90.3% Graduation Rate Achieved with High-Quality Curriculum and Virtual Instruction
San Diego Virtual School Customizes Learning to Help At-Risk Students Experience Success

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Introduction
San Diego Virtual School (SDVS) is an accredited full-time virtual school that enrolls middle and high school students in courses of independent study for initial credit and credit recovery purposes in Grades 7–12. This case study examines the school's processes and programs in preparing 12th-grade students during the 2021–22 academic year. The school uses Edmentum Courseware, Edmentum's secondary digital curriculum program, which offers more than 500 state-standards-aligned courses for first-time credit, credit recovery, and expanded course access.

For many schools, the COVID-19 pandemic was their first encounter with remote, online learning. In September of 2020, 74% of the 100 largest U.S. school districts had chosen remote learning as their instructional model, affecting more than 9 million students (Sawchuk, 2020). And the effects were devastating, with alarming reports of disrupted schooling over two years (Kuhfeld et al., 2022). In contrast, virtual schools found themselves in the position of being experts—as one administrator at SDVS said, “We had it down pat.” Although stories about learning loss are critical for keeping a policy lens on the needs of marginalized students, narratives of success are frequently overlooked—situations where learning continued happening, where students graduated, and where families remained connected to their schools and their teachers.

This case study focuses on one such school, located in Southern California, that serves a unique population of students. Some students are recent immigrants, some are homeless, and many do not speak English as a first language. Others struggle with mental health and social anxiety. Of interest are features of the school that work in service of these students and the measures of success the school finds the most meaningful in guiding its 12th-grade students toward achievement of their goals. Our guiding questions focused on who enrolls in the school, how the curriculum is used in a full-time virtual setting, and which measures of success administrators and teachers found most useful to inform their instructional strategies. We employed a mixed-methods approach to better understand both the measurable outcomes of success, as well as the context in which student learning occurred. We focused on the 12th-grade in particular, but many of the findings speak to the operation of the school overall.

Conceptual Framework
The paper draws from prior research on virtual and blended learning, secondary education, and teacher instructional practices. For the past two decades, online learning has blossomed. Online courses have a variety of formats and features that can vary according to subject matter and provider. Some are completely online and self-paced; others combine online learning with teacher support for students (Molnar et al., 2019; Picciano & Seaman, 2009; Zweig et al., 2015).

But while research on virtual and blended learning in K–12 education is growing (Martin et al., 2023), it remains a narrow slice compared to research on online higher education (Means et al., 2013). Furthermore, the availability of online and blended K–12 learning applications outpaces the extent of research informing curricular practices, leaving practitioners with little guidance on instructional strategies that support learning (Barbour, 2022). Even more limiting, most of the extant research is
focused on describing course technologies such as virtual labs, online games, and virtual reality, instead of describing instruction or curriculum implementation in K-12 settings (Martin et al., 2023).

Although prior research argues that adaptive online course models may hold promise for supporting struggling students, virtual programs have had mixed results on essential subjects in urban settings (Heppen et al., 2017; Rickles et al., 2018). To understand the specifics of these findings, it is necessary to examine how an online course will be implemented, the instructional features that comprise implementation of an online course, and how the varying needs of this student population are addressed (Heppen et al., 2017; Rickles et al., 2018).

We conducted a case study of a specific virtual high school to elucidate the ways in which the online curriculum is leveraged and adapted by the teachers and administrators to serve the school’s definition of success. The study highlights ways in which the administration and teachers have created an online school that mirrors, as much as possible, the successful strategies of brick-and-mortar high schools, simultaneously taking advantage of the strengths of an online setting and curriculum.

Specifically, four themes emerged from this study. First, the school provides a structured, yet personalized, learning experience for the students based on understanding the students’ specific experiences and community. Second, teachers and administrators purposefully create an instructional program that attends to the needs of the students the school serves. Third, teachers and administrators describe a school climate designed to support effective learning and instruction. And finally, the goals of the administration are to prepare students not only for postsecondary success but also for the workplace.

**Research Plan**

**The Context**

San Diego Virtual School is a virtual, independent public school that has been serving middle and high school students in Southern California for over 10 years. Its diploma program has been accredited by the Western Association of Schools and Colleges. SDVS is an independent study charter school that operates within California’s Mountain Empire United School District. SDVS services students in San Diego County and the three adjacent counties, and it serves approximately 450 students per year and employees 25 teachers with 10 additional part- and full-time staff, including the executive director, principal, academic support staff, and a social worker. According to the principal, all full-time subject-matter teachers are credentialed in California and also hold an English Learner (EL) Authorization and Crosscultural, Language, and Academic Development (CLAD) Certificate, which authorizes instruction to English learners. We focused our quantitative inquiry on 12th-grade students who were enrolled in the school during the 2021-22 school year, but the teachers and administrators we interviewed referenced the entire student body in their comments.
Our Positionality

We are not, nor did we ever intend to be independent evaluators of the school, its educators, or the students the school seeks to serve. Rather, we are scholars embedded within an educational technology company who realized that the school profiled in this case study was nontraditional, effective, and worth learning about. The team who conducted the study are employed by Edmentum. We are researchers experienced in qualitative and quantitative methods. We have worked in higher education settings as researchers and faculty, conducting federally funded national research programs, and we have also worked with, and for, schools and districts across the United States.

The Curriculum: Courseware

Edmentum Courseware, our secondary digital curriculum program, is used by SDVS almost exclusively. With more than 500 courses covering core, Advanced Placement®, career and technical education, world language, and elective subjects, Courseware is designed to prepare students for their next step toward postsecondary education or the workforce. Our curriculum is grounded in sound instructional design, leveraging a mastery-based approach to meet all students at their proficiency level. Courseware can be used for students seeking first-time credit, exploring offerings beyond their school's current catalog, needing credit recovery, or working toward credits for higher education.

SDVS has been using Courseware as its core curriculum for six years for students pursuing either a high school diploma or a career diploma. All students receive the same coursework when assigned to an asynchronous class in Courseware and all are eligible to receive a diploma if they complete the required classes. The guided notes in Courseware are designed to help students with study skills. The school uses Courseware for both its traditional online program, where students virtually complete course requirements to receive a diploma toward graduation (California Department of Education, 2023, April 26). Students may also participate in Courseware for credit recovery purposes. For example, in cases where students have fallen behind in the credits needed to graduate, they can take courses tailored to help them catch back up. Courseware is asynchronous, meaning that students have access to the curriculum and associated modules at any time during the learning period.

Research Questions

The study was guided by several research questions that were elicited through a series of conversations with internal stakeholders at Edmentum.

1. Who attends the full-time virtual school? What characteristics of the students are observed in the data, and how do the educators describe the student population?

2. How is Courseware used? What proportion of the curriculum is comprised of Courseware and what usage statistics can be observed? For the 12th graders, are they focused on first-time use or credit recovery?
3. How is success defined at school? What measures of success, such as graduation rates, course completion rates, and test scores, are observed in the data? How do the teachers and administrators define success for the school and its students?

4. How do teachers' and administrators' understanding of their students, as well as their relationships with the students, inform their instructional strategies? What are teacher strategies for increasing engagement and participation?

5. What were the effects of the COVID-19 pandemic at the school?

**Research Methods**

The project utilized a mixed-methods case study approach. For the quantitative analyses, SDVS administrators shared school records from 2018–22 with the research team. All data were cleaned and merged with existing Edmentum usage data. We cooperated with the school staff as needed about specific variables in the data. Once the data were cleaned and merged, descriptive statistics and correlational analyses were employed to analyze the quantitative data. The focus of the quantitative analyses was primarily the 12th-grade students enrolled in academic year 2021–22.

For the qualitative component of the study, data were collected in the fall of 2022. Two administrators volunteered to participate; in turn, they recommended three teachers who were subsequently contacted. Five total interviews were conducted, all via Zoom video conferencing. One researcher interviewed the administrators; two researchers participated in the teacher interviews. Two interview protocols were developed: one for the administrators and one for the teachers. Before the interviews started, interviewees were informed of the interview's purpose and assured that their participation was voluntary and that their responses would remain confidential. All interviews were recorded. The length of the interviews ranged from 53 to 63 minutes, with the average being about 58 minutes.

The interview videos were transcribed and de-identified. The interviews were first analyzed using conventional content analysis to generate categories of perceptions reported by the interviewees. Open coding was used to identify initial themes, and constant comparison was used to classify these initial codes into categories of assertions. Consistent with conventional content analysis recommendations, words, sentences, paragraphs, and comments in the interview session transcripts were the units of analysis (Stemler, 2001). Researchers independently analyzed and interpreted the contents of interview transcriptions, first identifying major themes and then comparing and discussing individual interpretations until a consensus was reached. Finally, the data were independently coded according to the consensus category scheme.
Results

The Students: An Adaptive and Changing Population

SDVS has a fairly transitory population of students, meaning that students may enter and leave the school at nontraditional times. Students are less likely to be enrolled at SDVS for a full four years of school compared to students at a traditional high school. As Figure 1 shows, in 2021, a total of 172 seniors were enrolled at the school and working toward graduation. Of those students, the green segment represents the 60 students who enrolled in 2021, suggesting that they are making up credits for graduation. About 23% of the seniors have been enrolled for four years. The remaining seniors enrolled in previous years, as seen in Figure 1.

The SDVS educators reported that it is common for students to enroll, drop out, and then return, as one administrator discussed,

"Some of the kiddos go back to a traditional school. But once they get a taste of our school they usually come back because they . . . they realize like they're getting one-on-one help. Edmentum is a great program. They're learning a lot. You know, they build relationships with teachers, and it's been really successful for them."

Schools such as SDVS are often referred to as “alternative” or “nontraditional” schools. In California, schools of choice are designed to provide alternative means to reaching the same ends that traditional schools seek to reach. Alternative schools of choice, however, must meet the same standards for curriculum, instruction, and number of instructional minutes (California Department of Education, 2023, April 26). The staff members at SDVS take these instructions seriously and are proud of their students.

One staff member noted, “[We] view ourselves as [a] true, identifiable school that can be trusted."

Another said: “The graduation rate . . . it's been pretty effective, and that's even with our 5th year seniors. It may take five years to finish, but at least they finish."

Figure 1. Numbers and Percentages of the 2021 Seniors Organized by Their Original Year of Enrollment (n=172)
For 2021–22, SDVS student program requirements consisted of 44 classes (220 credits), including both major courses and electives. When appropriate, the courses students take also satisfy the University of California (UC) “a-g” course requirements (Regents of the University of California, 2023).

As Table 1 indicates, the school serves a diverse population of students. A large proportion of the Grade 12 students are of Hispanic/Latino descent, which is representative of the population of Southern California. Many students report McKinney-Vento status (per the McKinney-Vento Homeless Assistance Act, individuals who lack a fixed, regular, and adequate nighttime residence fall under this status; National Center for Homeless Education, 2015). Nearly a third of the students live in temporary housing; administrators suggested that many student families doubled up due to increased cost of living.

### Table 1. Demographic Characteristics of the Grade 12 Students Enrolled in 2021–22 (n=172)

<table>
<thead>
<tr>
<th>Student Characteristics</th>
<th>Number</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>90</td>
<td>52%</td>
</tr>
<tr>
<td>Male</td>
<td>78</td>
<td>45%</td>
</tr>
<tr>
<td>Nonbinary</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Not Reported</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native American or Alaska Native</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Asian</td>
<td>13</td>
<td>8%</td>
</tr>
</tbody>
</table>
Table 1 presents only 12th-grade students, and these students are both similar and different from other students enrolled in the school and the broader population of students enrolled in the Mountain Empire United School District.

For example, in 2021–22, the entire San Diego Virtual School was comprised of 429 students. Of the entire 429 students in the school, 52% identified as Hispanic. Of the 12th graders profiled in the study, 36% are White. Overall, the 12th-grade students currently enrolled may have more resources than the

### Table 1: Student Characteristics

<table>
<thead>
<tr>
<th>Family Education Level</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Black or African American</td>
<td>11</td>
<td>6%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>62</td>
<td>36%</td>
</tr>
<tr>
<td>White</td>
<td>80</td>
<td>47%</td>
</tr>
<tr>
<td>Decline to Answer</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>College Graduate</td>
<td>30</td>
<td>17%</td>
</tr>
<tr>
<td>No Response</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>Graduate Degree or Higher</td>
<td>22</td>
<td>13%</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>36</td>
<td>21%</td>
</tr>
<tr>
<td>Not a High School Graduate</td>
<td>18</td>
<td>11%</td>
</tr>
<tr>
<td>Some College or Associate Degree</td>
<td>57</td>
<td>33%</td>
</tr>
<tr>
<td>Reduced Lunch Students</td>
<td>44</td>
<td>26%</td>
</tr>
<tr>
<td>Parenting Students</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Homeless Students(^1)</td>
<td>56</td>
<td>33%</td>
</tr>
<tr>
<td>Transient Students</td>
<td>61</td>
<td>36%</td>
</tr>
<tr>
<td>Unaccompanied Students(^2)</td>
<td>21</td>
<td>12%</td>
</tr>
<tr>
<td>Foster Youth</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Residence Category</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foster/Family Home</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Permanent Housing</td>
<td>117</td>
<td>68%</td>
</tr>
<tr>
<td>Temporary Housing</td>
<td>54</td>
<td>31%</td>
</tr>
</tbody>
</table>

\(^1\) Home and parental identifiers per the McKinney-Vento Act (2015); an “unaccompanied” child is not in the care of a parent or guardian.
rest of the school and district. The percentage of 12th-grade students who would qualify for free/reduced lunch (a proxy for socioeconomic status, or SES) is about 26% (of 172), in contrast to the higher percentage of students with low SES in the overall school (58%). In general, SDVS identifies as a mid to high poverty school, and the district's median income is $28,870, which is low for California (California Department of Education, 2023, July 26). For many students from low-income communities, COVID-19 made it difficult to justify staying in school, and across the state of California, schools reported increased dropout rates (California Department of Education, 2023, July 26). The students in 12th grade, while facing many challenges, either managed to stay in school or returned to recover graduation credits.

The SDVS administration reports that the school's student population has changed over the years but has always served students in need. The executive director first started the school for Native American students who lived in remote areas, with a focus on access.

One administrator recounted:

He really did want to start a program where all kids would have access, including the ones that were on the reservation. So, that was the beginning of this program. That was really the clientele. It was the kids that could not have access. That's what started it.

Subsequently, the school drew from other populations. For example, the school had a relationship with the juvenile court system, so it drew in children who could not be in traditional schools. The population changed even more to include students who needed credit recovery, as well as students who wanted to graduate early.

A staff member offered:

Actually, we had a great partnership with the . . . San Diego juvenile court system, and we would take the kids that could not be in a traditional school system, and really, we saw so many success stories. . . You know students were actually graduating that would have never graduated if they were in a regular school . . . and then we got, the athletes . . . we had athletes that could not be in a traditional school that were traveling all the time. So, we have a couple of Olympians in our history, which is pretty amazing.

More recently, SDVS reported an increase in students who wanted to complete school but were facing COVID-19-related disruptions and school closures. At the same time, the student population seemed to shift again in response to an increased awareness of mental health and the ways COVID-19 exacerbated mental health challenges.

A staff member elucidated:

And COVID brought in a lot of students because what was happening in the traditional schools was . . . they didn't know what to really do in an online setting, and it was, you know, those poor
teachers—it was just kind of putting pieces together and hoping it works. Well, we already had it down pat and already had Edmentum rolling . . . students wanted our program because we were at a school that was up and running.

Now . . . three years later. Our program has still consisted with those kiddos that wanted that, that don't want the traditional in-the-seat type of setting. But now, we’re dealing with the aftereffects of COVID, and so a lot of these kiddos may be agoraphobic where they can't leave their house; maybe they have anxiety and social issues . . .

Courseware Implementation and Instruction

All students enrolled in the school use Courseware as their core curriculum, and many take elective courses through Courseware-integrated programs. We examined variation within student use of Courseware by first looking at students' enrollment counts across semesters. During the academic year 2021–22, Grade 12 students enrolled in about five and a half classes in the fall semester and four classes in the spring semester, generally taking around nine classes across the entire academic year. There were also a handful of summer course enrollments.

Figure 2. Subject Enrollment Counts for Courseware, 2021–22 (n_{enrollments}=1,521, n_{students}=172)

Students generally take one to two courses within a subject area each academic year (e.g., Algebra I and II, two social studies courses per year). In the 2021–22 academic year, subjects with the highest course enrollment (defined as the total number of courses that students enrolled in, for each subject area) included social studies, health and physical education, language arts, and mathematics, followed by electives and science. Visual and performing arts (VAPA) and world languages courses had relatively low
enrollments (see Figure 2). This table is aggregated in that it includes enrollments in multiple subjects and double enrollment per subject (e.g., English 1 followed by English 2).

SDVS has been using Courseware as its core curriculum for six years for diploma and college-track students. All students receive the same coursework when assigned to an asynchronous class in Courseware. However, teachers will address the varying needs of the population and adjust when appropriate. For example, if students are part of a special population group, alternations specific to their needs may be made. Teachers also customize students’ learning by offering tutoring, live lessons, test reviewing, and additional personalized learning as needed.

The guided notes in Courseware help students with study skills. Teachers reported using them extensively as a meaningful support in the learning process. Teachers at SDVS also took individualizing learning a step further by layering in modifications to support their specific student population, particularly English learners.

A staff member explained:

Most of the time kids who are struggling, it isn’t for content except for math. It’s typically study skills. It’s connecting to the curriculum. Why do they need to do this? And maybe that they don’t have the ability to read for understanding. And so, we do really rely on the [guided notes] that are in there.

Teachers also report that they benefited greatly from the professional development and program training they received. Teachers appreciated knowing how best to match assignments with the credential requirements (including meeting the California state standards) that met their learning objectives.

An SDVS teacher remarked:

[Students] still receive the same curriculum, so Edmentum does not change for them. The coursework does not change. What changes though is that . . . [for] every single subject that that student is in, there is a highly qualified teacher that is monitoring and addressing their needs.

The Edmentum representative offered SDVS targeted guidance on the flexibility of the Courseware program—particularly the ability to customize course structure, sequence, and settings to meet unique program needs.

The teacher described, “So [our Edmentum representative] was like, . . . ‘You pick [assignments] and choose and stay in the credential.’ And that’s what we did. And then, we started having huge success.”

**Courseware as Both Credit Recovery and/or Part of the “Traditional” School Program at SDVS**

The U.S. Department of Education defines credit recovery (CR) as a strategy that encourages students in danger of high school dropout to re-take a previously failed course that is required for graduation. The student
earns credit by successfully completing course requirements. Credit recovery courses are often available online or in alternative settings to suit the needs of the student (U.S. Department of Education, 2018).

SDVS has a large proportion of students identified as being on a credit recovery track. Courseware is used for students on the credit recovery and traditional tracks, albeit with some modification. Per discussions with SDVS administrators, 11th and 12th-grade students may be placed in the “credit recovery” customized version of a course if they are behind in the number of credits they need to graduate (e.g., if, as a senior, they do not appear to be on track to earn the number of credits needed to graduate by the end of the year). Students are evaluated upon entering SDVS and then reevaluated at the 11th- and 12th-grade levels to determine whether a credit recovery track should be considered. SDVS administrators form a partnership between the students, parents, and school to determine eligibility for and to accept credit recovery status.

Credit recovery versions of a course are slightly modified. Students enrolled in the credit recovery version of a course get content that is very similar to the traditional courseware with fewer written assignments. As a result, they can take more courses per semester.

An SDVS educator elaborated:

In our traditional program, we try to highlight around five to seven writing assignments. And in our credit recovery program, we're looking at . . . two to three quality assignments. So, they're still going to get a lot of the same content; they're just going to have less produced work. So hopefully they'll, have a little bit more time.

As seen in Table 2, enrollment in courses labeled as credit recovery increased over the past few years, with the highest proportion of credit recovery course enrollments seen in the 2020–21 academic year with 63 students enrolled in at least one credit recovery course.

This increase in enrollment may be an effect of COVID-19—as one administrator commented, “The kids were not in school during COVID at all, and now you know, now we're getting seniors with (only) 5 or 10 credits.”

Upon entering SDVS, students will start either on the traditional track or on the credit recovery track. There may be cases where students who started on a traditional track switch over to the credit recovery track during their time at SDVS, such as when students struggle in their courses and require remediation. Once on the credit recovery track, students will remain on that track throughout their time at SDVS.

Table 2 shows that, in 2018, only two of the current seniors were in credit recovery during their freshman year. In 2021–22, 103 of the 172 current seniors are in credit recovery. In other words, a number of students who began on a traditional track four, three, or even two years ago moved to credit recovery. The shift to credit recovery dramatically increased in the COVID-19 years—seen from 2019–20 to 2020–21 when the proportion of students on the credit recovery track increased from 23% to 58%.
Table 2. Number of Students from Our Current 12th-Grade Sample Who Were Enrolled in Credit Recovery vs. Traditional Education Courses from 2018–22

<table>
<thead>
<tr>
<th>Year</th>
<th># of current 12th graders enrolled</th>
<th># enrolled in credit recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018–19</td>
<td>44</td>
<td>2 (5%)</td>
</tr>
<tr>
<td>2019–20</td>
<td>84</td>
<td>19 (23%)</td>
</tr>
<tr>
<td>2020–21</td>
<td>108</td>
<td>63 (58%)</td>
</tr>
<tr>
<td>2021–22</td>
<td>172</td>
<td>103 (60%)</td>
</tr>
</tbody>
</table>

Figure 3. Subject Enrollment in Credit Recovery vs. Traditional Courseware for 12th-Grade Students (n=172), 2021–22

Credit recovery students naturally enroll in the subjects they need to graduate and receive a diploma—math, language arts, science, and social studies. As can be seen in Figure 3, social studies had the most enrollments in credit recovery courses. Language arts and math were also highly enrolled.

In Table 3, we investigated if enrollment in credit recovery was associated with the demographic characteristics of the students. The results should be interpreted with caution given the small sample size, but the final model (3) indicates that students who are of low socioeconomic status, as indicated by free and reduced lunch qualification, are more likely to be associated with being enrolled in credit recovery after controlling for other demographic variables including gender, race, or ethnicity. Only a very small amount in the variation is explained by demographic variables ($R^2=9.5\%$); other variables not captured in these data may explain credit recovery enrollment, such as dropouts from prior schools, attendance, whether or not students needed to work to support a family, and so forth.
Table 3. Course Recovery Enrollment Predicted by Demographic Characteristics of Students, 2021–22 (n_{students with demographic info}=104)

<table>
<thead>
<tr>
<th>Parameter estimates (sd)</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.596 ***</td>
<td>0.596 ***</td>
<td>0.567 ***</td>
</tr>
<tr>
<td></td>
<td>(0.111)</td>
<td>(0.110)</td>
<td>(0.109)</td>
</tr>
<tr>
<td>Female</td>
<td>0.002</td>
<td>-0.058</td>
<td>-0.048</td>
</tr>
<tr>
<td></td>
<td>(0.114)</td>
<td>(0.117)</td>
<td>(0.115)</td>
</tr>
<tr>
<td>Male</td>
<td>0.026</td>
<td>-0.021</td>
<td>-0.001</td>
</tr>
<tr>
<td></td>
<td>(0.115)</td>
<td>(0.116)</td>
<td>(0.114)</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>0.251</td>
<td>0.270</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.195)</td>
<td>(0.192)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>0.069</td>
<td>0.052</td>
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<tr>
<td></td>
<td>(0.084)</td>
<td>(0.083)</td>
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<tr>
<td>Black or African American</td>
<td>0.074</td>
<td>0.062</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.078)</td>
<td>(0.077)</td>
<td></td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>0.085 *</td>
<td>0.065</td>
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<tr>
<td></td>
<td>(0.042)</td>
<td>(0.043)</td>
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<tr>
<td>Socioeconomic status</td>
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<tr>
<td></td>
<td>(0.043)</td>
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<td></td>
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<tr>
<td>N</td>
<td>104</td>
<td>103</td>
<td>103</td>
</tr>
<tr>
<td>R²</td>
<td>0.004</td>
<td>0.055</td>
<td>0.095</td>
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<td>28.052</td>
<td>30.283</td>
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<tr>
<td>AIC</td>
<td>-42.659</td>
<td>-40.103</td>
<td>-42.565</td>
</tr>
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</table>

*** p < .001; ** p < .01; * p < .05.

Success Is Defined in Multiple Ways

Student success at SDVS is a multidimensional construct—captured by Courseware completion, graduation, attendance, communication, grades, and learner engagement. The school rallies around the idea that, as one administrator said, “Success breeds success.” The ways in which teachers strategize to encourage students to succeed is essential to positive student outcomes, and the positive outcomes are interrelated. The Courseware curriculum has several features designed to measure success—completion rate, “successful” completion rate, and various metrics of learner engagement, including participation in threaded discussions, writing assignments, posttests, and mastery tests. For end-of-course grades, the
school relies on the Courseware end-of-semester (EOS) metric. In addition, the school examines attendance and assessments, including those outside of Courseware, such as the California state test (California Department of Education, 2023, May 31).

**Indicators of Success: Course Completion and Successful Course Completion**

Courseware completion rates are tracked via two distinct metrics—course completion and successful course completion. A course is considered “completed” when a student has completed 70% of activities or has taken the end-of-semester test. A course is considered “successfully completed” when a student has received a final course grade of at least 70% or completed the final exam.

SDVS, like many public schools, uses a score of 60% (a D) to indicate passing a course. However, for University of California (UC) and California State University (CSU) admissions requirements, California students must have a passing grade of at least a C, and the type of classes and rigor is important.

**Figure 4. Course Completion Rate by 12th-Grade Subject, 2021–22 (n_{enrollments}=1,521)**

As seen in Figure 4, during 2021–22, SDVS had very high completion rates, indicating that students were finished with most of the activities or had taken (not necessarily passed) the end-of-semester test.

Courseware users’ “successful” course completion rates are generally lower compared to general completion rates but as Figure 5 points out, successful completion rates were also quite high, and across all subjects, students were likely to successfully complete a course.
Generally, course completion rates were the same for 12th-grade students on the traditional track compared to the credit recovery track. But, as can be seen in Figure 6, “successful” course completion percentages for the students enrolled in 12th-grade in the 2021–22 school year changed over time, and there were differences between students on the credit recovery versus traditional tracks. Some students only take one or two credit recovery courses, so the samples are not independent. Over time, however, the number of 12th-grade students who needed to incorporate a credit recovery course in order to graduate increased. Of the 172 12th-grade students in 2022, 103 of them had at least one credit recovery course in their portfolio.

Nevertheless, in earlier years, there was a gap between the completion rates. Credit recovery courses had a lower successful course completion rate. Over time, on average, the percentage of courses successfully completed increased for both groups. In the current school year, comparing the two groups, the percentage of courses that are successfully completed is almost equal. Over time, students enrolled in credit recovery improved in their tendency to successfully complete courses.
Figure 6. Successful Course Completion Rates, Traditional vs. Credit Recovery Courses, 2018–22

Indicators of Success: Grades

Students’ final grades were analyzed based on 1,521 course enrollments during the 2021–22 academic year, 940 course enrollments during the 2020–21 academic year, 679 course enrollments during the 2019–20 academic year, and 294 course enrollments during the 2018–19 academic year. Coursework has required activities, and if activities are not attempted, the teachers record them as zero, and the score contributes to the final course grade.

The nature of online courses provides students with the freedom to pace their own learning. Students are granted access to all the content when they are assigned to the course and are encouraged to complete one to three assignments with passing grades per day. Students have agency to monitor their own pacing with in-program dashboards providing insight into whether students are on track to complete their course successfully on time; teachers can similarly track whether students are on pace to finish and use that data to guide instructional support. Both teachers and students appreciate the feature.

An SDVS teacher remarked, “We use the pacing; we use that as a good teaching tool. Some kids really like the colors. So, that is huge for them—is to see the green versus the red.”
Figure 7 presents the distribution of student grades across all the subject enrollments over time. For instance, enrollments resulted in high course grades (the bubble above 50%), even though some lower grades (less than 25%) were reported each year.

The distributions show how the distribution of grades changed over time. Looking across all enrollments (students can be enrolled in more than one course), the green bubble represents the school year 2018–19. There seemed to be a small bubble of course enrollments where students received lower grades (greater than 25%). Then, there was a bigger climb at about the 60% mark, which is not surprising given that 60% was a passing grade. In 2019, however, the distribution shifted steeply, where many of the grades were higher than 75% (i.e., higher than a C average). This indicates a shift where possibly higher grades were encouraged by the school. Class activities—participation—are included in the course grade.

An SDVS teacher explained:

The majority of our stuff is automatically graded by the [Courseware] system, and we manually grade the discussions in the activities. And that's usually 25% to 30% of each class. So, then we have to teach them, when the end of the semester is coming up, the difference between their course grade [which is needed to pass] and their current grade and having to match up.

Figure 7. Distribution of Course Grades for All Enrollments Over Time, 2018–22

Students at SDVS are measured against a grading system where passing is considered a D or higher. As can be seen in Table 4, grades of 68 (D+) were the lowest the 12th graders achieved. Most of the grades in Table 4 were in the B or C letter-grade range. Teachers were encouraging students to achieve, and students were doing more than just the minimum to graduate.
<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives</td>
<td>Fall</td>
<td>77.0</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>80.2</td>
</tr>
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<td>Health and Physical Education</td>
<td>Fall</td>
<td>73.7</td>
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<tr>
<td></td>
<td>Spring</td>
<td>100.0</td>
</tr>
<tr>
<td>Language Arts</td>
<td>Fall</td>
<td>70.2</td>
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<tr>
<td></td>
<td>Spring</td>
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<tr>
<td>Mathematics</td>
<td>Fall</td>
<td>68.1</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>77.2</td>
</tr>
<tr>
<td>Science</td>
<td>Fall</td>
<td>76.6</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
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<td>Social Studies</td>
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<td>78.0</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>81.6</td>
</tr>
<tr>
<td>VAPA</td>
<td>Fall</td>
<td>69.3</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>67.7</td>
</tr>
<tr>
<td>World Languages</td>
<td>Fall</td>
<td>80.9</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>85.1</td>
</tr>
</tbody>
</table>

Teachers also run reports for each class frequently, which provide information on students' course progress. If students are not engaged, teachers will communicate with them and take appropriate action. Core courses are needed for graduation and cannot be dropped. If the students try an elective course and do not like it, they have the ability to switch to another elective course.

An SDVS teacher remarked:

If there are students who are not passing, I will often reach out and see if they want some help with the class. So, we can kind of monitor that way. I’ll run a report just to see what the percentage completion is, what the current grades are in each class, and that way, I can kind of see who needs help.

Another teacher declared:

I kind of look to see if they’re struggling with the quizzes or mastery tests or the written discussions or activities—that kind of thing. But basically, I’m looking for students who are below a C, and we want to pull those grades up and get them more into the class.
Indicators of Success: Learner Engagement

Measuring engagement in a virtual setting is challenging. Both the teaching and counseling staff at SDVS engage students in multiple ways, such as holding weekly office hours; conducting live lessons; and sponsoring virtual community groups, virtual clubs, and in-person clubs. While both administrators and teachers agree that engagement is tricky and a constant challenge, teachers are expected to communicate with their students daily through Google Chat, which is a practice that administrators cite as important to their success. Teachers also reported collaborating with each other when reaching out to students to avoid overwhelming situations (for example, multiple teachers contacting a student at one time).

Embedded in Courseware are activities that indicate some aspects of learner engagement. At SDVS, some courses are customized for students to complete activities on a Google Docs document or via Dropbox. Teachers create workshops—virtual opportunities for students to meet as a group and discuss class content as needed. Their workshops are prevalent in math and sometimes in other courses that lend itself to this style of learning. Teachers report modifying the activities—either taking some out or even adding their own. Teachers also grade the activities separate from the Courseware EOS grade. At the end of the course, all of the teachers report, including a “class participation” component to the EOS grade, as another tool to encourage greater connection to the learning experience.

One SDVS teacher commented, “We keep the majority of the mastery tests and the tutorials and things like that because we know that it matches the standards, but oftentimes, [we] take out the discussions and the activities and put in our own.”

Another teacher noted, “So, the majority of our stuff is...automatically graded, and we manually grade the discussions in the activities.”

Another elaborated:

I found most success when I have kind of a third-party option for them within the meeting to add something, whether it’s a Padlet, or even just a Google Slide that I share with them, and they jump in and add a Post-it [Note].

Indicators of Success: Attendance

Attendance in SDVS is tied to learner engagement, which is not limited to where or when in the day students do their work. Any work submitted on a school day is considered an attendance. The teachers run their Courseware report, see students’ progress, and then start individual instruction for the day. Each student is assigned a Teacher of Record (TOR) who is responsible for contacting students daily. TORs manage students’ day to day activities, help them feel connected to the school, and act as the liaison between the school and parent. Students also have Highly Qualified Teachers (HQTs) within each class subject. In addition to providing academic support in their classes, HQTs are also expected to check in with their students regularly. Like a traditional school, if students fail to demonstrate participation, SDVS has processes in place to respond. Students may be referred to SDVS’ multi-tiered process for
reengagement at the end of a learning period. Importantly, SDVS does not wait for students’ lack of engagement before intervening.

One SDVS described:

My day looks like appointments throughout the day and during free time . . . I’m contacting students on my math lists, checking their grades, seeing where they’re at sending messages, either texts or phone calls or chats, whatever is in our contact system that we see works well for that student.

Another commented:

We’re looking for them to be completing assignments, like mastery tests, discussions, activities, posttests, things like that, preferably passing them. So that’s kind of what we’re looking for. But even if they’re just reading a tutorial for the day, I count that as attendance. So really just engagement in any of their classes will be attendance for that day.

**Indicators of Success: Graduation**

The California Education Code establishes a minimum set of graduation requirements for California high schools (California Department of Education, 2023, April 26). SDVS students on the traditional track need to earn 220 credits to graduate, while students pursuing a career diploma need 200 credits. Because Courseware serves as the core curriculum at SDVS, passing the course awards the necessary subject credit to graduate. However, at SDVS, students may have more time to facilitate graduation.

The graduation rate improved during the years of this study (2021–22) because during the COVID-19 pandemic, students only had to complete 130 credits (per Assembly Bill 104, the state minimum was reduced; California Department of Education, 2023, March 3). For example, in 2022, the graduation rate reported on the California Department of Education dashboard was 90.3%, including 25 fifth-year graduates (California Department of Education, 2023, July 26). In 2021, the rate was 75.3% (137 graduated out of 182), and that rate was the same in 2020 (128 graduated out of 170). The seniors in 2022 were in 10th grade when COVID-19 closed schools, and many are struggling to catch up. Of the current seniors, most graduated. Only one or two dropped out, transferred, or stayed enrolled for another year.

One SDVS educator remarked: “(The) . . . graduation rate . . . it’s been pretty effective, and that’s even with our fifth-year seniors. It may take five years to finish, but at least they finish.”
Even with the higher graduation rates, administrators struggled ethically with the decreased graduation requirements of the COVID-19 pandemic. Students only needed 130 credits versus 220, which likely pushed many to complete them and meet the requirements. Yet administrators wondered whether that was a good thing or not. They accommodated the decreased requirements but increased their workshops on career readiness.

An SDVS educated admitted:

> And it’s hard to know how to balance between like what the state is asking you and what’s feasible and what you know is realistic. . . . I even felt really conflicted about the 130 grad [credits] . . . so we ramped up our college and career awareness for those students. We gave them workshops to attend. We focused on a career-interest surveys for them to really try to build something so they're just not left at, you know, I have a high school diploma now. . . . I don't know if that necessarily helped benefit those [graduated] kids right now.

**Indicators of Success: Assessments**

State test data for the 12th-grade seniors is scarce. Only about a quarter of the students (42 out of 172) had any available data, even including prior years. Analyses of these data were inconclusive and therefore not included in this report.

The mastery tests Courseware provides are used to assess students to ensure that they are on track. Formative assessments are also woven into Courseware at frequent intervals and include non-scored feedback, checks for understanding, teacher-graded activities and assignments, quizzes, unit tests, and
other performance measures. For math, SDVS use Edmentum Exact Path, our K–12 diagnostic-driven individualized instruction program. The adaptive diagnostic is given at time of enrollment as a premeasure to determine specific skill gaps and inform placement into the appropriate math course. For other subjects, the administrators assign courses based on students’ previous grades, transcript information, and on students’ postsecondary goals.

An SDVS educator explained:

Now, with all of our kids in terms of math, we give them the Exact Path, the diagnostic. And if they do score lower than, let’s just say the grade level of what we would assume integrated math would be, then they would get the foundational, the algebra readiness, or integrated math readiness class to build those skills. So, math is the only one that we really, you know, have to see what their results are first before we give them the course.

Most students from the analytic sample achieved relatively high scores on their end-of-semester (EOS) assessment in Courseware, as is evident from Table 5, with median EOS scores ranging from 72.9 to 92.5 in the fall semester and 69.4 to 91.1 in the spring semester in the 2021–22 school year. When we compare EOS assessment scores to course grades for the semester (Table 4), we found that students tended to score higher on their EOS assessment than the course grade. One explanation for this finding is that EOS assessment scores make up a part of the final course grade; student participation and their scores on other activities and assessments also contribute to the final course grade.

One of the challenges SDVS teachers and administrators reported is the tension between a student having taken the course content (sometimes more than once if coming from a prior school), yet failing to adequately pass the test. In that case, the administrator seems to differentiate between knowing the content and passing an exam. Not being able to pass an exam, in other words, did not indicate for the administration that the student did not understand the content and could not progress. Pretests are sometimes used if students have already taken and failed a course but in combination with other course stipulations and administrator permission.

An SDVS educator clarified:

We actually do open up the pretest for that student to maybe get them to move a little bit faster through the program and especially with kiddos that are, you know, 19 to 20 [years old] . . . and they’ve already been exposed to that content. So, we feel confident to be able to give them the pretest in a course where they can actually, maybe move through those tutorials a little bit faster.

Table 5. Median EOS Assessment by Subject and Semester, 2021–22

<table>
<thead>
<tr>
<th>Subject</th>
<th>Semester</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives</td>
<td>Fall</td>
<td>72.7</td>
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<tr>
<td></td>
<td>Spring</td>
<td>69.5</td>
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</table>
### Instruction Is Informed by Teacher-Student Relationships and Guided by Principal Leadership

SDVS has a student-teacher ratio ranging from 5:1 to 25:1, based on the course, and the school stresses personalized learning for students, also acknowledging that students' engagement is not always consistent. The administration works with families often, reaching out to check on attendance and overall well-being. This relationship formation, with families and between teachers and students, is essential for student success because teachers can tailor their instruction accordingly and support each individual student, including providing mental health resources as needed. As mentioned previously, each student's Teacher of Record is required to contact the student each day. This teacher resolves any issues, facilitates the school's information to the home, and provides additional support that the student may need to be successful.

An SDVS teacher described:

> The first thing I do is, I log in. Who worked yesterday and what did they accomplish? I have to run a report between 8:00 and 8:30, and I evaluate my students' work from the day before. Some of them didn't log in. Some of them did log in. Some of them did assignments and failed. Some of them did assignments and passed. So, I spend the first half hour to hour analyzing what my kids
did the day before, and now I may have specific appointments with my students for today; I may have just, “Hey, I’m checking in.”

The Highly Qualified Teachers in each subject matter work with students on a one-on-one basis to respond to individual learning needs and provide tutoring and academic support in their specific subject matter. Academic progress monitoring is conducted by students’ Teachers of Record, who works with students to set individual goals on a daily, weekly, and semester basis.

Interestingly, although students have access to the entire course content, sometimes teachers will choose to “hide” some course content and let students focus on just two or three sections at a time, waiting to assign the remainder until after they finish the first section. These adaptations directly result from teachers understanding their student population. Some students panic seeing how much there is still to do to get credit. Other students like seeing that they are on track to course completion.

Also, if a student cannot finish a course within a semester, teachers can issue “no grade” for that semester and let the student continue working on that course next semester. School counselors will also guide students who want to take courses from community colleges. The school takes a community approach to helping students be successful.

An SDVS educator reported:

[We do not offer official IEPs (Individual Education Programs) for all students, but] in some ways every kid has [a plan, because we’re all kind of working with them on a very individualized basis. And we work with their families too, so it’s kind of like a community effort rather than just, you know, what you usually think of with an independent study school.

In virtual schools, teachers and students rarely “see” each other in traditional ways. However, staying communication with teachers and getting feedback from teachers have been identified as valuable parts of the online learning experience. Studies have found that students are more likely to succeed when they have higher levels of interaction with online teachers (Borup et al., 2020; Johnson et al., 2023). Administrators at SDVS believe that the teachers overall are successful in building relationships with students. Teachers check in with students regularly, and students reach out to teachers if they have problems.

An SDVS administrator explained:

It all starts with building that relationship. So, if the teacher is able to take the time out during the beginning of the school year to really build a relationship with the students, then the engagement is a lot richer and fluid. And that’s what’s happening right now. . . . The kiddos are getting used to these live lessons, and I’m starting to see cameras on now. And I’m starting to see them actually speaking up rather than typing out their answers. But I think right now, it’s a building process in terms of engagement.
Teachers welcome knowing what’s going on in their students’ lives and report that, in some ways, the virtual environment facilitates deeper communication. One administrator likens it to being a homeroom teacher, a confidant for the students. The online space seems to allow privacy for personal problems to be addressed.

The administrator further stated:

I think the thing that I love [is] the daily communication, like [when] I was a site-based teacher, I loved homeroom. I love standing at the door . . . so me as a teacher . . . . I’m going to make sure that in my homeroom [I ask:] “Is there something I can do to help?”

However, teachers also reported some obstacles. For example, some students prefer chatting in the Google or Zoom text box rather than unmuteing themselves to share their thoughts during group video conferencing meetings. This is common particularly for students who have anxiety about speaking up in public or who are in a learning space without privacy.

An SDVS teacher discussed:

But because we’re in an online environment and we have students with a lot of anxiety and that social phobia, we have students that don’t have their cameras on or that don’t feel comfortable speaking. So, they do use the chat feature on the side of the Google Meet, and they’ll answer questions to their teacher specifically—that right now is, I would say, the majority of engagement that’s happening in some of these live lessons. It’s my passion to really build that engagement a little bit more robust for our students.

Throughout the administrator interviews, it became clear that principal leadership is critical to SDVS’ success. The school’s principal supports and guides ongoing teacher-student relationships. She is aware of teacher and student engagement and is attentive to the teachers’ instruction.

The SDVS principal illustrated:

Contact Manager . . . it’s a diary that [teachers] basically are writing regarding what they’re working on with the students. In this environment, there is a lot of trust that needs to happen. You know, I’m . . . not a micromanager by any means . . . . but there is . . . that ambiguity. You know what our teacher is doing, and you know, I love to think that if parents are very happy, if students are happy, I usually only hear when they’re not, and I don’t get those calls at all. So, I do base it on a little bit of more trust with the staff.

The trust the principal builds with the teachers is reinforced with personal support and observation. Prior to COVID-19, classroom observation occurred in the central office, where she would sit in a teacher’s cubical and listen in on a lesson. Then, her leadership strategies adapted in response to the new context. The principal also touched upon some of the internal professional development that she designs. For instance, currently the educators have a book club and are reading about online engagement strategies.
The principal described:

When we were in the office, the main office that we had, there were about 25 teachers. I used to just kind of listen in on their teaching to get somewhat of an idea of how things were going. Obviously, in an online environment now, it can be very difficult. However, I do pop into their live lessons occasionally just to check in [and] see how things are going. Right now, we're really building the idea or understanding of true engagement and what that looks like in an online setting. So, I'm observing teachers throughout the week just on engagement . . . what their lessons look like when they go in and they're actually teaching.

The research literature recognizes that student-teacher engagement and personalization is critical for online learning (Gallagher & Cottingham, 2020). It follows that teachers need to feel engaged with their peers and supported by their administrators. Not only is teacher collaboration critical to professional development and learning, but it is associated with student achievement (Horn & Little, 2010; Ronfeldt et al., 2015). But, as SDVS' principal demonstrates, online collaboration and engagement does not happen by accident. It must be purposeful.

At SDVS, the principal and teachers make time to engage in team chats together. They have organized discussions about their instructional practice. Critically, the principal mentions “strategizing.” Teachers are not only providing emotional support but also deepening their conversations to determine instructional best practices for their students. Horn and Little (2010) differentiate professional development programs that provide instructional planning as well as emotional reassurance. While the latter helps teachers feel like they belong to their community, instructional discussions focused on lessons are beneficial for student achievement (Ronfeldt et al., 2015). Both are important.

The principal noted:

One [group chat] was called EL [English learners] support. . . . Listening to all these teachers, they're collaborating like crazy, talking about how they're best supporting their EL students . . . they're strategizing how they're going to work on certain tactics with their students. . . . [Later,] they reflect on how things worked . . . lots of collaborating . . . and the results are what I see with the kids, you know, actually producing.

The school is focused on creating an environment that is welcoming, yet academically rigorous. Each individual student enters the classroom—whether in person or virtually—with a different background and a different perspective of the immediate learning environment. Regardless of these differences, all students must feel supported in their learning and prepared to respond to the challenges they may face in the classroom (Durlak et al., 2015). SDVS' teachers and administrators have shared strategies they enact that attend to the needs of the student learners, ensuring that communication and collaboration—values that are key to success at SDVS—are at the forefront.

While not physically in the same space as their teachers, students nevertheless rely on connections in their learning environments and on support from their teachers to remain engaged and interested in their learning (Bakia et al., 2013; Minkos & Gelbar, 2021; Rickles et al., 2018). The same is true at the
educator level. In order to provide meaningful support for the student body, SDVS staff's needs must be met as well. Through strategic planning and instruction, administrators and teachers build trust with one another and, in turn, with their students. This helps to ensure that, at all levels, the SDVS community has a support system in place when faced with difficulties both in and out of the classroom.

Learning and Teaching During a Pandemic

The effects of the COVID-19 pandemic permeate this report—including how the flow of traditional track students changed to credit recovery, how SDVS responded positively to a virtual learning approach when brick-and-mortar schools struggled, and how COVID-19 brought in a new “clientele” of students who needed to graduate despite school closures.

One administrator believed that COVID-19 improved the school's teaching and, in turn, affected the way it used Courseware, stating:

"Our program changed for the better . . . when we first purchased Edmentum, we were still on the . . . route of being managers for students, of them being truly independent, them working on their own, (with) the teachers. . . . Now since the pandemic, [teachers] truly are teaching; they're doing live lessons. They're working one-on-one with students; there's so much more teaching going on with Edmentum.

Students engage with the curriculum asynchronously at home. However, before COVID-19, teachers in SDVS commuted to an office and taught virtually. Teachers had cubicles where they would conduct lessons. Students could, and were expected to, come to the facility, and work one-on-one with a teacher in person. Teachers also would meet with students in person in some local libraries. Now, all teachers and administrators teach online and communicate through the Google Chat communications tool. In response to these changes, teachers conduct live lessons through Google Meet video conferencing system and focus on more social and emotional student support.

An SDVS teacher observed:

"We did start working from home—that was a difference. . . . We'd see each other every day and . . . be working together. COVID hit, and we all started working from home. But it's worked out really well for us . . . staying in contact through [Google] Chat and the [Google] Meets and meeting and things.

During the lockdown phase of the COVID-19 pandemic, SDVS had provided hotspots to students because some students had difficulty accessing Wi-Fi. Now, public libraries can provide hotspots, and some students may be more aware of resources available to them, although access still remains an issue. Furthermore, COVID-19 elevated mental health as a topic for schools to tackle. SDVS has mental health staff on call, and now everyone at the school knows how to get students help."
Although it is essential that we understand the effects of COVID-19 learning loss on students, SDVS demonstrates that not all the effects of were negative. Student mental health as a topic surfaced nationally during the pandemic, but mental health issues have always been present. Now, student needs are acknowledged. Instructional strategies targeted student engagement, and SDVS teachers may be collaborating more than they did previously. While the decreased COVID-19 graduation requirements in California perhaps opened some previously locked gates for students, they now hold a diploma, which is predictive of salary and lifetime income (U.S. Bureau of Labor Statistics, 2022)

**Conclusion**

SDVS presents a story of success for educators, families, and students. Although prior research on virtual and blending learning argues that students who struggle in school will generally struggle more online (Gallagher & Cottingham, 2020), some virtual schools stepped in and found themselves well-prepared. Specifically, SDVS used Courseware as its asynchronous curriculum to provide high-quality learning opportunities for its students. By adapting the curriculum and keeping the needs of its students in mind, SDVS leveraged its online learning environment to create and maintain a personalized learning program for each student despite a pandemic.

The current study used a mixed-methods approach to answer questions about the population of the students, the ways teachers used Courseware, their metrics of success, and the effects of COVID-19 on the school. We examined usage data, completion rates, and outcome measures such as grades, alongside administrator and teacher interviews. Specifically, four themes emerged from this study.

First, the school provides a structured experience for the students based on understanding the students’ personal experiences and community. We found that many students fall under McKinney-Vento status, eligible for assistance, and some do not speak English as a first language. Others struggle with mental health and social anxiety. The requirements of the specific population the school serves emerged in conversations with teachers and administrators because of frequent communication with students and families. The educators we interviewed are very aware of the challenges their students face. Teachers at the school share a disposition of care—as an example, one mentioned that she always liked “being a homeroom teacher,” explaining that she felt more connected with students in homeroom.

Second, the educators at the school have purposeful strategies for fostering engagement with students, families, and each other in a virtual setting. They run reports about the day-to-day work students are doing to make sure that they are on pace, they call and text students about their work, and the principal reaches out to families if attendance lags. Teachers attend a book club together, and one book they read is about increasing student engagement. Across several interviews, it became clear that the educators shared a definition of what it meant to be “engaged” virtually, one that is supported by the principal leadership.

Third, to actively support their students, educators do not simply use Courseware as an asynchronous, self-standing program. The educators report customizing courses to specific needs by making modifications for both credit recovery students and traditional students. They use many of the Courseware features, such as the pacing metric and discussion threads. But they also teach live lessons,
use Google Meet, and share resources with one another. Teachers collaborate about supporting English learners by adapting curricula, translating content, or creating scaffolds for existing lessons. Courseware is personalized for their student body.

Last but not least, the educators in the school use multiple metrics to capture success. During 2021–22, SDVS had high completion and “successful” completion rates. Across all subjects, students in our analytic sample were more likely to successfully complete a course than not complete it. Prior research has suggested that online high school curricula require both rigorous content and the flexibility to address gaps in students’ prior skills and understandings (Rickles et al., 2018). The SDVS principal highlights SDVS’ priority of personalizing the learning experience for each student due to the flexible tailoring of the content.

“Success breeds success” seems to be a motto at the school, and the educators are focused on more than just providing a high school diploma. In fact, during COVID-19, when the graduation requirements lessened, they ramped up providing career coaching and working with students about workplace readiness. They realized that the students graduating may not be as prepared as past cohorts in math, science, or language arts because the California state graduation requirements decreased. Because of this, SDVS wanted to ensure that seniors had a postsecondary plan once they graduated, so the staff enacted practices to make certain that the students graduated with as much knowledge about academics and careers as they could provide.

Discussion

Adaptive online course models designed to support learning may hold promise for struggling students, including those in need of credit recovery (Rickles et al., 2018). But prior research in high school classrooms points out that virtual programs have inconclusive effects (Heppen et al., 2017; Rickles et al., 2018). An increasing number of studies examine the associations between the elements of K–12 online courses, instructional strategies, and student outcomes (Johnson et al., 2023; Zheng et al., 2020). This case study challenges the inclusive supposition and adds to the research literature by detailing the ways in which one school enacts “adaptive” instruction.

To begin, the ways in which the teachers at SDVS strategize to create supports and modify their lessons—for English learners as one example—suggest that SDVS educators attend to their students’ needs by purposefully collaborating to design successful learning opportunities. Scholarship in teacher leadership differentiates between teacher professional development focused on providing personal support, where communities offer empathy, such as “that happened to me” or “that student is challenging” versus other professional communities that spend time solving thorny problems of instructional practice (Horn & Little, 2010). The latter communities represent caring partnered with action. In this paper, we argue that the important work of adaptive instruction was built on intentional design—the teachers and administrators themselves created a community of best practices that responds to the needs of their students and holds them to the highest standards possible academically and professionally. The blend of personalization and instructional improvement are twin pillars of high-quality schools (Herlihy & Quint, 2006; Quint, 2006).
Furthermore, the findings of this case study suggest that the trope of “virtual learning leads to disengagement” may be more nuanced than it appears. On one hand, virtual instruction may seem impersonal because students and instructors are not in the same classroom and relationships are distal especially during a pandemic (Heider, 2021). Clearly, personal relationships are important for student success and academic achievement (Delgado et al., 2016). On the other hand, a remote environment at SDVS allowed for one-on-one interactions and enabled instructors to build trust and rapport with individual students in ways that traditional classrooms may not facilitate. As one example, the online environment may have encouraged students to share privately with their teachers about the problems they were having at home. Teachers reported such conversations to us. The school has two counselors and one therapeutic licensed social work counselor for all the students. The school partners with a mental health program that matches families and students with mental health resources. Parents can reach out to the counselor; counselors will help find therapy. Teachers can also refer students directly. In a public school building, funding for counseling is scarce, and teachers are usually too burdened to take on the responsibility of student mental health and well-being (Shelton & Owens, 2021). It’s also difficult to have private conversations in a busy public school hallway or class. Students may shy away from sharing. The school’s approach to mental health follows national policy guidelines (National Research Council and Institute of Medicine, 2009).

Additionally, when teachers have online access to student class activities and see for themselves if students are on pace in the course or did the reading, it illuminates student disengagement before it turns into dropouts or failed courses. Certainly, students in traditional schools experience disengagement and drop lessons. However, disengagement with learning is often either unobservable or it becomes entangled with behavioral problems in the classroom, causing teachers to get sidetracked (Arnold, 1997; Masten et al., 2005). In contrast, the principal of SDVS acknowledges that she does not have to deal with behavioral issues. In this setting, academic disengagement is obvious. If a student shows signs of not doing the work, the principal can reach out to the families. Email exchanges or texts between teachers and parents, for instance, may be more frequent. Teachers run reports on student activities in the system on a daily basis. Prior research has examined the processes where virtual settings may promote, rather than hinder, student-teacher-family interactions (Doherty & Mayer, 2003); future research should continue this line of inquiry.

In conclusion, it is essential that educational research examines if and how educational interventions improve student outcomes such as test scores. At the same time, there is room for case studies that analyze the perspectives of administrators, teachers, and other stakeholders who seek to make schools successful. The story of San Diego Virtual School points to the ways in which success comes from qualified teachers implementing promising approaches in their classrooms alongside ongoing collaborative analysis and improvement of practice with colleagues. Some researchers argue that it is at the school and classroom level where specific challenges of “adaption” exist (Johnson et al., 2012; Johnson et al., 2014). Effective school-based leadership depends not only the principal but also on the teachers’ efforts to address schoolwide challenges to ensure that instruction is inclusive, to meaningfully engage parents, and to capitalize on the knowledge and skills of colleagues through professional development. Whether in virtual or brick-and-mortar settings, the challenges and opportunities for high-need schools seem to be the same.
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