurate 		<ul style="list-style-type: none"> In-text citation and works cited page are accurate

Appendix C: Oakland Unified Graduate Capstone Oral Presentation Rubric

2018–19 Graduate Capstone Oral Presentation

NOTE: When using this rubric, the in-between categories (i.e., “E/D”) are meant for work that falls between the other categories either as a matter of degree or as a matter of satisfying only some of the required criteria within that domain.

NOTE: Please consider weighting the various domains based on relative importance.

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Argument <i>What is the evidence that the student can present a clear argument and line of reasoning?</i>	Element not yet present	<ul style="list-style-type: none"> Has a general argument Explains a little background and context of topic/issue Draws superficial connections or conclusions 		<ul style="list-style-type: none"> Makes an argument and develops it Explains some background and context of topic/issue Draws general or broad connections or conclusions 		<ul style="list-style-type: none"> Makes a clear and well-developed argument/thesis Explains background and context of topic/issue for the intended audience Makes specific connections and draws meaningful conclusions 		<ul style="list-style-type: none"> Makes a clear, well-developed, and convincing argument/thesis Thoroughly explains background and context of topic/issue for the intended audience Makes insightful connections, draws meaningful conclusions, and raises important implications
Multiple Perspectives <i>What is the evidence that the student considers other perspectives?</i>	Element not yet present	<ul style="list-style-type: none"> Mentions questions or alternative interpretations 		<ul style="list-style-type: none"> Acknowledges and briefly responds to questions or alternative interpretations when appropriate 		<ul style="list-style-type: none"> Acknowledges and responds to questions or alternative interpretations when appropriate 		<ul style="list-style-type: none"> Acknowledges and responds to questions or alternative interpretations to explore the complexity of the topic when appropriate
Evidence & Analysis <i>What is the evidence that the student can support an argument with relevant evidence?</i>	Element not yet present	<ul style="list-style-type: none"> Restates or refers to facts, experience, or research to support the argument 		<ul style="list-style-type: none"> Summarizes relevant facts, experience, and/or research to support the argument 		<ul style="list-style-type: none"> Elaborates on sufficient and relevant facts, experiences, and research to support the argument 		<ul style="list-style-type: none"> Elaborates on extensive and relevant facts, experience and research; synthesizes ideas from multiple sources to support the argument
Organization <i>What is the evidence that the student can organize a presentation in a way that supports the audience's understanding?</i>	Element not yet present	<ul style="list-style-type: none"> A few ideas are logically sequenced A few transitions are used 		<ul style="list-style-type: none"> Some ideas are logically sequenced Some transitions connect ideas 		<ul style="list-style-type: none"> Ideas are logically sequenced Transitions connect ideas 		<ul style="list-style-type: none"> Ideas are logically sequenced to present a coherent whole Transitions guide the audience through the development of the argument

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Language Use <i>What is the evidence that the student can use language appropriately and fluidly to support audience understanding?</i>	Element not yet present	<ul style="list-style-type: none"> Uses language and style that is <i>somewhat suited</i> to the purpose, audience, and task Speaking is <i>somewhat</i> fluid 		<ul style="list-style-type: none"> Uses language and style that is <i>mostly suited</i> to the purpose, audience, and task Speaking is <i>mostly</i> fluid 		<ul style="list-style-type: none"> Uses language and style that is <i>suited</i> to the purpose, audience, and task Speaking is fluid and easy to <i>follow</i> 		<ul style="list-style-type: none"> Uses <i>sophisticated and varied</i> language that is suited to the purpose, audience, and task Speaking is <i>consistently</i> fluid and easy to follow
Use of Digital Media <i>What is the evidence that the student can use digital media/visual displays to engage and support audience understanding?</i>	Element not yet present	<ul style="list-style-type: none"> Digital media or visual displays are <i>somewhat</i> informative and relevant 		<ul style="list-style-type: none"> Digital media or visual displays are <i>mostly</i> informative and relevant 		<ul style="list-style-type: none"> Digital media or visual displays are <i>appealing, informative, and support audience engagement and understanding</i> 		<ul style="list-style-type: none"> Digital media or visual displays are <i>polished, informative, and support audience engagement and understanding</i>
Presentation Skills <i>What is the evidence that the student can control and use appropriate body language and speaking skills to support audience engagement?</i>	Element not yet present	<ul style="list-style-type: none"> Demonstrates <i>some</i> of the following presentation skills: control of body posture and gestures, language fluency, eye contact, clear and audible voice, and appropriate pacing 		<ul style="list-style-type: none"> Demonstrates <i>most</i> of the following presentation skills: control of body posture and gestures, language fluency, eye contact, clear and audible voice, and appropriate pacing 		<ul style="list-style-type: none"> Demonstrates <i>all</i> of the following presentation skills: control of body posture and gestures, eye contact, clear and audible voice, and appropriate pacing 		<ul style="list-style-type: none"> Demonstrates <i>command</i> of all of the following presentation skills: control of body posture and gestures, eye contact, clear and audible voice, and appropriate pacing <i>in a way that keeps the audience engaged</i>
Questions and Answers <i>What is the evidence that the student can respond to audience questions effectively?</i>	Element not yet present	<ul style="list-style-type: none"> Provides a direct response to <i>some</i> questions; demonstrates a <i>somewhat</i> adequate command of the facts or understanding of the topic 		<ul style="list-style-type: none"> Provides a direct response to <i>most</i> questions, <i>using evidence when appropriate</i>; demonstrates a <i>mostly</i> adequate command of the facts and understanding of the topic 		<ul style="list-style-type: none"> Provides a direct response to <i>all</i> questions, using evidence when appropriate; demonstrates an <i>adequate</i> command of the facts and understanding of the topic 		<ul style="list-style-type: none"> Provides a direct response to <i>all</i> questions, <i>persuasively</i> using evidence when appropriate; demonstrates an <i>in-depth</i> command of the facts and understanding of the topic

Appendix D: Oakland Unified Graduate Capstone Field Research Rubric

2018–19 Graduate Capstone – Field Research Rubric (Survey, Interview, Focus Group)

NOTE: When using this rubric, the in-between categories (i.e., “E/D”) are meant for work that falls between the other categories either as a matter of degree or as a matter of satisfying only some of the required criteria within that domain.

NOTE: Please consider weighting the various domains based on relative importance. For example, “Introduction” might be weighted as only 5% of the total score as opposed to “Questions,” which might merit 20%.

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Introduction	Element not yet present	<ul style="list-style-type: none"> Introduction <i>vaguely</i> states the intended respondents Purpose of research is <i>vaguely</i> stated 		<ul style="list-style-type: none"> Introduction <i>somewhat</i> clearly states the intended respondents Purpose of research is <i>somewhat</i> clearly stated 		<ul style="list-style-type: none"> Introduction <i>clearly</i> states the intended respondents Purpose of research is <i>clearly</i> stated 		<ul style="list-style-type: none"> Introduction <i>clearly and precisely</i> states the intended respondents Purpose of research is <i>clearly and precisely</i> stated
Bias	Element not yet present	<ul style="list-style-type: none"> A <i>few</i> questions and choices are written to allow respondents to answer honestly and without leading them to certain answers 		<ul style="list-style-type: none"> <i>Introduction and some</i> questions and choices are written to allow respondents to answer honestly and without leading them to certain answers 		<ul style="list-style-type: none"> Introduction and <i>most</i> questions and choices are written to allow respondents to answer honestly and without leading them to certain answers 		<ul style="list-style-type: none"> Introduction and <i>all</i> questions and choices are written to allow respondents to answer honestly and without leading them to certain answers
Questions (Students should make intentional choice of open and/or close-ended questions, but are not required to do both)	Element not yet present	<ul style="list-style-type: none"> A <i>few</i> close-ended questions provide clear and logical choices, options, or scaled responses A <i>few</i> open-ended questions allow respondents to answer freely and in depth on the intended topic A <i>few</i> questions are asked in a logical sequence 		<ul style="list-style-type: none"> <i>Some</i> close-ended questions provide clear and logical choices, options, or scaled responses <i>Some</i> open-ended questions allow respondents to answer freely and in depth on the intended topic <i>Some</i> questions are asked in a logical sequence 		<ul style="list-style-type: none"> <i>Most</i> close-ended questions provide clear and logical choices, options, or scaled responses <i>Most</i> open-ended questions allow respondents to answer freely and in depth on the intended topic <i>Most</i> questions are asked in a logical sequence 		<ul style="list-style-type: none"> <i>All</i> close-ended questions provide clear and logical choices, options, or scaled responses <i>All</i> open-ended questions allow respondents to answer freely and in depth on the intended topic <i>All</i> questions are asked in a logical sequence

Scoring Domain	No Score	Emerging	E/D	Developing	D/P	Proficient	P/A	Advanced
Relevance	Element not yet present	<ul style="list-style-type: none"> A <i>few</i> questions relate clearly to the research thesis 		<ul style="list-style-type: none"> <i>Some</i> questions relate to the research thesis 		<ul style="list-style-type: none"> <i>Most</i> questions relate clearly and <i>some</i> are of key importance to the research thesis 		<ul style="list-style-type: none"> <i>All</i> questions relate clearly, and <i>most</i> are of key importance to the research thesis
Language and Conventions	Element not yet present	<ul style="list-style-type: none"> The writer expresses a <i>few</i> of the questions in a clear and accessible manner for the intended audience There are a <i>few</i> instances of correct grammar, usage, and mechanics 		<ul style="list-style-type: none"> The writer expresses <i>some</i> of the questions in a clear and accessible manner for the intended audience There are <i>some</i> instances of correct grammar, usage, and mechanics 		<ul style="list-style-type: none"> The writer expresses <i>most</i> of the questions in a clear and accessible manner for the intended audience There are <i>many</i> instances of correct grammar, usage, and mechanics 		<ul style="list-style-type: none"> The writer expresses <i>all</i> of the questions in a clear and accessible manner for the intended audience Nearly the entire document has correct grammar, usage, and mechanics
To be assessed after implementation of field research (though students should consider these domains prior to doing their field research):								
Respondents	Element not yet present	<ul style="list-style-type: none"> Respondents have a <i>low</i> likelihood of sharing responses that are relevant to the research purpose 		<ul style="list-style-type: none"> Respondents have <i>some</i> likelihood of sharing responses that are relevant to the research purpose 		<ul style="list-style-type: none"> Respondents have a <i>high</i> likelihood of sharing responses that are relevant to the research purpose 		<ul style="list-style-type: none"> Respondents are <i>almost certain to give</i> responses that are relevant to the research purpose
Multiple Constituents (survey only)	Element not yet present	<ul style="list-style-type: none"> Survey makes some attempt to seek responses from multiple constituents in order to assess variation across different demographics 		<ul style="list-style-type: none"> Survey seeks responses from multiple constituents in order to assess variation across different demographics that are <i>somewhat</i> relevant to the research topic 		<ul style="list-style-type: none"> Survey seeks responses from multiple constituents in order to assess variation across different demographics that are <i>mostly</i> relevant to the research topic 		<ul style="list-style-type: none"> Survey seeks responses from multiple constituents in order to assess variation across different demographics that are <i>clearly</i> relevant to the research topic

Appendix E: Performance Assessment Decisions Grounded in Students' Needs During the Pandemic

In March 2020, California schools and districts moved to distance learning in response to the COVID-19 pandemic. The state suspended required standardized testing on March 17, 2020, and optional standardized admissions tests such as the SAT and ACT were put on hold as well.⁶⁷ Across the state, districts worked diligently to establish distance learning plans, and many struggled to ensure that all students had access to the internet.⁶⁸

On May 13, 2020, the Oakland Unified School Board voted to temporarily waive the senior project graduation requirement.⁶⁹ By the time the requirement was waived, most schools had determined individual plans to move forward with the graduate capstone—their version of the senior project—as many students had already turned in their research papers and some students had already presented. School sites generally framed any elements of the graduate capstone that were due after schools closed as optional for seniors and avoided any punitive measures for students who were unable to complete their presentations.

The manager of performance assessments encouraged teacher leaders and site-level administrators to decide if and how to continue implementing the graduate capstone at a distance. The manager worked with his team to provide assistance to school sites and prioritize the supports they needed. Most schools required students to complete their graduate capstone papers, many of which were due in mid-March as the pandemic hit, while a majority of the schools in the district chose to cancel oral presentations as a graduation requirement once schools moved to virtual learning. This was especially the case in schools with significant numbers of students navigating unstable Wi-Fi, working essential jobs, or contending with other challenges exacerbated by the pandemic. Those who required students to complete a graduate capstone presentation allowed students to pre-record their presentations, which many students chose to do. In some cases, completing this presentation was framed as a way to improve students' grades.

At one school site, teachers decided that students would be required to complete the research papers that they had outlined and drafted prior to spring break and that they could choose whether to complete a virtual presentation as well. To aid students in completing both the paper and the presentation, the graduate capstone lead teacher and the 12th-grade English teacher reached out to each student in the senior class and had a 15-minute conversation with each of them. They completed these calls together with each student, so as to demonstrate joint buy-in for the decision to move forward with the required paper and optional presentation and also to ensure that students' needs were communicated to multiple adults who could share what they learned about students' needs across the grade level. As of May 19, 2020, teachers in that pathway noted that most students had completed the paper and estimated that slightly less than 40% of the senior class had uploaded a final presentation.

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