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| STEM AP Access Expansion Opportunity InitiativeYear 2 Year End Report |
| September 30, 2022 |

STEM AP Access Expansion Opportunity Initiative

*Year 2 Year End Report*

Prepared by the UMass Donahue Institute’s
Applied Research & Program Evaluation Group

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# Executive Summary

This second Year-end report is part of the ongoing evaluation of the STEM AP Access Expansion Opportunity (Expanding Access) initiative by the UMass Donahue Institute (UMDI), under contract with the Massachusetts Department of Elementary and Secondary Education (DESE). This report focuses on high-level findings about the second year of the initiative (2021–22 school year), which was the first year the program was implemented in schools. This report is based on data collected through focus groups, interviews, and surveys; secondary data from DESE and VHS Learning; and notes from monthly collaborative meetings that included DESE, VHS Learning, and UMDI. Please see the summary of methods, below, for details about data collections used to inform this report. This Executive Summary provides an overview of the key findings and recommendations.

## Key Findings

### 1. DESE and VHS Learning reported success in relation to the launch of the initiative, and in collaboration between both groups.

DESE and VHS Learning reported that the launch of the first year of the Expanding Access initiative’s implementation in schools was successful. Through independent and joint efforts by DESE and VHS Learning, including recruitment of virtual AP instructors, Site Coordinators, and schools; and student enrollment and ongoing student support, all virtual AP courses ran successfully. Both DESE and VHS Learning indicated that effective communication and a shared prioritization of student success contributed to their partnership. VHS Learning’s experience with providing virtual learning services to students across the Commonwealth was also noted as an asset that contributed to the effective launch of the initiative.

2. Implementation has varied at the school level, both among schools new to VHS Learning and those with established histories partnering with VHS Learning**.**

Implementation of the Expanding Access initiative varied considerably among participating schools. This variation was most evident in schools’ recruitment and enrollment of students, and in the supports provided to students, including: academic year resources and supports; time and space allocated during a school day to support virtual AP coursework; and expectations for AP exam-taking. These variations were evidenced among both schools without a prior relationship with VHS Learning, and those that had established partnerships with VHS Learning.

### 3. The initiative met 30% of its initial enrollment target.

Leading up to the launch of the initiative in schools, DESE and VHS Learning initially planned to serve up to 1,500 students during the first year of program implementation.[[1]](#footnote-2) DESE and VHS Learning engaged in capacity building, hiring, and other activities at a scale that would support full enrollment. Despite extensive recruitment efforts, enrollment peaked at 456 seats, representing approximately 30% of the initiative’s initial enrollment target.

### 4. Course persistence rates were below VHS Learning’s programmatic average.

Across all courses offered during the first year of program implementation, the observed persistence rate was 46%. Notably, VHS Learning reported that the typical (or overall) persistence rate for the courses they offer is approximately 80%.[[2]](#footnote-3) While the factors that contributed to this lower than anticipated rate of student retention have yet to be fully documented, factors noted by school representatives included possible preferences for in-person learning following the COVID-19 pandemic, students’ under preparedness for VHS Learning’s paced, asynchronous learning structure, and student misunderstandings regarding the rigor of the AP STEM courses offered through the initiative.

## Recommendations

### 1. Increase the clarity and frequency of communication with key personnel at participating schools.

School administrators and Site Coordinators provide the most in-person engagement with students and families regarding the Expanding Access initiative. It is important for school personnel to fully understand the intent and expectations of the initiative so that they can both provide adequate support to students enrolled in the initiative, and effectively share expectations of participation with students and parents/guardians. To that end, schools may benefit from more tailored and frequent communication from both DESE and VHS Learning.

### 2. Continue to prioritize diversity, equity, and inclusion, particularly as enrollment in the initiative grows.

To increase student enrollment in the Expanding Access initiative, DESE opened enrollment to all schools (and students)—while noting a preference for schools to enroll diverse populations. However, as enrollment in the initiative increases, DESE may consider recentering efforts on diversity, equity, and inclusion (DEI). We recommend that DESE continues to build communication and recruitment strategies with this in mind, and to the extent possible, center the original goal of serving students who traditionally have limited access to AP STEM courses.

***3. Expand outreach.***

Enrollment during Year 2 of the Expanding Access initiative represented approximately 1% of the total school population among schools participating in the initiative. In order to reach the goal of 1,500 seats enrolled per year, and in an effort to improve both recruitment and retention of schools and students into the initiative, DESE may consider increasing staffing to expand communication and outreach efforts across the Commonwealth.

# Introduction

The University of Massachusetts Donahue Institute (UMDI) is working with the Massachusetts Department of Elementary and Secondary Education (DESE) to evaluate the STEM AP Access Expansion Opportunity (Expanding Access) initiative. Expanding Access is a state-wide initiative geared towards improving school capacity to provide Advanced Placement (AP) STEM courses to high school students across the Commonwealth. By increasing enrollment in AP STEM courses, DESE is supporting students in their post-secondary aspirations, enrollment, and persistence in STEM majors, and for students to ultimately pursue STEM careers within the Commonwealth. VHS Learning has been selected by DESE to provide virtual AP STEM courses and related support services to students and schools/districts participating in the initiative. VHS Learning is also collaborating with DESE and UMDI to support key facets of the evaluation.

The three primary (and interrelated) goals of the evaluation are to: (1) monitor and assess key metrics of program implementation and impact, (2) facilitate continuous program improvement, and (3) promote organizational learning—particularly for DESE and participating schools/districts.

## Summary of Year 1 Activities

The first year of the Expanding Access initiative was largely a planning year for DESE and VHS Learning, which focused primarily on school recruitment for participation in the initiative. During Year 1, UMDI interviewed key personnel from DESE and VHS Learning to capture reflections and knowledge related to Year 1 project activities, and it was observed that over the course of Year 1, DESE successfully engaged in purposeful and intentional planning leading up to the launch of the Expanding Access initiative, and engaged partners in thoughtful and responsive collaboration around project planning and implementation.

## Summary of Year 2 Activities

During Year 2, the first year the initiative was implemented in schools, UMDI worked with DESE and VHS Learning to develop and finalize data collection instruments and to conduct data collection and analysis. To gain insights into the initiative’s implementation and the experiences of student participants, UMDI:

* Interviewed interested parties, including: DESE; VHS Learning; students; parents/guardians; and Site Coordinators and school administrators.
* Distributed surveys to students and school administrators.
* Analyzed enrollment data submitted by VHS Learning.
* Analyzed secondary demographic data for students and school administrators submitted by DESE.
* Held monthly joint meetings with DESE, VHS Learning, and UMDI.

Results from analyses of these data are integrated throughout this report. This ongoing work lays the foundation for quasi-experimental/summative analyses that will be completed during the final year of the initiative.

# Methods

Per the evaluation scope, this report includes findings from several sources: one focus group with students and three with parents/guardians; five group interviews with schools (Site Coordinators and/or school administrators), one group interview with DESE and one with VHS Learning; surveys of students[[3]](#footnote-4) and schools;[[4]](#footnote-5) secondary data from DESE and VHS Learning; and notes from monthly joint DESE, VHS Learning, and UMDI meetings. Findings integrate data gathered across all data collection activities.[[5]](#footnote-6) Further description of the methods utilized is provided in Appendix A.

Protocols for interviews and surveys were developed during the fall, winter, and spring of FY22 in consultation with DESE and VHS Learning.

## Evaluation Questions

Over the course of the past year, UMDI was tasked with addressing specific evaluation questions in relation to the initiative’s implementation and success during Year 2 of the initiative. These seven evaluation questions guided the development of survey, focus group, and group interview protocols:

1. What implementation measures are being met? Why, why not?
	1. What implementation successes and barriers do DESE, the vendor, and schools/districts experience? What is working and what is not? How does this change over time?
	2. How do schools/districts recruit students? What data are schools/districts using to identify potential participants? Is the program reaching the intended target population?
2. What is the impact of COVID on program launch, implementation, and participation of schools and students?
	1. How has COVID impacted student preparation for AP courses? Have students been adequately prepared in pre-AP courses and supports?
	2. What summer courses and supports are districts/schools providing to bolster preparation for AP courses?
	3. How prepared do participating students feel for AP courses?
3. What strategies do schools/districts use to support students who take AP STEM coursework through this program?
	1. What strategies do schools/districts use to ensure that a high percentage of participating students sit for the end-of-course examinations?
4. What are the impacts of the program on student access, participation, and performance? (i.e., AP course taking & passing, AP exam taking & passing, graduation, dropout, and post-secondary attendance, retention, & completion)
	1. Do program impacts vary by subject? For which student groups is the program most effective?
	2. Do program impacts vary based on types of supports available (e.g., intensive, high dosage versus drop-in tutoring)?
5. What is the cost of the initiative per student (including student supports, such as tutoring)?
	1. Which costs are fixed, and which are variable? Does cost vary by course type?
6. What could/should DESE and schools/districts do to ensure students who are served by the intervention are connected to services that help support their post-secondary success while they are participation in the program?[[6]](#footnote-7)
7. What could/should DESE and schools/districts do to promote the stability of the program/services?[[7]](#footnote-8)
	1. What are schools/districts doing to maintain and grow student enrollment in the program?
	2. How do schools/districts leverage and invest in their own capacity to support the program/services? What systems and procedures have schools/districts implemented to sustain their work?
	3. How do schools/districts plan to ensure the continuation of the program beyond the life of the grant?

Responses to these evaluation questions are integrated into the report findings. For further information on the ways in which evaluation questions have been addressed across the findings, please see Appendix B.

## Limitations

Data findings presented in this report were limited due to low participation among students, parents/guardians, and schools. In collaboration with DESE, UMDI intends to both revise the scope of the evaluation and subsequent data collection methods in future years, and to modify recruitment efforts.

# Findings

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| **Summary of Key Findings** |
| * DESE and VHS Learning reported success in relation to the launch of the initiative, and in collaboration between both groups.
* Implementation has varied at the school level, both among schools new to VHS Learning and those with established histories partnering with VHS Learning.
* The Expanding Access initiative met 30% of its enrollment target.
* Course persistence rates were below VHS Learning’s programmatic average.
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## 1. DESE and VHS Learning reported success in relation to the launch of the initiative, and in collaboration between both groups

DESE and VHS Learning reported that the launch of the first year of the Expanding Access initiative’s implementation in schools was successful, through both independent and joint efforts. Leading up to the initiative’s launch in schools, DESE engaged in a consultative process with 78 schools/districts across the Commonwealth, resulting in a final total of 48 participating schools and 456 course seats enrolled. All AP course offerings (Biology, Calculus AB, Chemistry, Computer Science, Environmental Science, Physics, and Statistics) were fully staffed through VHS Learning’s teacher recruitment efforts,[[8]](#footnote-9) and all schools had in place at least one Site Coordinator to monitor student progress. Summer supports were additionally offered by VHS Learning leading up to the launch of the academic year, including virtual office hours with VHS Learning instructors and virtual orientation sessions.

Throughout Year 2, DESE and VHS Learning engaged in frequent communication regarding school and student needs, and in group interviews both reflected positively on their collaborative efforts. A member of DESE’s team, when describing their experience interacting with VHS Learning noted:

*They’ve been great partners, willing to go the extra mile.*

Similarly, VHS Learning staff reflected on their strong working relationship with DESE:

*Very good rapport with DESE, great collaboration, they’ve been on all sessions we’ve run. That collaborative rapport has been nice.*

The Expanding Access initiative additionally benefitted from the selection of VHS Learning as a vendor, an organization which has a demonstrated history in building strong foundations for implementing and running virtual AP courses across Massachusetts. VHS Learning’s experience and capacity were a noteworthy asset in contributing to the effective launch of the initiative.

## 2. Implementation has varied at the school level, both among schools new to VHS Learning and those with established histories partnering with VHS Learning

School administrators and Site Coordinators described, through group interviews and survey responses, numerous variations in the implementation of the Expanding Access initiative within schools, both among schools new to VHS Learning programming, and those with prior experience partnering with VHS Learning. These variations included Site Coordinator recruitment and selection, student recruitment, school-provided resources and supports including time and space allocated during a school day in support of students’ virtual AP coursework, and expectations for AP exam-taking.

#### Site Coordinator recruitment and selection

In survey responses, schools shared numerous criteria that were implemented to select Site Coordinators, including: familiarity with resources related to post-secondary education, knowledge of STEM course content, comfort with virtual learning, and the capacity to engage directly with students. While some schools indicated in survey responses that they did not engage in any formal recruitment process for their Site Coordinator, availability and bandwidth in several instances led to a school’s decision to nominate a particular person to serve as Site Coordinator.[[9]](#footnote-10)

There was noteworthy variation, in surveys and group interviews, in Site Coordinator recruitment and selection among schools with prior VHS Learning experience compared to those that did not have prior experience. Among schools that had previous experience with VHS Learning programming, schools shared that Site Coordinators were frequently selected due to their previous experience, essentially representing a continuation of their role. Alternatively, schools without prior experience with VHS Learning often placed staff in the role due to their bandwidth or capacity, suggesting little opportunity for staff to opt in or out:

*I was ‘volun-told.’…the [school administrator] at the high school sent me an email and said, “We need you to do this,” and I of course said yes.*

*In my job interview, they said that I would be watching over a class and just be a ‘body in the room.’*

#### Student recruitment

Schools similarly shared a variety of ways in which they recruited and selected students for participation in the initiative. In the school survey, when asked to describe the ways in which students were recruited, respondents most frequently indicated that all students at the school were made aware of the opportunity to enroll, while fewer indicated more targeted recruitment efforts such as making the opportunity available to students with a known interest in STEM, completion of course pre-requisites, GPA requirements, teacher recommendations, and/or targeting economically disadvantaged students.[[10]](#footnote-11) Interviews and group interviews with Site Coordinators and school administrators similarly echoed a broad approach to student recruitment:

*Yeah, so definitely in terms of the outreach, I’ll send it to every senior, every junior—we definitely want to open it up to as many people as possible*

*All upcoming juniors and seniors are aware of the opportunity.*

*We blasted it to everyone. All juniors and seniors got an email.*

#### School-provided supports and resources

In survey responses, schools shared a variety of ways in which their school offered supports and resources to students enrolled in the initiative (Figure 1). Respondents most commonly reported their school offering meetings with instructors and Site Coordinators, while fewer indicated access to student cohorting and technology support, or in-school tutoring and support for lab exercises.[[11]](#footnote-12)

Figure . School-provided supports

The majority of survey respondents indicated that their schools frequently integrated time into a student’s day to complete their virtual AP coursework, however schools did not always offer students a dedicated or quiet space to complete their virtual AP work. One student observed in a focus group[[12]](#footnote-13) that they had a dedicated space in the library to complete coursework. Alternatively, a participant in a parent/guardian focus group noted that their child completed coursework in a noisy cafeteria.[[13]](#footnote-14) Among school interviewees, Site Coordinators shared similarly diverse experiences. One Site Coordinator describing their school’s approach to ensuring that students are afforded a comfortable environment stated:

*We have them in the library, provide them with a space that is quaint and suitable and quiet. We have an average of 15 students per period.*

Another Site Coordinator shared that because students were expected to engage in self-directed learning, they were required to seek these spaces out independently:

*…we don’t have a room for them to go to, we don’t have a teacher they have to report to; it’s truly an independent study…students find a comfortable spot and get to work*.

AP exam intent

School survey responses additionally suggested some variation in expectations regarding AP exam taking for their Expanding Access-enrolled students. While 66% (16) of schools that completed a survey indicated that all enrolled students had registered for the AP exam, 25% (6) indicated that none of their students had registered for their AP exams.[[14]](#footnote-15)

In some contrast to survey responses, all school interviewees indicated without exception that all Expanding Access-enrolled students were expected to take their AP exams:

*We have been clear with them that that is an expectation of the grant, and they are expected to do so...that’s what we signed on for, and we expect the students to fulfill those expectations. You’re getting a free test, so you’re going to take it.*

*If you’re taking these AP courses, you’re taking the test. That’s kind of non-negotiable.*

## 3. The Expanding Access initiative met 30% of its initial enrollment target

Leading up to the launch of the initiative, DESE and VHS Learning initially planned to serve up to 1,500 students during the first year of the initiative’s implementation in schools, and engaged in capacity building, hiring, and other activities at a scale that would support full enrollment.[[15]](#footnote-16) However, despite extensive recruitment efforts, enrollment peaked at 456 seats across 48 schools, representing approximately 30% of the initiative’s initial target enrollment.

The 48 schools participating in the Expanding Access initiative reflected a diversity of geographic spread, locale, school type, and were both priority and non-priority zone schools.[[16]](#footnote-17) Among the participating schools: 67% (32) were located in Eastern Massachusetts; 19% (9) were in Western Massachusetts; and 15% (7) were in Central Massachusetts.[[17]](#footnote-18) Across locales,[[18]](#footnote-19) the majority of participating schools, 42% (20), were in non-gateway/non-urban areas. Among priority zone schools, the majority, 43% (10), were located in urban areas, while the majority of non-priority zone schools, 60% (15) were in non-gateway/non-urban areas.[[19]](#footnote-20)

#### Course enrollment

Seven AP STEM courses were offered to students during the first year of program implementation: AP Biology; AP Calculus AB; AP Chemistry; AP Computer Science Principles; AP Environmental Science; AP Physics 1; and AP Statistics. Analyses were conducted to assess course enrollment by priority zone utilizing enrollment information provided by VHS Learning (Figure 2). Of note is the high rate of enrollment in AP Computer Science Principles at 31% (142), while the lowest enrollment was AP Calculus AB at 3% (14). Relative to priority zone, noteworthy is the diverse spread of course enrollment across priority zone schools, while 91% (185) of seats from non-priority zone schools enrolled in three courses: AP Computer Science Principals, AP Environmental Science, and AP Physics 1.

Figure . Enrollment by course subject by priority zone

### Enrollment relative to select demographic variables

#### Gender

Among identifiable individuals (419),[[20]](#footnote-21) counts were generated to determine enrollment by gender and priority zone (Figure 3).[[21]](#footnote-22) The total number of enrolled female students (219, or 52%) was slightly higher than that of male students (200, or 48%). Priority zone schools had overall higher rates of enrollment than their non-priority zone peers.

Figure . Identifiable participants by gender by priority zone

#### Race/ethnicity

Analyses were also conducted to assess enrollment by race and ethnicity by priority zone (Figure 4). Noteworthy is the high representation of White students enrolled in the initiative (133), as well as the demographic distribution by zone designation, which varied considerably. Specifically, in priority zones the majority of students were Black (74), followed by Latino students (67). Contrarily, in non-priority zones, the highest participation was among White students (81) followed by Asian students (53).

Figure . Participants by race and ethnicity by priority zone

Figure removed due to small sample size.

**Economically Disadvantaged Status**

Analyses were conducted to identify the number of participants in the Expanding Access initiative categorized as economically disadvantaged (Figure 5),[[22]](#footnote-23) which is determined based on a student's participation in one or more of the following state-administered programs: the Supplemental Nutrition Assistance Program (SNAP); the Transitional Assistance for Families with Dependent Children (TAFDC); the Department of Children and Families' (DCF) foster care program; and MassHealth (Medicaid). Among participating students, 38% (162) were categorized as economically disadvantaged, the majority of which were within priority zones (114 students, or 70% of all economically disadvantaged students).

Figure . Economically disadvantaged students by priority zone

**Disability status**

Analysis was additionally conducted to determine the number of students who participated in the initiative if they were classified as having a disability. Among participating students, 21 (5% of the total identifiable population) had a reported disability. [Additional content has been removed due to small sample size.]

Figure . Students with a disability by priority zone

Figure removed due to small sample size.

**English learners**

Lastly, analysis was further conducted to identify the number of students engaged in English language programs. A total of 31 students (7% of the total identifiable population) were classified as being enrolled in an English language program. [Additional content has been removed due to small sample size.]

Figure . Students engaged in English language programs by priority zone

Figure removed due to small sample size.

## 4. The Expanding Access initiative experienced course persistence rates below VHS Learning’s programmatic average

Over the course of the initiative’s first programmatic year, 46% (210) of seats remained enrolled through May 2022 (Figure 8), a noteworthy variation of persistence compared to VHS Learning’s overall programmatic persistence rate of approximately 80%.[[23]](#footnote-24)

UMDI found notable variation of persistence rates between schools with and without experience with VHS Learning programming, and between priority and non-priority zone schools. UMDI also noted variation in persistence by course subject[[24]](#footnote-25) and relative to select demographic variables including gender, race/ethnicity, low income status, disability status, and 504 plan status. In addition to secondary data, key personnel have provided some insight into student withdrawals through interviews and group interviews, detailed below.

Figure . Total enrollment over time

### Retention of students from schools that have experience with VHS Learning programming was higher compared to schools that were new to VHS Learning programming.

Analyses were conducted to compare enrollment and persistence among enrolled seats from schools new to VHS Learning programming, and those that had prior experience with VHS Learning. Figure 9 represents the total number of enrolled seats over time by a schools’ prior experience with VHS Learning. While initial enrollment was notably higher in schools with no prior relationship to VHS Learning—65% (296) of total enrollment—compared to schools with a prior relationship (160), the latter group had a notably higher persistence rate at 66% (107), compared to the persistence rate at schools that were new to VHS Learning, at 34% (103).

Figure . Enrollment over time by a school’s prior relationship with VHS Learning

### Overall persistence of students from non-priority zone schools was higher than students from priority zone schools.

Analyses were additionally conducted to determine enrollment and persistence by priority zone (Figure 10). Despite a higher rate of enrollment in priority zone schools (253 seats) compared to non-priority zone schools (203), persistence of priority zone school-enrolled seats, at 33% (84), was notably lower than the persistence of non-priority zone schools, at 62% (126).

Figure . Enrollment over time by priority zone

***There is variation of persistence relative to select demographic variables.***

During the enrollment period of the Expanding Access initiative, priority zone schools had overall higher rates of enrollment, as well as overall higher rates of and diversity among their student populations (particularly of race/ethnicity, EL students, economically disadvantaged students, and students with a disability). However, non-priority zone schools had higher rates of persistence across nearly all demographic variables.[[25]](#footnote-26)

**Gender**

Analyses were conducted to determine persistence for identifiable male and female students who remained enrolled in at least one Expanding Access course through May 2022 (Figure 11). While female enrollment (219) slightly outpaced male enrollment (200), persistence among female students was notably lower, at 41% (89) than their male peers at 53% (106). Additionally noteworthy is persistence among male and female students by priority zone: Across both genders, those within priority zones had notably lower persistence rates than their non-priority zone peers.[[26]](#footnote-27)

Figure . Persistence by gender

**Race/ethnicity**

Analyses were conducted to determine persistence by race and ethnicity among identifiable students who remained enrolled in at least one Expanding Access course through May 2022 (Figure 12). Persistence was highest among Asian students at 71% (55), followed by White students at 52% (72). Latino students persisted at a rate of 35% (33), and Black students had a persistence rate of 29% (29). Additionally noteworthy is that across nearly all race and ethnicity categories, persistence of students from priority zone schools was lower than their non-priority zone peers.[[27]](#footnote-28) [Additional content has been removed due to small sample size.]

Figure . Persistence by race and ethnicity

Figure removed due to small sample size.

**Economically disadvantaged students (ECODIS)**

Analyses were conducted to determine persistence of total students who remained enrolled in at least one Expanding Access initiative virtual AP course through May 2022 who were categorized as economically disadvantaged (162) relative to enrolled students who are not categorized as economically disadvantaged (Figure 13).[[28]](#footnote-29) The persistence among economically disadvantaged students was 34% (55) compared to a persistence of 54% (140) among non-economically disadvantaged students. Noteworthy is that among economically disadvantaged students from priority and non-priority zone schools, students from priority zone schools had overall lower rates of persistence than their non-priority zone peers.[[29]](#footnote-30)

Figure . Persistence of economically disadvantaged and non-economically disadvantaged students

**Disability status**

Analyses were additionally conducted to determine persistence of identifiable students who remained enrolled in at least one Expanding Access initiative virtual AP course through May 2022 with and without a disability (Figure 14). Students with a disability had a noteworthy lower persistence rate compared to students without a disability.[[30]](#footnote-31) [Additional content has been removed due to small sample size.]

Figure . Persistence of students with and without a disability

Figure has been removed due to small sample size.

#### 504 Plan

Analyses were further conducted to determine persistence of students who remained enrolled in at least one Expanding Access initiative virtual AP course with and without a 504 plan (Figure 15). Noteworthy is that identifiable students enrolled in a 504 plan (22) experienced an overall higher rate of persistence at 54% (12) when compared to students who were not enrolled in a 504 plan at 46% (183).[[31]](#footnote-32)

Figure . Persistence of students with and without a 504 plan

#### Insights into student withdrawals

Interview and survey data provided some insight into why students opted out of the program throughout the year. Participants suggested that virtual learning as a result of the pandemic did not adequately prepare students for the rigor of a virtual AP course.[[32]](#footnote-33) In a conversation with representatives from DESE, staff acknowledged that virtual learning from the pandemic may have reduced student interest in pursuing additional virtual learning opportunities through the Expanding Access initiative:

*COVID has fried everyone, students are still recovering from virtual learning experiences during* [the] *pandemic, not everyone is keen on online learning because of that.*

Schools additionally acknowledged that, as a result of the pandemic and subsequent online learning, students may have been underprepared for a virtual AP STEM course, and perhaps didn’t fully understand the type of work and skills required to succeed in a virtual AP STEM environment:

*What I’ve seen, though, is that, as a result of the pandemic, some of the students who are taking VHS classes have never been involved in self-directed learning before. A lot of those students need a lot closer monitoring.*

*My kids who struggle with VHS tend to struggle with executive functioning skills, partly…Those kids in the middle – not the ones who basically have another adult doing it with them and not the ones who can do it independently – the kids in the middle, that’s where they struggle. They can do the math, they can do the reading, they can do the literary analysis, they can’t log on every day. When they log on, they can’t figure out where to upload the thing, so they give up.*

*It’s pretty different. When remote classes started, more of how I envision remote learning was like VHS. There’s more engagement with VHS. Remote learning through Zoom had little engagement. Teachers tried to replicate in-person learning, but it wasn’t doing the same thing. There’s a lot on the students with VHS, keeping up with time-management and all that. It’s very different.*

# Recommendations

## Increase the clarity and frequency of communication with key personnel at participating schools.

Both schools with prior experience with VHS Learning and schools new to their virtual programming implemented the Expanding Access initiative in a variety of ways. We found variation in implementation evidenced in how schools recruited and selected Site Coordinators and the types of resources and supports provided by schools. These variations among schools suggest possible misunderstandings regarding expectations around the initiative’s implementation in schools.

Additionally, because school administrators and Site Coordinators are the primary in-person communicators of the Expanding Access initiative with students and families, how DESE and VHS Learning communicate the initiative to schools is critical to ensuring that schools accurately share goals and expectations regarding participation in the initiative with students and families.

To alleviate possible misunderstandings with regards to the initiative’s expectations of schools and students, we encourage DESE and VHS Learning to both vary their methods of communication (to consider in-person presentations and printed materials in addition to electronic and virtual interactions) and to target their communications with schools around several key components of the initiative, in particular: Site Coordinator recruitment and selection; student recruitment and target populations for the initiative; and supports provided at the school level. We also encourage DESE and VHS Learning to tailor those communications with schools based on the school’s prior relationship with VHS Learning, for new schools to understand a school’s obligations to its students and DESE when participating in the initiative, and for schools with previous experience with VHS Learning to understand the ways in which this initiative is distinct from their prior experiences. Improving communication in these ways will allow schools and students to make more informed decisions about whether virtual AP courses are the right ‘fit’ for them, and likely result in higher persistence rates.

## Continue to prioritize diversity, equity, and inclusion, particularly as enrollment in the initiative grows.

To increase student enrollment in the Expanding Access initiative, DESE opened enrollment to all schools (and students)—while noting a preference for schools to enroll diverse populations. However, as enrollment in the initiative increases, DESE may consider recentering efforts on diversity, equity, and inclusion (DEI). We recommend that DESE continues to build communication and recruitment strategies with this in mind, and to the extent possible, center the original goal of serving students who traditionally have limited access to AP STEM courses, including students in rural areas and students in under resourced environments. While efforts were made this past year to recruit students from priority zone schools, the majority of participating schools did not fall under that designation. We encourage DESE and VHS Learning to continue to consider these populations at every step of program planning, implementation, and analysis.

Expand outreach**.**

At its peak, student participation in the Expanding Access initiative during Year 2 represented approximately 1% of student populations across all 48 participating schools. For DESE to meet its yearly enrollment goal of 1,500 seats will require significant expansion either to enrollments within schools that are currently participating in the Expanding Access initiative, or enrollment of new schools across the Commonwealth.

In addition to expanding DESE’s reach to recruit more schools to the initiative and to increase enrollment among priority zone schools, expanding staffing would also facilitate more constant communication between DESE and schools, especially those in priority zones that serve students with targeted identity profiles for the initiative. Current staff have made tremendous efforts in school outreach, but by increasing staffing, we anticipate this to have positive impacts particularly among priority zone schools and among schools that have not previously partnered with VHS Learning, and to improve persistence among student participants.

# Appendix A: Methods

### Focus Groups and Group Interviews

All focus groups and group interviews were conducted virtually by UMDI between March 2022 and May 2022.[[33]](#footnote-34) Per the evaluation scope, UMDI would conduct five focus groups each for students, parents/guardians, and schools. Student and parent/guardian focus groups were planned to have 6-10 participants per focus group, while schools would be inclusive of Site Coordinators and school administrators engaged in the Expanding Access initiative.

#### Student focus groups

Student focus group protocols were developed in consultation with DESE and VHS Learning during the Fall of 2021. Five evaluation questions guided the development of the student focus group protocols.[[34]](#footnote-35)

##### Focus group groupings

In initial conversations among DESE, VHS Learning, and UMDI, it was agreed that student participants would be grouped according to academic subject (math, science, and computer science) and then divided between those with and without prior AP course experience. Because this would result in six focus groups, UMDI agreed to increase the number of focus groups offered from five to six. However, due to low response rates of students, UMDI and DESE agreed there would be no intentional groupings of students; students could select any of the six focus group days/times that worked best with their schedules.

##### Recruitment and participation

In January 2022, UMDI began recruitment of students. However, due to low initial response rates during recruitment efforts, data collection was postponed to March 2022. In March, UMDI reached out to students a second time, and received interest from a total of 6 students, representing a response rate of 3%. A single focus group was scheduled for March 2022, which two students participated in.[[35]](#footnote-36)

#### Parent/guardian focus groups

UMDI developed focus group protocols in consultation with DESE and VHS Learning during the fall of 2021. Four evaluation questions guided the development of the parent/guardian focus group protocols.[[36]](#footnote-37)

##### Focus group groupings

Per the evaluation scope, it was UMDI’s intent to offer five parent/guardian focus groups with a goal of 8-10 participants per focus group. In initial discussions among DESE, VHS Learning, and UMDI, it was agreed that parent/guardian focus groups would be grouped by priority zone. However, due to low response rates, DESE and UMDI agreed there would be no intentional groupings of parents/guardians into certain focus groups; parents/guardians could select any of the six focus group days/times that worked best with their schedules.

##### Recruitment and participation

In January 2022, UMDI began recruitment of parents/guardians.[[37]](#footnote-38) Despite numerous reminder emails encouraging participants to register for a focus group, 7 parents/guardians expressed interest in participating, representing a response rate of 8%. Two focus groups were scheduled for March 2022, which three parents/guardians participated in, representing 2% of all parents/guardians whose students were enrolled in the Expanding Access initiative at the time of UMDI’s outreach.[[38]](#footnote-39)

#### School group interviews

Focus group protocols were developed in consultation with DESE and VHS Learning during the Fall of 2021. 14 evaluation questions guided the development of the school group interview protocols.[[39]](#footnote-40)

##### Inclusion criteria

To ensure diversity among schools, UMDI, in consultation with DESE, engaged in purposeful sampling, where inclusion and exclusion criteria were defined and applied to schools, which were then randomly selected and invited for focus groups.

* Schools would have a minimum of three students participating in the initiative
* Diversity of enrollment size: At least two of the five schools would have current enrollment of between three[[40]](#footnote-41) and seven students,[[41]](#footnote-42) and at least two of the five schools would have current enrollment greater than seven students.
* Diversity of course offerings: At least two of the five schools would have students enrolled in a single Expanding Access course (e.g., all participating students were enrolled in environmental science), and at least two of the five schools would have students enrolled in more than one Expanding Access course.
* Regional diversity: One school in the Western portion of the state, one in the Central portion of the state, and three in the Eastern portion of the state[[42]](#footnote-43) [[43]](#footnote-44)
* Locale diversity: Two urban[[44]](#footnote-45) or gateway city schools,[[45]](#footnote-46) with at least one urban or urban/gateway city school,[[46]](#footnote-47) and three non-urban, non-gateway city schools
* School type: At least one of the five schools would be a charter school

Final exclusion criteria included:

* Level five schools[[47]](#footnote-48)
* Schools or districts in receivership
* Private schools

##### Recruitment and participation

School administrators and Site Coordinators that were selected for group interviews were contacted in March 2022. All Site Coordinators within the selected five schools agreed to participate; two school administrators from a single school also agreed to participate. In total, UMDI spoke with seven individuals between March and April 2022.[[48]](#footnote-49)

#### DESE group interview

Group interview protocols were developed for DESE between February and April 2022. 10 evaluation questions guided the development of the DESE group interview protocol.[[49]](#footnote-50)

One group interview was conducted in May 2022 with two members of DESE’s team.

#### VHS Learning group interview

A VHS Learning group interview protocol was developed in consultation with DESE between February and April 2022. Eight evaluation questions guided the development of the protocol.[[50]](#footnote-51) One group interview was conducted in May 2022 with three members of VHS Learning’s team.

### Surveys

Surveys for students, parents/guardians,[[51]](#footnote-52) and schools were additionally developed in consultation with DESE and VHS Learning between October 2021 and March 2022. Seven evaluation questions guided the development of the student protocol, five evaluation questions guided the development of the parent/guardian survey, and 12 evaluation questions guided the development of the school survey.[[52]](#footnote-53)

#### Survey distribution

Surveys were distributed via Qualtrics to students and schools via email in April 2022.[[53]](#footnote-54) In total, 159 students were sent emails, including several reminder e-mails over a period of approximately two weeks. UMDI received email bounce-backs from 25 students and were able to successfully contact a total of 134 students. UMDI received responses from 18 students who either fully or partially completed the survey, for a response rate of 13%.[[54]](#footnote-55)[[55]](#footnote-56)

UMDI also distributed surveys to all 48 schools (principals, vice or associate principals, and Site Coordinators) that had seats enrolled in the Expanding Access initiative at any point during the first year of the initiative’s implementation in schools, including schools that no longer had any students enrolled at the time of outreach.[[56]](#footnote-57) UMDI received survey responses from 26 school administrators or staff, for a response rate of 54%.[[57]](#footnote-58) Among the 26 respondents, 12 (46%) represented priority zone schools, 12 (46%) had previously partnered with VHS Learning, and 17 (65%) had at least one student enrolled in the Expanding Access initiative at the time the survey was completed.

### Secondary Data

Secondary data provided by VHS Learning included student and school participation information; DESE provided datasets for: the Student Information Management System (SIMS); the Massachusetts Comprehensive Assessment System (MCAS); National Student Clearinghouse (NSC); Student Course Schedule (SCS); and the Education Personnel Information Management System (EPIMS).

#### Enrollment Data

Enrollment data used for this report was provided by VHS Learning, and reflected enrollments, transfers, and course withdrawals from April 30, 2021 through May 20, 2022. Variables provided by VHS Learning included:

* Participating students first, last, and middle names
* Student email addresses
* Expanding Access course enrollment date
* Transfer date (if applicable)[[58]](#footnote-59)
* Course drop date (if applicable)
* Course subject enrolled
* Course number
* School
* School code
* Whether the school had partnered with VHS Learning in the past five years
* Site Coordinator,
* Site Coordinator contact information,
* whether the Site Coordinator had been contracted with VHS Learning within the past five years, and if so in what capacity;
* parent/guardian names and contact information (if provided by the school).

##### Demographic Data: Students and Site Coordinators

The following SIMS demographic variables were utilized in this report:

* Race and ethnicity of students (RACE)
* Gender of students (GENDER)
* English language learners (ELP\_PROG)
* Student with disabilities (SPED\_DIS)
* 504 status (SPS\_504\_CODE)
* Economically disadvantaged (ECODIS).
* Days absent from remote learning (DAYS\_ABSENT\_REMOTE)

The following EPIMS demographic variables were utilized in this report:

* Race and ethnicity of site coordinators (RACE\_NAME)
* Gender of site coordinators (GENDER)
* Job classifications (JOB\_CLASSIF\_NAME)

UMDI also generated additional variables for priority zone designation, locale, and region.

UMDI merged SIMS data with VHS Learning-provided Expanding Access student enrollment data, and UMDI’s additional variables. Of all 456 seats (which corresponded to 426 individual students) enrolled in the Expanding Access initiative during year 1 of the initiative’s implementation in schools, UMDI successfully merged 445 seats with SIMS data (a total of 419 individuals), resulting in a merge rate of 97%. UMDI was unable to merge 11 seats, which represented 7 individuals.[[59]](#footnote-60)

UMDI also merged EPIMS data with VHS Learning-provided Expanding Access Site Coordinator data. Of all 50 Site Coordinators across 48 schools, UMDI was able to successfully merge 42 cases, at a merge rate of 84%.[[60]](#footnote-61)

### Notes from monthly joint UMDI, DESE, and VHS Learning meetings

In addition to the protocols outlined above as well as VHS Learning enrollment, SIMS, and EPIMS secondary data, this report utilizes notes taken by UMDI during monthly joint meetings attended by UMDI, DESE, and VHS Learning.

# Appendix B: Evaluation questions and key findings

|  |  |
| --- | --- |
| Evaluation Questions | Findings |
| 1 | What implementation measures are being met? Why, why not?  | Finding 1, Finding 2, Finding 3, Finding 4 |
| 1a | What implementation successes and barriers do DESE, the vendor, and schools/districts experience? What is working and what is not? How does this change over time? | Finding 1, Finding 2, Finding 3, Finding 4 |
| 1b | How do schools/districts recruit students? What data are schools/districts using to identify potential participants? Is the program reaching the intended target population? | Finding 2, Finding 3 |
| 2 | What is the impact of COVID on program launch, implementation, and participation of schools and students? | Finding 3, Finding 4 |
| 2a | How has COVID impacted student preparation for AP courses? Have students been adequately prepared in pre-AP courses and supports?  | Finding 4 |
| 2b | What summer courses and supports are districts/schools providing to bolster preparation for AP courses? | Finding 2 |
| 2c | How prepared do participating students feel for AP courses? | Finding 2, Finding 4 |
| 3 | What strategies do schools/districts use to support students who take AP STEM coursework through this program? | Finding 2 |
| 3a | What strategies do schools/districts use to ensure that a high percentage of participating students sit for the end-of-course examinations?  | Finding 2 |
| 4 | What are the impacts of the program on student access, participation, and performance (i.e., AP course taking & passing, AP exam taking & passing, graduation, dropout, and post-secondary attendance, retention, & completion)? | Finding 2, Finding 4 |
| 4a | Do program impacts vary by subject? For which student groups is the program most effective? | Finding 4 |
| 4b | Do program impacts vary based on types of supports available (e.g., intensive, high dosage versus drop-in tutoring)? | Finding 2 |
| 5 | What is the cost of the initiative per student (including student supports, such as tutoring)? Which costs are fixed, and which are variable? Does cost vary by course type? | Finding 2  |
| 6 | What could/should DESE and schools/districts do to ensure students who are served by the intervention are connected to services that help support their post-secondary success while they are participating in the program? | *In consultation with DESE, evaluation question seven was deprioritized during this first yar of the initiative’s implementation in schools, as schools were just beginning to integrate the initiative into their schools.* |
| 7 | What could/should DESE and schools/districts do to promote the sustainability of the program/services? | *In consultation with DESE, evaluation question seven was deprioritized during this first year of the initiative’s implementation in schools, as schools were just beginning to integrate the initiative into their schools.* |
| 7a | What are schools/districts doing to maintain and grow student enrollment in the program? | Finding 2 |
| 7b | How do schools/districts leverage and invest in their own capacity to support the program/services? What systems and procedures have schools/districts implemented to sustain their work? | Finding 2 |
| 7c | How do schools/districts plan to ensure the continuation of the program beyond the life of the grant?  | Finding 2, Finding 3, Finding 4 |
| 8 | What further research could provide additional insights relevant to the quantifiable impacts, fidelity of implementation, costs, and/or benefits of the program? | Finding 2, Finding 3, Finding 4 |

# Appendix C: Student focus group protocol

## Introduction and Consent [5 minutes]

Thank you for coming and agreeing to take part in this group discussion today.

**Who are we?** I’m [name], and I will be your moderator for the session. I’m a researcher from the UMass Donahue Institute, a research organization based in the University of Massachusetts Amherst. With me today is [name].

**Why am I here?** The UMass Donahue Institute is a third party, independent evaluator working with the Massachusetts Department of Elementary and Secondary Education (DESE) on a special initiative – called the STEM Advanced Placement Access Expansion Opportunity (which we’ll refer to as “Expanding Access”) initiative in Massachusetts – that gives high schools the option to participate in Advanced Placement (AP) math and science classes online. Part of what we are interested in is how this initiative works for you. We hope that this study will be useful for sharing information about the initiative’s strengths and identifying lessons to share with other schools and the Commonwealth. You have been invited to join this group because we want to learn from students enrolled in one of the AP classes covered by the initiative.

**What is a discussion group?** Discussion groups are a way to find out what people think about an issue through group discussion. We are interested in learning about your ideas, feelings, and opinions about this AP class. There are no right or wrong answers. We want to know what you think. You should feel free to disagree with each other; we hope to hear as many points of view as possible in response to the questions I’ll ask. Your participation is very important to the success of this study.

**How does this work?** The session today should last about [50] minutes. I may remind you occasionally to speak one at a time so that we can hear your comments, and ask that you provide non-verbal affirmations if you agree with whomever is speaking. We will also be monitoring the chat, if you would prefer to comment or join in that way. I am your guide, but this is a group discussion; everyone should feel free to speak. To keep us on schedule, I may change the subject or move ahead. Please stop me if you have something to add.

**Privacy:** I will include a summary of this discussion in reports I write later this year. I won’t use your names and will not identify you specifically, but I might quote you anonymously. For example, I might write something like, “one student found tutoring to be very helpful. She said, ‘sometimes I just need a little bit of help when I’m really stuck. After that, I can usually figure it out.’”

Also, please respect people’s privacy once we leave this group. We strongly urge each of you to respect the privacy of others in the group and not repeat anything you hear in this discussion outside the group.

**Recording:** I will be recording the discussion because it would be impossible for us to accurately write the whole the thing down. We will be transcribing the recording, and one or two of our colleagues may also review the transcript. No other people will hear or see the whole discussion. Does everyone here agree to be recorded?

Are there any questions before we begin?

I will turn on the recorder now and let’s start.

I am here with students who are taking an AP course from VHS Learning. This is just a reminder that this conversation is being recorded. I would also like to confirm with you that I have permission to record this conversation [receive verbal confirmation from participants].

### Intro/Icebreaker [5 minutes]

1. To start, let’s quickly go around the room: please say how many AP classes you have taken (including ones in which you are enrolled this term), and your favorite part about this class.

### Recruitment and Introduction to AP [20 minutes]

1. How did you learn about this class? *(Eval 1a)*

*Probes:*

1. Did you talk with a teacher, guidance counselor, or faculty advisor before signing up?
2. Did you talk with your friends before signing up? Your parents or other family?
3. What about AP classes in general?
4. How much confidence did you have going in that you could do the work? Where did that confidence come from? *(Eval 1a)*
	1. Describe how prepared you felt beginning a college-level course like this.
5. In what ways do you feel like COVID impacted your ability to prepare for this or these AP course(s), if at all? *(Eval 2a)*
	1. Do you feel that the virtual learning you engaged with at school as a result of COVID has impacted your interest and/or preparedness to begin a virtual AP course? *(Eval 2; 2a)*
	2. *For students who are enrolled in a lab-based AP*: Could you please describe your prior lab experience leading up to this course?
6. From your perspective, do you think most students in your VHS Learning AP class(es) are more or less alike in terms of their motivation or drive to succeed or academic aptitude? Do you think most students in your VHS Learning AP class(es) are adequately prepared for the class? *(Eval 1a)*
7. Were you able to participate in any summer opportunities to help you prepare for the virtual AP course? Describe them and the extent to which they were helpful. *(Eval 2c)*
	1. VHS specific supports
	2. School-specific supports

### Class Design and Teacher Involvement [5 minutes]

1. What are some things you like about your virtual class? *(Follow up with students for more detail when examples are provided)*

*Probes:*

* 1. What is your instructor doing that you find helpful?
	2. How well do lessons support your learning of concepts and skills?
	3. Is there anything that hasn’t been working well?
	4. How would you describe the course content and the class assignments? Do you think they are effective?

### Student Support [20 minutes]

1. So, we are about halfway through the first semester. How would you describe your experience so far with this online AP course? *(Eval 1a)*
2. Do you have access to help when you need it? Whom do you turn to for help with class assignments? *(Eval 6)*

*Probes:*

* 1. Have you formed study groups with peers, either in-person or virtually? If so, describe how beneficial those have been.
	2. Are there any people or groups not part of the initiative that you turn to for help?
1. What support is your school providing you for this AP course? *(Eval 6)*
2. Do you feel your school is doing enough to help you succeed in your AP course? *(Eval 6)*
	1. In what ways can your school provide more support?

One of the goals of this project is to support the access and success of students who have minoritized identities, and when we think about minoritized identities these are aspects of who we are that we don’t often see represented, or positively represented, in our society. Historically marginalized identities can be racial (BIPOC), sex or gender-based (LGBTQIA+), those who are not native English speakers, people with a disability, or people who come from low-resource environments. And of course, students might share none or one of these marginalized identities, but often people’s identities are intersectional. With all this in mind:

1. In what ways could your instructor, your school, your Site Coordinator, or your virtual classroom peers do a better job supporting students with minoritized identities in your online AP course(s)? (If student only mentions one role, probe for all four.)

### Wrap-up [time permitting]

1. If another student was thinking of taking a VHS Learning AP class and asked for your advice, what would you tell them? Why? *(Eval 1a)*
2. If you could make suggestions to your teacher or your school to improve the VHS Learning AP classes, what would you suggest? *(Eval 1a)*

We have asked all of our planned questions – is there anything else you would like to clarify or add to anything you have already said? Do you have any questions for us?

# Appendix D: Summary of student focus group responses

## Intro/Icebreaker [5 minutes]

**Protocol 1:** *To start, let’s quickly go around the room: please say how many AP classes you have taken (including ones in which you are enrolled this term), and your favorite part about this class.*

One student is enrolled in AP Environmental Science, and the other student is enrolled in AP Computer Science Principles.

## Recruitment and Introduction to AP [20 minutes]

**Protocol 2:** *How did you learn about this class?*

*Probes:*

1. *Did you talk with a teacher, guidance counselor, or faculty advisor before signing up?*
2. *Did you talk with your friends before signing up? Your parents or other family?*
3. *What about AP classes in general?*

Each student had a unique experience relative to learning about the Expanding Access initiative. One student indicated that they received an email from their school that had been sent out to all students. From there, they worked with the student dean to determine which courses they could take. The other student indicated that VHS courses are typically listed on their school’s program of studies, but their Site Coordinator contacted students directly regarding courses specific to the Expanding Access initiative.

**Protocol 4:** *In what ways do you feel like COVID impacted your ability to prepare for this or these AP course(s), if at all?*

* 1. *Do you feel that the virtual learning you engaged with at school as a result of COVID has impacted your interest and/or preparedness to begin a virtual AP course?*
	2. *For students who are enrolled in a lab-based AP: Could you please describe your prior lab experience leading up to this course?*

Both students indicated that their experiences with remote learning during the pandemic were comparable to those with their VHS Learning courses. While one student did express their early apprehensions relative to not having an in-person instructor, both students noted that they generally felt well-prepared for their virtual courses.

**Protocol 5:** *From your perspective, do you think most students in your VHS Learning AP class(es) are more or less alike in terms of their motivation or drive to succeed or academic aptitude? Do you think most students in your VHS Learning AP class(es) are adequately prepared for the class?*

Both students agreed that communication with their virtual classmates was limited, with one student sharing, “…none of us really knows each other or knows each other’s opinions.” Additionally, regarding interactions with in-person classmates who are enrolled in the same VHS Learning courses, one student also noted that their school does not provide them with time to complete their VHS Learning coursework during regular school hours, so they “wouldn’t know who else was doing it.”

**Protocol 6:** *Were you able to participate in any summer opportunities to help you prepare for the virtual AP course? Describe them and the extent to which they were helpful.*

1. *VHS specific supports*
2. *School-specific supports*

The two students shared different experiences relative to supports and preparation for the Expanding Access courses. One student was unaware of any summertime resources or opportunities, and while the other student indicated that they were aware of two or three virtual sessions hosted by VHS Learning, they did not attend any. Regarding additional supports, one student shared that they did not even know who their Site Coordinator was. The other student, however, shared the following: “Our school, the way it works, if we take VHS, it’s part of our schedule. So, I guess that’s our support in that sense; we get time in school, and we get a space in school to work on it. But in terms of academic help, I usually just ‘PT’ the teacher. But there are few instances where I feel students would need it, because the assignments are just kind of ‘fill them out’ kind of things.”

## Class Design and Teacher Involvement [5 minutes]

**Protocol 7:** *What are some things you like about your virtual class? (Follow up with students for more detail when examples are provided)*

*Probes:*

1. *What is your instructor doing that you find helpful?*
2. *How well do lessons support your learning of concepts and skills?*
3. *Is there anything that hasn’t been working well?*
4. *How would you describe the course content and the class assignments? Do you think they are effective?*

In terms of course design, both students agreed that many assignments through their Expanding Access courses are “tedious busy-work.” Additionally, both students noted that they found the course content to be relatively easy, with one student expressing the following: “I would definitely agree with the tedious aspect of it. The biggest concern with taking a VHS course was that yeah, I’ll probably get an A for my transcript, but I know for a fact that it’s not going to prepare me for the AP test. So, I kind of have no reliance on the VHS course to do well on the test. Because when I’m taking practice tests or preparing separately, it’s very apparent that the course didn’t prepare me for it. So, I just bought my own books and started preparing myself, kind of. I feel that’s due to tediousness of them, because I feel that a lot of the discussion posts, they’re not telling you to learn something, they’re just passive writing.” Moreover, the other student mentioned that he had noticed several content-related mistakes in his VHS Learning curriculum, and that certain lesson plans were identical to those offered through free online modules. Notwithstanding this discontent with the course curriculum, both students shared very positive feedback regarding their VHS Learning instructors.

## Student Support [20 minutes]

**Protocol 8:** *So we are about halfway through the first semester. How would you describe your experience so far with this online AP course?*

Both students agreed that they felt course material was “easy,” and that the courses they were enrolled in had, at times, “tedious” assignments.

**Protocol 9:** *Do you have access to help when you need it? Whom do you turn to for help with class assignments?*

*Probes:*

1. *Have you formed study groups with peers, either in-person or virtually? If so, describe how beneficial those have been.*
2. *Are there any people or groups not part of the initiative that you turn to for help?*

One student shared that when they need academic help, they reach out to their virtual teacher, but remarked that this was uncommon because assignments are straight-forward. The other shared that they didn’t find the course challenging, and subsequently didn’t need help with assignments.

**Protocol 10:** *What support is your school providing you for this AP course?*

One student noted that they are unaware of any school-provided supports related to their Expanding Access course. The other student shared that they take several AP courses, and they expressed the following relative to AP exam preparedness: “I feel like, at least in my school, every AP class is taught vastly different. It depends on whatever the teacher wants to do. I’d definitely say the work is easier, but it’s time-consuming, which can get annoying when you’re not really learning anything to help you pass the test but you’re also spending a lot of time doing it because it takes time for me to fill the word quota that they require or something like that.”

**Protocol 11:** *Do you feel your school is doing enough to help you succeed in your AP course?*

* 1. *In what ways can your school provide more support?*

Both students indicated that it would be helpful for their schools to offer proctored mock exams.

**Protocol 12:** *One of the goals of this project is to support the access and success of students who have minoritized identities, and when we think about minoritized identities these are aspects of who we are that we don’t often see represented, or positively represented, in our society. Historically marginalized identities can be racial (BIPOC), sex or gender-based (LGBTQIA+), those who are not native English speakers, people with a disability, or people who come from low-resource environments. And of course, students might share none or one of these marginalized identities, but often people’s identities are intersectional. With all this in mind:*

*In what ways could your instructor, your school, your Site Coordinator, or your virtual classroom peers do a better job supporting students with minoritized identities in your online AP course(s)? (If student only mentions one role, probe for all four.)*

Both students indicated that the courses are available to all students. One student mentioned that EL students tend to be clustered into classrooms with additional supports, so they were unsure what, if any, impact this had on their capacity to enroll in a VHS Learning course.

## Wrap-up [time permitting]

**Protocol 13:** *If another student was thinking of taking a VHS Learning AP class and asked for your advice, what would you tell them? Why?*

Both students indicated that they would recommend enrolling in the Expanding Access to other students if the sole consideration were receiving high marks on a transcript; however, both students expressed hesitation in terms of whether the courses prepare students for success on the AP exam. The student enrolled in the AP Computer Science Principles course expressed the following: “I cannot speak to the other classes because I have not taken them. But I would not recommend AP Computer Science Principles. It’s just not worth it for the time commitment and the tedious assignments. In my opinion, there are much better online classes. You could just study on your own or take another free online class. You wouldn’t get a grade for your transcript, but you’d be able to pass the test just fine if that’s your goal.”

The student enrolled in AP Environmental Science shared similar sentiments relative to disparities between course content and exam preparedness: “I wouldn’t not encourage it – I’m going to take another VHS AP next year. But I would say if your goal is just to have an A on your transcript for an AP class, one of the best ways to do it. But if your goal is to learn about the course and do well on the test, probably not. If you want to do well on the test or get credit, that’s going to be studying you have to do on your own time, which is hard to do considering you’re spending all this time on tedious assignments.”

**Protocol 14:** *If you could make suggestions to your teacher or your school to improve the VHS Learning AP classes, what would you suggest?*

Both students shared feedback regarding course curriculum. One student noted that he found the content-related errors in his curriculum to be distracting and frustrating. He suggested giving instructors more autonomy in terms of curriculum to mitigate this issue. The other student shared thoughts on course content relative to exam preparedness: “I know it’s not the point of learning something is not only to pass the test, but I wish there were more resources for that. I feel the most helpful part of the course is the AP Classroom assignments where you get to go into the College Board website and do those practice exam.” Moreover, regarding their day-to-day assignments, they noted that: “I think everyone does it and does it enough to get the grade, but none of us retain anything from it.”

Additionally, both students shared the sentiment that they would benefit from more applied and interactive work as opposed to mundane and tedious assignments. One student said: “In the virtual help sessions that we get, if there was a topic that you would choose for each session – in this one we’re going to answer questions like regular office hours, but we’ll also learn about ozone today, or we’ll learn about geothermal energy – things like that, so you can really get the experience of learning the information versus a very vague textbook.” The other student agreed, sharing the following: “I guess a good summary of this would be that it seems like a lot of busy work to make it seem like we’re learning when we’re not. I also know that my class has a textbook, as well, but I only looked at it once at the start of the class and then I have not looked at it since.”

**Wrap up:***We have asked all of our planned questions – is there anything else you would like to clarify or add to anything you have already said? Do you have any questions for us?*

Despite their constructive feedback regarding their Expanding Access courses, both students indicated that they appreciate the opportunity to participate in the initiative, and that their summative reflection was that students would benefit from courses being “more focused on students learning the material.”

# Appendix E: Parent/guardian focus group protocol

## Introduction and Consent [5 minutes]

Thank you for coming and agreeing to take part in this group discussion today.

**Who are we?** I’m [name], and I will be your moderator for the session. I’m a researcher from the UMass Donahue Institute, a research organization based in the University of Massachusetts Amherst. With me today is [name].

**Why am I here?** The UMass Donahue Institute is a third party, independent evaluator working with the Massachusetts Department of Elementary and Secondary Education (DESE) on a special initiative – called the STEM Advanced Placement Access Expansion Opportunity (which we’ll refer to as the ‘Expanding Access’) initiative in Massachusetts – that gives high schools the option to participate in Advanced Placement (AP) math and science classes online. Part of what we are interested in is how this initiative works for children and families. We hope that this study will be useful for sharing information about the initiative’s strengths and identifying lessons to share with other schools and the Commonwealth. You have been invited to join this group because we want to learn from parents and guardians who have a child or children enrolled in one of the AP classes covered by the initiative.

**What is a discussion group?** Discussion groups are a way to find out what people think about an issue through group discussion. We are interested in learning about your ideas, feelings, and opinions about your child’s AP class. There are no right or wrong answers. We want to know what you think. You should feel free to disagree with each other; we hope to hear as many points of view as possible in response to the questions I’ll ask. Your participation is very important to the success of this study.

**How does this work?** The session today should last about [50] minutes. I may remind you occasionally to speak one at a time so that we can hear your comments. I am your guide, but this is a group discussion; everyone should feel free to speak. We will also be monitoring the chat if you choose to utilize it, and ask that you please provide non-verbal affirmations if you agree with the speaker. To keep us on schedule, I may change the subject or move ahead. Please stop me if you have something to add.

**Privacy:** I will include a summary of this discussion in reports I write later this year. I won’t use your names and will not identify you specifically, but I might quote you anonymously. For example, I might write something like, “one parent observed tutoring to be very helpful. They said, ‘After [tutoring] started, I saw a noticeable improvement in my daughter’s engagement with their course.’”

Also, please respect people’s privacy once we leave this group. We strongly urge each of you to respect the privacy of others in the group and not repeat anything you hear in this discussion outside the group.

**Recording:** I will be recording the discussion because it would be impossible for us to accurately write the whole the thing down. We will be transcribing the recording, and one or two of our colleagues may also review the transcript. No other people will hear or see the whole discussion. Does everyone here agree to be recorded? Once I begin the recording, I’ll also ask you to verbally confirm that you’re consenting to participate in this discussion group.

Are there any questions before we begin?

I will turn on the recorder now and let’s start.

I am here with parents of children who are taking an AP course from VHS Learning. This is just a reminder that this conversation is being recorded. I would also like to confirm with you that I have permission to record this conversation [receive verbal confirmation from participants].

### Intro/Icebreaker [5 minutes]

1. Please share your name, what school your child attends, and what virtual AP course(s) they are enrolled in through VHS Learning.

### Past AP experience and AP prep [15 minutes]

1. What made your child want to sign up for an online AP course or courses? Can you describe how involved you were in that decision making process?
2. Had your child taken an AP course prior to enrolling in the VHS Learning AP class? *(Eval 2c)*
	1. If so, how is your child’s previous AP experience(s) similar or dissimilar from their experience in the virtual AP class? (We know the format is likely different, but is it for example more or less challenging? In what ways?)
3. Could you please describe how prepared you feel your child was to be successful in this virtual AP course? *(Eval 2c)*
	1. From your perspective, what contributed to this preparedness?

### COVID [5 minutes]

1. Can you please describe how COVID impacted learning for your child over the last approximate two years?
2. From your perspective, in what ways did your child’s previous virtual learning experience impact their decision to enroll in an online AP course? *(Eval 2)*

### Overall Learning Experience [25 minutes]

1. How did you first learn about this online AP initiative? *(Eval 1a)*
2. How would you describe your level of involvement with your child’s virtual AP course?

*Prompts:*

* 1. Have you looked at the class online? How frequently do you talk with your child about their course(s)? How are you getting information about your child’s progress?
1. When your child discusses their AP course(s) with you, how do they talk about it? What are some of the things that they say? *(Eval 1a)*

*Probes:*

* 1. How do they describe the coursework?
	2. How do they describe their instructors?
	3. How do they describe their interactions with their classmates?
	4. How do they describe the Site Coordinator?
1. The Expanding Access initiative sends you regular updates on your child’s progress in the course. How helpful/useful are those updates? *(Eval 1a)*
	1. Can you describe for me the ways in which you utilize these communications? For example, what sorts of conversations do these messages prompt between you and your child?
	2. If the Site Coordinator has not been as communicative as you would like, could you please describe for me any ways in which they could improve their communication practices with parents.
2. Has your child shared any challenges with you? If so, please describe what those are. *(Eval 1a)*
3. Have they shared any successes with you? If so, please describe what those are. *(Eval 1a)*
4. How do you think this initiative could be improved? *(Eval 1a; 6)*
5. Please describe any supports that the school provides your child to help them succeed in their AP course(s) that you are aware of.
	1. From your perspective, what additional or alternative sorts of supports can the school or VHS Learning be offering your child to best help them succeed? *(Eval 6)*

### Wrap-up [time permitting]

1. Is there any advice you would give to other parents whose children have an opportunity to enroll in a VHS Learning AP course?
2. We have asked all of our planned questions – is there anything else you would like to clarify or add to anything you have already said? Do you have any questions for us?

# Appendix F: Summary of parent/guardian focus group responses

## Intro/Icebreaker [5 minutes]

**Protocol 1:** *Please share your name, what school your child attends, and what virtual AP course(s) they are enrolled in through VHS Learning.*

Of the three students whose parents or guardians participated in the focus group, one student was enrolled in AP Environmental Science, one student was enrolled in AP Computer Science Principles, and one student was enrolled in AP Chemistry.

## Past AP experience and AP prep [15 minutes]

**Protocol 2:** *What made your child want to sign up for an online AP course or courses? Can you describe how involved you were in that decision making process?*

All focus group participants shared that their students had prior interest in the course content for their respective classes, and that their interest was related to post-secondary aspirations. Regarding the decision-making process, all participants indicated that their students were self-motivated to enroll in the initiative. One participant did note that they encouraged their student to participate because of their interest in the subject and because of the unique opportunity the initiative presented, while another added that they communicated directly with the school’s administration to ensure that their student had access to their course through VHS Learning after the in-person course was cancelled due to lack of enrollment. This participant specifically noted they were initially unaware of their school’s partnership with VHS Learning, so when their student’s in-person course was removed from the academic calendar, they contacted the school’s principal: “We got an email from somebody at the school telling us that the course is cancelled, and I think I called, and then I went down to the school with my son, and I personally spoke to the principal. I was pretty frank about my disappointment. He said he understood; he said that there was a chronic lack of interest in AP courses in our school system – which didn’t surprise me, because I kind of knew that. A lot of AP courses seem to have low enrollment, and there have been some other courses that have been cancelled since my son has been there – AP courses. I explained to him that this class was super important, and we would have signed up for VHS if we had known ahead of time.” This participant added that their student’s school contracts for 55 VHS Learning seats per school year, but that there was not much information available to parents relative to the platform and they were unaware that AP courses were included in course offerings.

**Protocol 3:** *Had your child taken an AP course prior to enrolling in the VHS Learning AP class?*

* 1. *If so, how is your child’s previous AP experience(s) similar or dissimilar from their experience in the virtual AP class? (We know the format is likely different, but is it for example more or less challenging? In what ways?)*

Two participants indicated that their students had prior AP experience, while the other shared that their student had no prior AP experience. In terms of the two students with prior AP experience, it was noted that they were both accustomed to working independently and were successful in developing self-study habits, skills that translated to their VHS Learning coursework.

**Protocol 4:** *Could you please describe how prepared you feel your child was to be successful in this virtual AP course?*

* + - * 1. *From your perspective, what contributed to this preparedness?*

All participants indicated that their students were well-positioned to be successful in their virtual AP courses. The participants shared that their students are self-motivated, and that their experiences with independent remote learning during the pandemic helped prepare them for VHS Learning’s asynchronous learning model. One participant also noted that their student attended a few of VHS Learning’s summer orientation sessions, but the student did not find them to be particularly helpful; the participant described these sessions as “a bit repetitive because [their student] had already taken AP courses.”

## COVID [5 minutes]

**Protocol 5:** *Can you please describe how COVID impacted learning for your child over the last approximate two years?*

Relative to COVID’s impact on learning, all focus group participants noted that their students suffered to some degree during the pandemic; they indicated gaps in their students’ education and decreases in both their students’ interest in learning and their motivation, with one participant describing what was, at time, a “chaotic” learning environment. Moreover, while both participants expressed that their students performed well academically throughout the pandemic, they did share that it can be more difficult for students to engage in and retain certain learning materials in a virtual setting.

**Protocol 6:** *From your perspective, in what ways did your child’s previous virtual learning experience impact their decision to enroll in an online AP course?*

All participants shared that their students were comfortable with and prepared for taking courses in an online setting due to their previous experiences with remote learning. Two participants noted the distinction between remote learning during the pandemic and virtual learning through the Expanding Access initiative, with one adding that because their student’s VHS Learning course was “designed to be an online course,” their student “knew there were going to be supports in place and a little more structure than everything that ended up online previously.”

## Overall Learning Experience [25 minutes]

**Protocol 7:** *How did you first learn about this online AP initiative?*

Two participants shared that they received emails regarding the Expanding Access initiative from their students’ schools; one received notice from the school’s principal, while the other was contacted by a school counselor. The third focus group participant indicated that they were unaware that their student could take AP courses through VHS Learning, and that they only became aware when they sought an alternative option after their student’s in-person course was cancelled due to lack of enrollment. This participant shared the following reflection: “When I learned that he could take this course online – I guess before that, I didn’t realize he could take AP courses through VHS. I probably should have explored it, in retrospect. I think he would have taken more courses through VHS, in maybe his junior year, if he had known, and maybe another one this year, if he’d known, or if I’d known about it. I learned that there are a lot of courses.”

**Protocol 8:** *How would you describe your level of involvement with your child’s virtual AP course?*

*Prompts: Have you looked at the class online? How frequently do you talk with your child about their course(s)? How are you getting information about your child’s progress?*

All participants indicated that their students work independently on their VHS Learning coursework, though all shared that they do check in with their students to ensure that they are progressing. Additionally, two participants noted their appreciation for the regular communications they receive from their students’ VHS Learning course instructors, as this prompts further engagement relative to their students’ experiences and overall success.

**Protocol 9:** *When your child discusses their AP course(s) with you, how do they talk about it? What are some of the things that they say?*

*Probes: How do they describe their:*

*Coursework?*

* + - * 1. *Instructors?*
	1. *Interactions with their classmates?*
	2. *Site Coordinator?*

Relative to their students’ classroom experience, participant feedback varied. One participant noted that, while they monitor their student’s academic performance, their student is largely independent, and that they have not shared much insight regarding their coursework, their classmates, or their instructor. Another participant indicated that their student shares content-related reflections, including their lab work, what they are learning, and its applicability outside the classroom. The third participant, however, shared that their student often expresses their dissatisfaction with certain aspects of their VHS Learning course. The student’s frustrations were largely linked to the curriculum, as they noted errors in learning materials and that several lesson plans were taken from another online platform. Despite this, the student was adamant that their feedback was not a reflection of their VHS Learning instructor.

**Protocol 10:** *The Expanding Access initiative sends you regular updates on your child’s progress in the course. How helpful/useful are those updates?*

* + - * 1. *Can you describe for me the ways in which you utilize these communications? For example, what sorts of conversations do these messages prompt between you and your child?*
				2. *If the Site Coordinator has not been as communicative as you would like, could you please describe for me any ways in which they could improve their communication practices with parents.*

All participants expressed general appreciation for the VHS Learning updates, indicating that they spark conversation with their student regarding their progress. However, while two participants shared that they are satisfied with the content and frequency of this outreach, the third participant indicated that they would like “more frequent” communications with additional feedback, noting that it would be helpful to receive “some comments from the teacher about how [their student] is doing, maybe what [they need] to work on.”

Regarding Site Coordinator feedback, none of the participants receive regular communications from their students’ Site Coordinators. One participant was unaware that their student even had a Site Coordinator. Another participant shared that their student’s Site Coordinator is also the school’s principal, so they speculate that their Site Coordinator duties may be falling on the backburner due to their more pressing responsibilities. The third participant indicated that they received a small handful of emails from their student’s Site Coordinator early in the school year, but that they have not received correspondence since. They do feel confident, however, that they could contact the Site Coordinator with any questions regarding their student’s learning experience.

**Protocol 11:** *Has your child shared any challenges with you? If so, please describe what those are.*

Regarding student challenges, focus group participants shared a variety of feedback. One participant shared that their student expressed frustration with VHS Learning’s academic calendar, in that the Wednesday-to-Wednesday ‘school week’ does not accommodate school vacation schedules. However, the participant noted that their student’s VHS Learning instructor was flexible with requests relative to vacation schedules. Another participant noted that their student encountered issues relative to her VHS Learning grade not being counted toward her GPA, but the participant is confident that this sort of administrative challenge will be resolved as the school becomes more involved with the initiative. The other participant reiterated their student’s frustration regarding errors in their VHS Learning coursework and added that their student would appreciate if the initiative offered some sort of vehicle for students who have mastered the current course content to ‘test out’ and move on to more advanced material.

Two participants also shared that their students received their lab kits quite late.

**Protocol 12:** *Have they shared any successes with you? If so, please describe what those are.*

All participants indicated their students’ satisfaction with their VHS Learning instructors. Additional successes included achieving high marks, the practical application of coursework, positive reinforcement from their instructors, effective communication, and enhanced critical thinking and problem-solving skills.

**Protocol 13:** *How do you think this initiative could be improved?*

Regarding initiative improvements, participants shared a variety of feedback. One focus group participant noted that the Expanding Access initiative could be improved through better site coordination. Another participant expressed that it may be prudent to amend course curriculum and proof for content errors. The third participant shared that “the information should be provided to parents. It should be clearly spelled out to parents that it’s available and what is available.”

**Protocol 14:** *Please describe any supports that the school provides your child to help them succeed in their AP course(s) that you are aware of.*

* + - * 1. *From your perspective, what additional or alternative sorts of supports can the school or VHS Learning be offering your child to best help them succeed?*

None of the focus group participant indicated that they were aware of any additional school-provided resources—other than two students being provided with a designated class period and workspace during the school day to complete their VHS coursework—designed to help students succeed in their Expanding Access courses.

## Wrap-up [time permitting]

**Protocol 15:** *Is there any advice you would give to other parents whose children have an opportunity to enroll in a VHS Learning AP course?*

All three focus group participants indicated their satisfaction with their students’ VHS Learning experiences, and they shared that they would recommend the Expanding Access initiative to other parents and guardians whose children are eligible for enrollment. One participant added the following: “I would tell them to be proactive and find out more about the program because it’s worthwhile. It’s a good program. I would have signed my [student] up sooner for VHS Learning if I had known more about it.”

**Protocol 16:** *We have asked all of our planned questions—is there anything else you would like to clarify or add to anything you have already said? Do you have any questions for us?*

No additional comments.

# Appendix G: School group interview protocol

## Introduction and Consent [5 minutes]

Thank you for coming and agreeing to take part in this [interview or discussion group] today.

**Who are we?** I’m [name], and I will be [interviewing you/your moderator] for the session. I’m a researcher from the UMass Donahue Institute, a research organization based in the University of Massachusetts Amherst. With me today is [name].

**Why am I here?** The UMass Donahue Institute is a third party, independent evaluator working with the Massachusetts Department of Elementary and Secondary Education (DESE) on a special initiative – called the STEM AP Access Expansion Opportunity (which we’ll refer to as “Expanding Access”) initiative – that gives high schools the option to participate in Advanced Placement (AP) math and science classes online. One of the things we are interested in is how this initiative works for schools. We have invited you to talk with us today because we want to learn from those who are involved in the initiative at schools, either as school administration or as the Expanding Access initiative’s Site Coordinator. Your participation is very important to the success of this study because it will help us understand the initiative’s strengths and identify lessons to share with other schools and the Commonwealth.

**For interviews (1 participant):**

**How does this work?** We will ask you a series of questions to learn about your experience, ideas, feelings, and opinions about the Expanding Access initiative. There are no right or wrong answers. We want to know what you think. The session today should last about [90] minutes. As a participant in this research, it is your choice to skip a question, pause or stop the recording, or end the interview early. To keep us on schedule, I may change the subject or move ahead. Please stop me if you have something you’d like to add.

**For discussion groups (More than 1 participant):**

**How does this work?** We will ask you a series of questions in a group setting to learn about your experiences, ideas, feelings, and opinions about the Expanding Access initiative. There are no right or wrong answers. We want to know what you think. You should feel free to disagree with each other. We ask that you keep this conversation confidential. Please do not repeat anything you hear in this discussion after it has ended. The session today should last about [90] minutes. I may remind you occasionally to speak one at a time so that we can hear your comments. I am your guide, but this is a group discussion; everyone should feel free to speak. We will also be monitoring the chat if you choose to utilize it and ask that you please provide non-verbal affirmations if you agree with the speaker. As participants in this research, each of you individually can choose to skip a question, pause or stop the recording, or end the interview early. To keep us on schedule, I may change the subject or move ahead. Please stop me if you have something to add.

**Privacy:** We will include a summary of this discussion in reports we write later this year. We won’t use your name(s) and will not identify you specifically. No quotes will be attributed to individuals, and any quotes will be anonymous. For example, we might write something like, “one school administrator observed the Site Coordinator role to be very helpful. They said, ‘Our Site Coordinator has done an effective job in helping students stay on task.’”

**Recording:** I will be recording the discussion because we can’t accurately write down everything you say. We will be transcribing the recording. Only members of the UMDI research staff will have access to the transcript. No other people will hear or see the whole discussion, including no DESE staff. Do you, or does everyone here, agree to be recorded? Once I begin the recording, I’ll also ask you to verbally confirm that you’re consenting to participate in this discussion group.

Are there any questions before we begin?

I will turn on the recorder now and let’s start.

I am here with a school administrator and Site Coordinator whose school is involved with the Expanding Access initiative. This is just a reminder that this conversation is being recorded. I would also like to confirm with you that I have permission to record this conversation [receive verbal confirmation from participants].

### Participation and Recruitment [15 minutes]

1. We know DESE approached your school to participate in the Expanding Access initiative. How did your school decide to take part in the initiative?
	1. What pros and cons did your school weigh when making the decision to participate?
	2. In what ways and to what extent did COVID impact your willingness to participate in this initiative, if at all? *(Eval 2)*
2. If you weren’t directly involved in your school’s decision-making process to participate in the Expanding Access initiative, how did you personally learn about this opportunity?
	1. What prompted you to become involved in this initiative?
3. For school leadership: \*How did your school recruit and select a Site Coordinator?
	1. What are the day-to-day responsibilities of the Site Coordinator at your school? (*Eval 1a; 3*)
	2. What experiences, characteristics, or qualities were you looking for in a Site Coordinator?
4. For Site Coordinators: How would you describe your work as Site Coordinator?
Any different in your role as Site Coordinator for Expanding Access vs. previous experience as Site Coordinator for VHS Learning? What does your communication with students and parents look like? Frequency?
	1. In what ways have your previous experiences (either in teaching, administration, or other positions) helped prepare you for this new role?
	2. In what ways, if any, do school administrators support you in your role as Site Coordinator?
	3. Are there any ways in which your school could better support you in your role as Site Coordinator? If so, how?
	4. In what ways does VHS Learning support you in your role as Site Coordinator?
	5. Are there ways VHS Learning could better support you in your role as Site Coordinator? If so, how?

### Student Preparedness and Student Support [25 minutes]

1. What kinds of support or resources, if any, did your school provide to students over the summer to help them prepare for their AP course(s)?
	1. Do you know if students used this/these resources? How do you know?
	2. How would you describe students’ utilization of these supports and resources? *(Eval 2b*)
2. In what ways, if any, do you think COVID impacted student preparation for, or participation in, these courses? Could you please share some examples? (*Eval 2; 2a*)

*Probe:*

* 1. In what ways, if any, do you think *virtual learning that occurred as a result of COVID* has influenced or impacted how well-prepared students are for virtual AP courses? (For example: confidence around virtual learning; student abilities to engage with a virtual instructor or virtual classmates.) Could you please provide one or two examples?
1. How were students recruited and selected for participation? *(Eval 1b)*

*Probes:*

* 1. Were decisions about student recruitment and selection data-driven? If so, what data did you use? How did you use those data? (Provide examples if necessary, such as: MCAS scores; previous courses or other preparation; demographics.)
		1. Could teachers, or any other staff—such as guidance counselors—nominate students?
		2. Could students nominate themselves? Parents?
		3. Did any students who were offered this opportunity decide not to enroll? If so, do you know why they declined?
1. One of the goals of this project is to support historically marginalized students. Please describe for us the ways in which considerations for diversity, equity, and inclusion impacted your school’s decision-making around recruitment for this virtual AP initiative.
	1. Were there any specific student groups that you intentionally recruited or encouraged to enroll? (Such as students who’d never taken an AP or honors course before.)
	2. If so, how did you recruit and encourage students from those groups to participate?
	3. Does your school have a group of historically marginalized students who were underrepresented in this year’s participants in this AP initiative? If so, as you reflect on the demographics of the students that are enrolled this year, what might your school do differently in the future (regarding, for example, recruitment, outreach, or support)?
	4. What, if anything, did your school do to prepare school staff to support these students?
2. Do any students who are currently enrolled in the initiative have an IEP or 504 plan?
	1. If yes: How have appropriate accommodations for these students been made as part of the delivery of the student’s virtual course? What do those accommodations look like?
	2. Has it been challenging to provide all of the services and/or accommodations required by student IEP or 504 plans? *(Eval 3; 5)*
	3. Has there been any variation in student supports based on course type?
3. Are any of the students currently enrolled in the initiative second language learners?
	1. If yes: Were these students actively recruited for participation in this initiative?
	2. If yes: Has the school needed to, or been able to, provide additional supports for English language learners who are participating in the initiative? (*Eval 5*)

*Probes:*

* + 1. What do those supports look like?
		2. Has there been any variation in the needs of students based on course type?

### Successes and Challenges [20 minutes]

1. In this year, have there been any noteworthy successes in the launch of the initiative? (*Eval 1a*)

*Probes:*

* 1. In what ways do you hope to build on this/those success(es)?
1. In this first year, have there been any noteworthy challenges as the initiative launched? (*Eval 1a*)
	1. If yes, how were these challenges resolved? If not, how should they be addressed?
	2. From your perspective, are these issues likely to recur? And if so, what are your thoughts on how to manage these issues in the future?
	3. What challenges—related to participation—have students communicated with teachers, guidance counselors, the site coordinator, or other school staff?
2. How did you go about integrating this/these courses into student’s schedules?

*Probes*:

* 1. Given that your school uses a [semester terms; block; trimesters; etc.] schedule, in what ways have you had to adapt the virtual AP course’s year-long schedule to fit within your school’s existing scheduling format? (*Eval 1a*)
	2. What sorts of scheduling challenges, if any, do you anticipate over the course of the remaining year?
	3. Were you unable to integrate this/these course(s) into any of your students’ schedules? If so, what was the primary challenge?
	4. Were there any unique scheduling challenges for English language learners or students with disabilities?
	5. Has it been difficult to accommodate the testing schedule (e.g., mid-terms, finals) provided by the virtual AP course(s)?
1. From your perspective, in what ways do the virtual course instructors positively support student success? (*Eval 1a*)
	1. What constructive feedback might you give, if any, to course instructors to better support student success?
2. From your perspective, in what ways does VHS Learning positively support student success? (*Eval 1a*)
	1. What feedback might you give, if any, to VHS Learning to help them better support student success?

### AP Exam Intent [5 minutes]

1. How does your school encourage students participating in the Expanding Access initiative to register for AP exams? (*Eval 3a*)
	1. Does this encouragement differ by course subject?
	2. Has there been any difference in AP exam interest based on course subject? (*Eval 4a*)
	3. Does this encouragement differ in any way from that offered to AP students not participating in the Expanding Access initiative?

### Post-secondary Support [10 minutes]

1. What supports does your school offer students who are preparing to enter college? (*Eval 6*)
	1. Are there any different or unique supports offered to students with disabilities?
	2. Are there any different or unique supports offered to English Language learners?
	3. How, if at all, does the Expanding Access initiative compliment those school-provided services or resources?
	4. In what ways, if at all, does the Expanding Access initiative conflict with or contradict the school-provided resources you have described? For example, are any students missing out on services or opportunities provided by the school (like college fairs) because of commitments for their virtual course(s)?
	5. Are there ways in which the Expanding Access initiative could be adapted to meet its goals and at the same time benefit from the school-provided support services?

### Initiative Sustainability [5 minutes]

1. From your perspective, what kinds of supports do you envision your school would need in order to continue this initiative once the grant funding has ended? (*Eval 7; 7b; 7c*)
	1. Is there is any interest at your school in continuing to offer AP courses—either virtually or in-person—to students after this grant has ended?
	2. What are some of the barriers to continuing to provide AP courses? How could you overcome/work around those? (If not already mentioned.)

### Wrap-up [time permitting]

1. Is there anything else you think is important for us to know regarding your school and your students’ experiences with this initiative? (*Eval 8*)
2. What have you learned about the Expanding Access initiative that would be helpful to share with other school administrators or Site Coordinators who are interested in participating in this initiative?

# Appendix H: Summary of school group interview responses

## Participation and Recruitment [15 minutes]

**Protocol 1:** *We know DESE approached your school to participate in the Expanding Access initiative. How did your school decide to take part in the initiative?*

* 1. *What pros and cons did your school weigh when making the decision to participate?*
	2. *In what ways and to what extent did COVID impact your willingness to participate in this initiative, if at all?*

Relative to schools’ decisions to participate in the Expanding Access initiative, several focus group participants shared that their schools had existing relationships with VHS Learning, which facilitated a smooth integration of the initiative into their existing learning models. Expanded course offerings, no-cost exams, and a sense of obligation to support VHS Learning were also factors that contributed to participation. Though two participants were not privy to their school’s decision-making process, one did acknowledge that increasing access to and participation in AP courses is ingrained in their school’s philosophy, and this initiative seemed a natural continuation of that mission.

In terms of additional considerations relative to enrolling students in the Expanding Access initiative, one focus group participant shared the following: “One challenging things as a site coordinator is always dealing with the materials and equipment, and cost that is associated with seats, especially after we’ve had the pandemic year, and we had a significant number of people involved with VHS courses. This was going to give us the ability to reach a greater number of students and allow them to be enrolled in VHS courses without impacting the number of seats we had already purchased with the contractual number. So, there was the cost with it, and also the cost associated with the lab supplies. There was a significant amount of new lab materials – VHS had redone their lab equipment – so what we had been working with previously was not going to be tenable in the future.”

**Protocol 2:** *If you weren’t directly involved in your school’s decision-making process to participate in the Expanding Access initiative, how did you personally learn about this opportunity?*

1. *What prompted you to become involved in this initiative?*

Staff who were not directly involved in their school’s decision-making process to participate in the initiative shared a range of perspectives relative to their current involvement. For participants whose schools have previously partnered with VHS Learning, several were their schools existing Site Coordinator, so expanding the scope of their role to facilitate student success through the initiative seemed a natural transition.

There were also instances where Site Coordinators shared that their accepting this role seemed to be somewhat of an expectation, with one noting that they were “volun-told” to take the position, and another adding that they were asked during the school’s interview process whether they would be willing to take on this additional title. This Site Coordinator elaborated on the process, sharing the following anecdote: “In my job interview, they said that I would be watching over a class and just be a ‘body in the room,’ and as the year went on, I started gaining more and more responsibilities for it…things got added to it, but now it’s clear.  Now it’s 100% clear what the role of the Site Coordinator is.”Perhaps more notably, this Site Coordinator only learned this past Spring that they were their school’s official Site Coordinator, and they shared that they were just informed prior to the focus group that the Site Coordinator position involved a stipend.

**Protocol 3:** *For school leadership: How did your school recruit and select a Site Coordinator?*

* 1. *What are the day-to-day responsibilities of the Site Coordinator at your school?*
	2. *What experiences, characteristics, or qualities were you looking for in a Site Coordinator?*

One school administrator noted that that their Site Coordinator is very seasoned, and they manage nearly every component relative to students’ interactions with VHS Learning. They act as a liaison, they work directly with students to ensure that their questions are answered, and they provide them with additional academic supports, such as connecting students with in-person instructors who teach courses complementary to their VHS Learning courses. They also manage student recruitment, the scheduling process, and initiative advertisement; they navigate behavioral and academic expectations within the virtual learning environment, and they work with guidance counselors in terms of managing students’ social-emotional health.

**Protocol 4:** *For Site Coordinators: How would you describe your work as Site Coordinator?
Any different in your role as Site Coordinator for Expanding Access vs. previous experience as Site Coordinator for VHS Learning? What does your communication with students and parents look like? Frequency?*

* 1. *In what ways have your previous experiences (either in teaching, administration, or other positions) helped prepare you for this new role?*
	2. *In what ways, if any, do school administrators support you in your role as Site Coordinator?*
	3. *Are there any ways in which your school could better support you in your role as Site Coordinator? If so, how?*
	4. *In what ways does VHS Learning support you in your role as Site Coordinator?*
	5. *Are there ways VHS Learning could better support you in your role as Site Coordinator? If so, how?*

There was some notable variation amongst VHS Learning Site Coordinators—not exclusively linked to years of experience—in terms of engagement with students. Similar to expectations relative to managing a traditional classroom setting, several Site Coordinators understood their position to encompass an array of activities related to monitoring student success, facilitating student supports, and liaising between students, parents, and VHS Learning. Moreover, Site Coordinators generally expressed that they feel supported by both their brick-and-mortar schools and VHS Learning. In summarizing their work, a seasoned Site Coordinator shared the following account of their day-to-day activities: “Yeah, just the touchpoint for all our VHS kids to make sure their experience is going well. Maybe it’s just kind of my style – I feel like I open the VHS student info system each day just to see, just to do a really quick – the way I see it is I’d rather check every day than be alarmed if I go in once a week and realize a kid hasn’t been in in a week. So, I’ll just go in each day and look. The two big things are the number of days since last log-in, is a big factor – and then obviously the grade. So those are the two kind of things, and I feel like I’ve been doing it long enough where, the first couple of weeks I don’t look at it as closely, because everyone is learning the new system and all that stuff, but after a few weeks in, I feel like I have a pretty good understand of, who are the kids who have got the system down, they’re turning everything in, and who are the kids who are dragging their feet, and it’s not the best experience for them. And then just communicate with them and their guidance counselors on how it’s going. Should we keep going, should we not – obviously I’ll get some outreach to their VHS teacher directly, as well, and that will help paint the picture. But just as the general touchpoint to make sure they’re moving along.”

However, not all Site Coordinators displayed the same level of engagement in their students’ experiences with VHS Learning. One Site Coordinator, who notably had years of experience in this role, expressed that the scope of their work was rather limited, and that participating students are largely self-directed. The Site Coordinator described their responsibilities, including tasks such as assisting with registration, clarifying expectations and success criteria, handling case management, and communicating with VHS Learning; they shared that they follow up with students and teachers as needed, but expressed that there is no expectation of regular communication and there is little micro-management.

In another instance, a new Site Coordinator indicated that while they would appreciate an increased involvement in their students’ experiences, the manner in which their school implements the initiative limits their capacity to engage. In describing their experience as Site Coordinator, this focus group participant shared the following: “We signed up for two courses. I was the body in the room for one, and there was another teacher, a body in the room for the other one. For some reason, which is not clear to me, I went through the training, so I’m checking their work, seeing how often they sign in; that’s part of my responsibilities. I do check in on them, for both groups. I contact them through email and say, ‘Hey, are you okay? Do you need any help?’ But I don’t know them physically. The other teacher, who’s the body in the room for the other group, he didn’t go through the training process. He has them in his roster in school, the school roster, but not VHS. He does not have access to VHS at all.” Further, relative to their ability to communicate effectively with their students, they expressed the following: “I would like to. I don’t see the students. I don’t know these students, for the most part. And that’s something, next year, I’d like to make that very different. I don’t have them in my roster; I only have a smaller group, maybe one or two students, and the other group, I don’t even know them. It’s hard for me to know who they are, find them in the hallway; I just know the name. It’s been a bit of a mess.”

## Student Preparedness and Student Support [25 minutes]

**Protocol 5:** *What kinds of support or resources, if any, did your school provide to students over the summer to help them prepare for their AP course(s)?*

* + - * 1. *Do you know if students used this/these resources? How do you know?*
1. *How would you describe students’ utilization of these supports and resources?*

Relative to student resources, most focus group respondents indicated that, aside from ensuring participating students were aware of VHS Learning’s summer orientations, office hours, and preparatory coursework, their schools did not offer additional supports. The sole exception to this was a participant who noted that both their school’s Site Coordinator and administrative staff were available to students as resources over the summer should they need support.

**Protocol 6:** *In what ways, if any, do you think COVID impacted student preparation for, or participation in, these courses? Could you please share some examples?*

*Probe:*

1. *In what ways, if any, do you think virtual learning that occurred as a result of COVID has influenced or impacted how well-prepared students are for virtual AP courses? (For example: confidence around virtual learning; student abilities to engage with a virtual instructor or virtual classmates.) Could you please provide one or two examples?*

When asked about the impact of COVID on student preparation and participation, focus group respondents generally agreed that while remote learning during the pandemic differed significantly from virtual learning through the Expanding Access initiative, the more advanced, “high-flier” students did not exhibit a decline in content-readiness. However, several Site Coordinators expressed that for students who were new to VHS Learning or AP courses, the more hands-on nature of remote learning negatively impacted their experiences with the Expanding Access initiative. One Site Coordinator shared the following perspective: “What I’ve seen, though, is that, as a result of the pandemic, some of the students who are taking VHS classes have never been involved in self-directed learning before. A lot of those students need a lot closer monitoring. VHS gives me the tools that are necessary for me to do that. They make it relatively easy for me to see where the students are, whether they’re keeping up, whether they’ve logged in. All of those are things I can easily go through and do, but there’s a greater amount of that that started when we had more students enrolled in VHS courses. For the first time since I’ve been Site Coordinator, we’ve added flex courses, and that is also adding a little bit more onto it. Those students are not students who are the traditional VHS students, so it’s requiring a little bit more.”

**Protocol 7:** *How were students recruited and selected for participation?*

*Probes:*

* 1. *Were decisions about student recruitment and selection data-driven? If so, what data did you use? How did you use those data? (Provide examples if necessary, such as: MCAS scores; previous courses or other preparation; demographics.)*
	2. *Could teachers, or any other staff—such as guidance counselors—nominate students?*
	3. *Could students nominate themselves? Parents?*
	4. *Did any students who were offered this opportunity decide not to enroll? If so, do you know why they declined?*

In terms of student recruitment, all focus group respondents indicated that their schools advertised the Expanding Access initiative to all students, and that most students self-select to participate. However, notwithstanding that approach, several participants shared that their school did consider additional criteria when finalizing enrollment. These factors primarily centered around students’ interest in STEM course content and the completion of prerequisites, as outlined by both the schools and VHS Learning.

**Protocol 8:** *One of the goals of this project is to support historically marginalized students. Please describe for us the ways in which considerations for diversity, equity, and inclusion impacted your school’s decision-making around recruitment for this virtual AP initiative.*

1. *Were there any specific student groups that you intentionally recruited or encouraged to enroll? (Such as students who’d never taken an AP or honors course before.)*
2. *If so, how did you recruit and encourage students from those groups to participate?*
3. *Does your school have a group of historically marginalized students who were underrepresented in this year’s participants in this AP initiative? If so, as you reflect on the demographics of the students that are enrolled this year, what might your school do differently in the future (regarding, for example, recruitment, outreach, or support)?*
4. *What, if anything, did your school do to prepare school staff to support these students?*

No focus group participant indicated that their school prioritized the recruitment of marginalized student populations for the Expanding Access initiative. Two respondents, however, did share additional context relative to student recruitment. One Site Coordinator shared that their school’s student body comprises predominantly marginalized students, and that the students participating in the initiative are demographically representative of the student population as a whole; another Site Coordinator noted that their school has endorsed a long-standing commitment to identifying and engaging marginalized students in advanced courses, but they also emphasized the importance of early intervention and assessment: “We do what we can do at the high school, but that’s kind of unrelated to whether they end up taking AP, right? So, if VHS can figure out a way to target students – I don’t know whether they can get DESE to add a ‘kids who excelled on MCAS and aren’t taking AP coursework,’ that kind of thing. To target the groups that they’re looking for in this grant – and I’ve told VHS this before, they’re not going to get the kids whose parents don’t go to college through, ‘Oh, we have this virtual thing you can do.’ And some of that is on the Site Coordinator, and I understand that, but a kind of school-wide, system-wide push to expand access and equity, you’re not going to get anywhere. And a lot of that stuff starts really early.”

**Protocol 9:** *Do any students who are currently enrolled in the initiative have an IEP or 504 plan?*

* + - * 1. *If yes: How have appropriate accommodations for these students been made as part of the delivery of the student’s virtual course? What do those accommodations look like?*
				2. *Has it been challenging to provide all of the services and/or accommodations required by student IEP or 504 plans?*
				3. *Has there been any variation in student supports based on course type?*

Among focus group participants, none reported having any students with IEPs enrolled in the Expanding Access initiative. Two Site Coordinators shared that they supported a combined three students with 504 plans. Among those students, two required minor academic supports that their schools were easily able to accommodate.

**Protocol 10:** *Are any of the students currently enrolled in the initiative second language learners?*

*If yes: Were these students actively recruited for participation in this initiative?*

*If yes: Has the school needed to, or been able to, provide additional supports for English language learners who are participating in the initiative?*

*Probes:*

* + 1. *What do those supports look like?*
		2. *Has there been any variation in the needs of students based on course type?*

All but one focus group respondent reported that they did not have any ESL students participating in the Expanding Access initiative. The Site Coordinator with ESL students shared that these students have access to in-house programs, and those teachers provide them with additional support.

## Successes and Challenges [20 minutes]

**Protocol 11:** *In this year, have there been any noteworthy successes in the launch of the initiative?*

*Probes:*

*a. In what ways do you hope to build on this/those success(es)?*

Focus group respondents generally conveyed their satisfaction with their school’s experience with VHS Learning and the Expanding Access initiative. None shared any noteworthy successes, but many expressed both gratitude for the opportunity to provide students with access to advanced courses and appreciation for student success and progress. One school administrator shared the following sentiments: “In previous years, not this year or this year before, there have been times where we’ve hit our seat limits and have had to tell students they cannot take a VHS class. To be honest, I don’t know how the numbers worked out this year and last, but the seats that were available to us by our district, by our own VHS teachers, and along with this grant, it was nice to not have had to tell students this year – at least I don’t think –, that, ‘No, you cannot take a VHS class; we don’t have any more seats.’ So, I appreciate that students have been given that opportunity if they have selected that that’s what they’d like to do. I don’t know if that’s a result of SAPAO or other factors.”

**Protocol 12:** *In this first year, have there been any noteworthy challenges as the initiative launched?*

* 1. *If yes, how were these challenges resolved? If not, how should they be addressed?*
	2. *From your perspective, are these issues likely to recur? And if so, what are your thoughts on how to manage these issues in the future?*
	3. *What challenges—related to participation—have students communicated with teachers, guidance counselors, the site coordinator, or other school staff?*

Although two Site Coordinators shared that they did not experience any notable challenges, other focus group participants noted trials they faced during the first year of implementation. Among these challenges was the condensed timeline schools were presented with in terms of student recruitment, communicating expectations, student preparation, and bridging gaps in content knowledge. Regarding issues with student recruitment and academic expectations, it was noted that these should be resolved with time; however, one Site Coordinator shared the following perspective relative to student preparation for AP STEM courses, in particular: “…we can do a lot more with students in psych and lit and lang and history than we can with calc, right? We can’t get a year of pre-calc in that didn’t exist. You can’t do those concurrently, whereas you can do some things concurrently with those other courses. The non-traditional – the kids that used to get excluded from AP, I don’t know if this program is going to get it done for those guys. The kids who need a ton of support – an hour of office hours a week, or whatever they get, that’s not going to get it done.”

**Protocol 13:** *How did you go about integrating this/these courses into student’s schedules?*

*Probes:*

1. *Given that your school uses a [semester terms; block; trimesters; etc.] schedule, in what ways have you had to adapt the virtual AP course’s year-long schedule to fit within your school’s existing scheduling format?*
2. *What sorts of scheduling challenges, if any, do you anticipate over the course of the remaining year?*
3. *Were you unable to integrate this/these course(s) into any of your students’ schedules? If so, what was the primary challenge?*
4. *Were there any unique scheduling challenges for English language learners or students with disabilities?*
5. *Has it been difficult to accommodate the testing schedule (e.g., mid-terms, finals) provided by the virtual AP course(s)?*

All focus group respondents indicated that their Expanding Access-enrolled students are allocated time during regular school hours to complete their virtual coursework. One Site Coordinator, however, noted a caveat: students in their school have the option to take VHS Learning courses as independent studies or as supplemental courses; students who elect the latter are not provided with time and a learning space during regular school hours.

Additional supports, such as a quiet learning space, varied among schools.

**Protocol 14:** *From your perspective, in what ways do the virtual course instructors positively support student success?*

1. *What constructive feedback might you give, if any, to course instructors to better support student success?*

When asked how VHS Learning instructors support student success, responses from focus group participants varied. While several Site Coordinators expressed their appreciation for instructors’ responsiveness and engagement, one indicated that their students’ experiences relative to communication were inconsistent.

**Protocol 15:** *From your perspective, in what ways does VHS Learning positively support student success?*

1. *What feedback might you give, if any, to VHS Learning to help them better support student success?*

Focus group respondents expressed satisfaction with VHS Learning’s level of engagement, their effective communication, and their continuous support for participants in the initiative. One school administrator shared the following: “From my point of view, they do an excellent job for trying to provide as much support as they possibly can for learning what individual students need. That’s all a tribute to their training programs that they have and the way that the courses are structured.”

Apart from this general contentment, one Site Coordinator shared a unique and noteworthy request that they felt would help bridge the gap in terms of students’ varying degrees of technological savvy. This Site Coordinator cited student struggles with navigating the VHS Learning website, which led them to suggest creating a ‘dummy’ administrative account that would allow Site Coordinators to guide students through the platform. The Site Coordinator acknowledged that VHS’s website is user-friendly, but they were confident that this would enhance students’ comfort with self-directed learning tasks.

## AP Exam Intent [5 minutes]

**Protocol 16:** *How does your school encourage students participating in the Expanding Access initiative to register for AP exams?*

1. *Does this encouragement differ by course subject?*
2. *Has there been any difference in AP exam interest based on course subject?*
3. *Does this encouragement differ in any way from that offered to AP students not participating in the Expanding Access initiative?*

All focus group participants indicated that all Expanding Access-enrolled students were registered for their respective AP exams. There was, however, notable variation in how schools record students’ grades relative to AP credits, GPAs, and transcripts.

## Post-secondary Support [10 minutes]

**Protocol 17:** *What supports does your school offer students who are preparing to enter college?*

1. *Are there any different or unique supports offered to students with disabilities?*
2. *Are there any different or unique supports offered to English Language learners?*
3. *How, if at all, does the Expanding Access initiative compliment those school-provided services or resources?*
4. *In what ways, if at all, does the Expanding Access initiative conflict with or contradict the school-provided resources you have described? For example, are any students missing out on services or opportunities provided by the school (like college fairs) because of commitments for their virtual course(s)?*
5. *Are there ways in which the Expanding Access initiative could be adapted to meet its goals and at the same time benefit from the school-provided support services?*

Relative to post-secondary supports, most focus group participants indicated that their guidance departments offer a series of resources to both students and parents, though supports tend not to vary across student populations. Regarding ways in which the Expanding Access initiative complements schools’ efforts, several respondents noted how the initiative’s academic rigor and self-directed structure integrate with post-secondary preparation, with one Site Coordinator sharing that their school utilizes the initiative to “make kids’ course requests and kids’ career and college planning more successful.” A school administrator added, “I think it has helped some students realize that they can be successful at college, it has given them a little more confidence with the number of students that have been able to access these courses. As [Site Coordinator] said earlier, it’s also caused some reflection in students to learn a few more skills or hone some skills that they needed to persevere and to be successful when the going gets tough, so to speak.” Further, focus group participants also were unanimous in expressing that VHS Learning’s asynchronous structure allowed students the flexibility to avoid overlapping their coursework with school-offered supports.

## Initiative Sustainability [5 minutes]

**Protocol 18:** *From your perspective, what kinds of supports do you envision your school would need in order to continue this initiative once the grant funding has ended?*

* 1. *Is there is any interest at your school in continuing to offer AP courses—either virtually or in-person—to students after this grant has ended?*
	2. *What are some of the barriers to continuing to provide AP courses? How could you overcome/work around those? (If not already mentioned.)*

Focus group participants generally expressed that their schools intend to reenroll in the Expanding Access initiative next year, and several indicated interest in continuing the initiative following the expiration of the grant. None shared any concerns relative to barriers to participation or the need for additional supports, but one Site Coordinator did emphasize the importance of early assessment in terms of student recruitment and success.

## Wrap-up [time permitting]

**Protocol 19:** *Is there anything else you think is important for us to know regarding your school and your students’ experiences with this initiative?*

Focus group participants generally expressed their gratitude for VHS Learning’s commitment to the success of both partnering schools and students. One administrator shared: “…their support for us, administrators or the coordinator, is just incredible. That kind of empowers and gives us confidence to be able to interact with students and their VHS class and their VHS teacher, if need be, to really sort out any problems or any issues. That alignment in being on the same page relative to the students’ experience and the adults in the building’s experience with VHS, really makes a difference. I hope other schools experience that, as well… The relationship really makes a big difference with VHS, so we’re happy to be part of it.” Moreover, several participants noted students’ excitement regarding course selection, and there was praise for VHS Learning’s course content and rigor relative to challenging students and preparing them for post-secondary success.

There was, however, acknowledgement that this initiative is not a ‘one size fits all’ model; one Site Coordinator shared: “I think in terms of the program and the outreach and all that, I’ve been happy with it…To me, it boils down more to the student and their fit with it, less than it does a representation of a grant or the initiative. It’s always going to come down to me as the right fit, and more so a representation of that student, if that student was the right fit, less so than ‘they didn’t have enough support in their class.’ I don’t think it’s a representation of the grant; I think it’s more so the student.”

**Protocol 20:** *What have you learned about the Expanding Access initiative that would be helpful to share with other school administrators or Site Coordinators who are interested in participating in this initiative?*

In terms of guidance for other school administrators or Site Coordinators who are interested in participating in the Expanding Access initiative, focus group participants shared an array of suggestions. Notably, Site Coordinators recommended that schools involve staff with a baseline understanding of technology, regardless of whether they are directly involved with the initiative. In the same vein, several participants noted the value of developing a team to coordinate on different components of the initiative; one school administrator advised that schools include administrators, guidance counselors, and content experts to generate, communicate, and implement a thorough and thoughtful plan. One Site Coordinator also encouraged schools to solicit feedback from participating students so as to make informed practice changes going forward.

There were also notable comments relative to student preparedness and subsequent supports. One Site Coordinator shared that, in order to succeed in a virtual learning environment, students need to possess high executive function skills, irrespective of their academic aptitude. This Site Coordinator shared their perspective on what makes students a ‘good fit’ for the initiative: “Those kids in the middle – not the ones who basically have another adult doing it with them and not the ones who can do it independently – the kids in the middle, that’s where they struggle. They can do the math, they can do the reading, they can do the literary analysis, they can’t log on every day. When they log on, they can’t figure out where to upload the thing, so they give up.” It was also noted that schools should consider whether their students may need supports beyond the scope of VHS Learning; accordingly, one Site Coordinator indicated that a greater degree of “scaffolding and communication” through the school may be necessary to accommodate the needs of more vulnerable student populations.

# Appendix I: DESE group interview protocol

**Introduction and Consent [5 minutes]**

My name is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and I work with UMass Donahue Institute, an independent third-party research organization that has been contracted by DESE to conduct an evaluation of the STEM Advanced Placement Access Expansion Opportunity (Expanding Access) initiative in Massachusetts. Thank you for taking this time to speak with me about your experience with this initiative.

**Study Purpose**

As you know, DESE has contracted this study to monitor and assess key metrics of the Expanding Access initiative’s implementation and impact, facilitate continuous program improvement, and promote organizational learning. The input you provide today about your experiences as members of DESE’s team will inform and assist us in documenting and learning about the first year of implementation of the Expanding Access initiative.

**Confidentiality**

Information obtained today will be used for the purposes of improving the Expanding Access initiative’s implementation and to inform others about program impacts and lessons learned. We will be generating a brief summary from these interviews. Only UMDI will have access to the interview data—the data will not be shared with DESE. Because the number of interviewees is limited, we cannot guarantee your confidentiality. However, we will de-identify interviewees in the summary we produce—meaning that no names will be used (and if necessary, pseudonyms will be assigned), no quotes will be attributed to individuals, and your positions will not be revealed. We also ask that you each maintain the confidence of the other participants in this room.

**Permission to Record**

The interview is voluntary and will take no more than 1 hour. With your permission, I would like to record our conversation to ensure your comments are accurately documented. No one outside of the UMDI team will have access to the recording. If you want me to turn off the recorder at any point, please just let me know. **May I have your permission to record this conversation?** Before we get started, do you have any questions for me? Ok, I am turning on the recorder, and we will begin the interview.

### Successes and challenges over the last year [30 minutes]

1. What have been some the key successes during the first year of the Expanding Access initiative’s implementation? (*Eval 1A)*

*Probe if not addressed:*

1. What have been some of the key successes around school engagement and interest?
2. What have been some of the key successes regarding student preparation and recruitment?
3. What have been some of the key successes regarding VHS Learning as vendor?
4. What have been some of the key successes in relation to diversity, equity and inclusion?
5. What have been some of the key challenges during the first year of the Expanding Access initiative’s implementation? (*Eval 1A)*

*Probe if not addressed:*

* 1. What have been some of the key challenges for students?
	2. What have been some of the key challenges for schools or Site Coordinators?
	3. What have been some of the key challenges in relation to collaboration with VHS Learning?
	4. What have been some of the key challenges in relation to diversity, equity, and inclusion? (*Eval Q1B*)
1. How has COVID impacted the first year of the initiative’s implementation in schools? (*Eval 2*)

*Probe if not addressed:*

1. Impact on students?
2. Impact on school administrators or Site Coordinators?
3. Impact on VHS Learning?
4. We’d like to develop an understanding around cost of the initiative. Have there been any unanticipated costs, and if so, what were they? (*Eval 5)*
	1. Is DESE’s payment to VHS learning dependent on the number of students or schools served each year?
	2. Does DESE compensate VHS Learning for each student who enrolls in an AP STEM course for any amount of time (or some minimum amount of time)?
	3. How does attrition (at the school and student level) impact DESE’s payments to VHS?
5. One of the goals of the initiative is to support participating students in achieving post-secondary success. How have DESE and VHS Learning pursued that goal over the past year? (*Eval 6*)
	1. What might DESE do moving forward to support participating students’ post-secondary success?
	2. What might VHS Learning do moving forward to support participating students post-secondary success?

One of the goals of the initiative is to support increased access to AP STEM courses for diverse student groups. How has DESE pursued that goal during the last year? What successes have you had? What challenges have you encountered? How might the initiative move forward? (*Eval 1b*)

How have enrollment challenges impacted DESE’s goals around diversity, equity, and inclusion, if at all?

### Looking ahead [15 minutes]

1. What does DESE plan to do differently next year? (*Eval 7*)
2. In what ways have you adjusted recruitment strategies with schools? (*Eval 1b*)
3. In what ways have you adjusted communication strategies with schools?
4. To what degree has DESE considered priority zone groupings in recruitment of schools for next year? (*Eval 1b*)
5. How would you describe schools’ general levels of interest in the initiative for next year? Compared to last year, has interest grown? What has most contributed to schools’ interest? (*Eval 7A*)
6. We’ve come to the end of the interview. Is there anything else you like to share with us regarding the Expanding Access initiative?

# Appendix J: VHS Learning group interview protocol

**Introduction and Consent [5 minutes]**

My name is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and I work with UMass Donahue Institute, an independent third-party research organization that has been contracted by the Massachusetts Department of Elementary and Secondary Education (or DESE) to conduct an evaluation of the STEM Advanced Placement Access Expansion Opportunity (Expanding Access) initiative in Massachusetts. Thank you for taking this time to speak with me about your experience with this initiative.

**Study Purpose**

As you know, DESE has contracted this study to monitor and assess key metrics of Expanding Access initiative implementation and impact, facilitate continuous program improvement, and promote organizational learning. Your input today about your experiences as members of the VHS Learning team will inform and assist us in documenting and learning about the first year of implementation of the Expanding Access Initiative.

**Confidentiality**

Information obtained today will be used for the purposes of improving the Expanding Access initiative’s implementation and to inform others about program impacts and lessons learned. We will be generating a brief summary from these interviews. Only UMDI will have access to the interview data—the data will not be shared with DESE. Because the number of interviewees is limited, we cannot guarantee your confidentiality. However, we will de-identify interviewees in the summary we produce—meaning that no names will be used (and if necessary, pseudonyms will be assigned), no quotes will be attributed to individuals, and your positions will not be revealed. We also ask that you each maintain the confidence of the other participants in this room.

**Permission to Record**

The interview is voluntary and will take no more than 1 hour. With your permission, I would like to record our conversation to ensure your comments are accurately documented. No one outside of the UMDI team will have access to the recording. If you want me to turn off the recorder at any point, please just let me know. **May I have your permission to record this conversation?** Before we get started, do you have any questions for me? Ok, I am turning on the recorder, and we will begin the interview.

### Key successes and challenges [15 minutes]

1. What have been the key successes during the first year of the Expanding Access initiative’s implementation? (*Eval Q1A*)

*Probe if not addressed:*

1. What have been some of the key successes for students?
2. What have been some of the key successes for Schools or Site Coordinators?
3. What have been some of the key successes in relation to collaboration with DESE?
4. What have been some of the key successes in relation to diversity, equity, and inclusion? (*Eval Q1B*)
5. What have been the key challenges during the first year of the initiative’s implementation? (*Eval Q1A*)

*Probe if not addressed:*

* 1. What have been some of the key challenges for students?
	2. What have been some of the key challenges for Schools or Site Coordinators?
	3. What have been some of the key challenges in relation to collaboration with DESE?
	4. What have been some of the key challenges in relation to diversity, equity, and inclusion? (*Eval Q1B*)
1. How has COVID impacted the first year of the initiative’s implementation? (*Eval Q2*)

*Probe if not addressed:*

1. Impact on students?
2. Impact on schools or Site Coordinators?
3. Impact on teachers?

### We’d like to ask some additional questions regarding students, Site Coordinators, and schools. [30 minutes]

1. Were most students adequately prepared for participation in their virtual AP STEM course(s)? How do you know? (*Eval Q1B*)
	1. Were schools’ procedures for identifying and recruiting students adequate? Did they reach the target population? (*Eval Q1B*)
	2. Have participating students typically required additional or different supports than other VHS Learning students? If so, what did those supports look like? (*Eval Q3*)
2. What information did VHS Learning discover (either through exit surveys or communication with teachers, schools, and/or Site Coordinators) about why students were dropping their courses?
	1. Was attrition higher than expected this year? What do you believe contributed to attrition?
	2. How might schools better support students to reduce attrition rates? (*Eval
	Q3; Q7A*)
3. To what extent have Site Coordinators fulfilled their duties in support of the initiative? Is VHS Learning satisfied with their commitment to the initiative?
4. How invested do you believe participating schools are in the success of students who are enrolled in the Expanding Access initiative? (*Eval Q7*)
5. Do you believe that most participating schools intend to provide students with long-term access to AP STEM courses? Have your feelings on this changed since the beginning of the year? If so, why? (*Eval Q7B; 7C*)
6. We know that many schools that participated this past year had a prior relationship with VHS Learning. In what ways are the experiences of students at schools new to VHS Learning similar or different from the experiences of students at schools that are not new to VHS Learning? (*Eval Q1A*)
7. How has VHS Learning worked with DESE or schools to connect students with the knowledge, skills, and supports necessary for post-secondary success? What does VHS learning hope to do moving forward? (*Eval Q6*)

### Looking ahead [10 minutes]

1. What does VHS Learning plan to do differently next year?

*Potential probes:*

1. Are you planning any changes to support for participating schools/districts?
2. Are you planning any changes related to support and training for Site Coordinators?
3. Are you planning any changes related to support for participating students?
4. Are you planning any changes related to collaboration with DESE?
5. What next steps does VHS Learning have in mind to continue to promote diversity, equity, and inclusion through the Expanding Access initiative? (*Eval Q1B*)
6. Are you planning any next steps related to the hiring of a diverse teacher workforce?
7. Are you planning any next steps related to improving students’ sense of inclusion?

### Wrap up [5 minutes]

We’ve come to the end of the interview. Is there anything else you like to share with us regarding the Expanding Access initiative?

# Appendix K: Student survey protocol

## Introduction and Consent [2 minutes]

Thank you for taking the time to complete this survey. You are being invited to participate in an evaluation of the Expanding Access initiative, also known as “SAPAO,” because you are enrolled in at least one virtual Advanced Placement (AP) course offered through the initiative. This evaluation is being conducted by the UMass Donahue Institute (UMDI)—an independent third-party evaluator working with the Massachusetts Department of Elementary and Secondary Education (DESE).

**Why are we doing this survey?**

The purpose of this survey is to learn more about how the initiative works, and how to improve students’ experiences with the initiative.

**What will I be asked to do and how much time will it take?**

If you agree to participate, you will be asked to complete a survey about your experiences so far in your virtual AP STEM course(s). The survey will take about 15 minutes to complete**.**

**Will completing this survey help me in any way?**

While there are limited direct benefits, the information you provide will be used to improve the Expanding Access initiative for yourself and for other students. You may also benefit by reflecting on your experience in the initiative.

**How will my personal information be protected?**

To the best of our ability, your answers will remain confidential. To protect your confidentiality, only members of the UMDI team will have access to the survey data. Survey findings will only be reported to DESE as aggregate data, which combines responses from all students. Your responses will not be shared with your teachers, classmates, or parents, and will not impact your course grade.

**Will I be given any money or other compensation for completing this survey?**

We do not offer participation incentives for your involvement in this survey.

**What happens if I say yes, but I change my mind later?**You do not have to participate in this survey if you do not want to. If you agree to participate, but later change your mind, you may stop taking the survey at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

**Who can I talk to if I have questions?**You can ask any questions that you may have about this survey or the program evaluation. If you have a question, you can call Jeremiah Johnson at 413-455-7377 or Hanni Thoma at 413-577-2005, or email jeremiah@donahue.umass.edu or hanni@donahue.umass.edu.

By clicking “I agree” below you are indicating that you have read this consent form and agree to participate in this survey. You are free to skip any question that you choose.

Please print a copy of this page for your records.

### Pre-AP [4 minutes 15 seconds]

1. How did you first learn about the Expanding Access initiative? (Please select all that apply) (*Eval 1A*)(30 seconds)
	1. My school notified me (either via email, phone, face-to-face, or through a virtual meeting) that I was eligible to participate.
	2. A teacher or guidance counselor told me about the initiative.
	3. A family member told me about the initiative.
	4. A classmate or friend told me about the initiative.
	5. Other (please specify):
2. What influenced your decision to enroll in an AP STEM course with the Expanding Access initiative? (Please select all that apply) (*Eval 2C*) (30 seconds)
3. I wanted to challenge myself academically.
4. I was interested in the subject.
5. I thought it would help me get into a good college or university.
6. I wanted to earn college credit.\* (Note: College credit may be offered by some colleges if a student earns a high enough score on the AP exam)
7. I thought it would improve my GPA.
8. I wanted to continue taking virtual learning courses.
9. My school encouraged me to enroll.
10. My family encouraged me to enroll.
11. My friends encouraged me to enroll.
12. Other (please specify):
13. Who encouraged you to enroll in an AP STEM course through the Expanding Access initiative? (Please select all that apply) (*Eval 1B*) (30 seconds)
14. My parents or a family member encouraged me to enroll.
15. My friend(s) encouraged me to enroll.
16. My teacher/counselor/coach/principal or other school staff member encouraged me to enroll.
17. No one encouraged me to enroll in a virtual AP course.
18. Other (please specify):
19. How prepared did you feel *when you began* your virtual AP STEM course(s)? (*Eval 2C*) (15 seconds)

Unprepared Somewhat unprepared Somewhat prepared Well prepared

1. **Display logic from Q3, if student selects ‘somewhat’ or ‘well prepared’:** What most contributed to your preparedness? (Please select all that apply) (30 seconds)
	1. Course content from a previous year
	2. Rigor or difficulty of course from a previous year
	3. Tutoring
	4. Independent study
	5. A previous virtual learning experience
	6. Study skills
	7. Summer school
	8. School-provided summer resources
	9. VHS Learning-provided summer resources
	10. Other (please specify):
2. While there was no requirement for students to do any preparation over the summer, please share whether the supports listed below were available to you *and* what supports you utilized, if any, to prepare for your virtual AP STEM course(s) with the Expanding Access initiative. (*Eval 1A, 2C, 3*) (2 minutes)

This was not available.

This was available, but I did not use it.

This was available, and I did use it.

I don’t know whether this was available or not.

* 1. Meeting with a counselor or teacher
	2. Reading list
	3. Library access
	4. Virtual learning opportunities (such as lectures or courses)
	5. Tutoring
	6. VHS Learning summer orientation
	7. Summer coursework
	8. Other (please specify):

### Virtual AP Experience [7 minutes]

1. Please indicate the extent to which you agree with the statements below. (*Eval 1A, 6*) (1 minute 15 seconds)

Strongly Disagree Disagree Agree Strongly Agree

1. This course(s) is more difficult than I expected when I enrolled.
2. My academic course load this year has been manageable.
3. This course(s) requires significantly more time (studying and completing course assignments) than the other courses I’m currently taking.
4. My participation in this course(s) has positively impacted my performance in other courses.
5. My virtual AP course(s) has increased my interest in pursuing a STEM major or a career in STEM.
6. How much time do you spend each week completing the asynchronous assignments for your course(s)? (15 seconds)
	1. Less than 3 hours
	2. Between 3 and 6 hours
	3. Between 7 and 12
	4. Over 12 hours
7. How much do you interact (such as over the telephone, online, or through face-to-face communications) with the following individuals? (*Eval 1A*) (45 seconds)

Every day Nearly every day A few times a week A few times a month Never

* 1. My virtual AP teacher
	2. My AP Site Coordinator
	3. My virtual AP classmates
1. Who do you seek out when you need help with your AP course(s)? (Please select all that apply) (*Eval 1A, 3*) (30 seconds)
	1. My virtual AP teacher
	2. My Site Coordinator
	3. My virtual AP classmates
	4. A teacher at my school
	5. Other (please specify):
2. The following questions pertain to your experiences with your virtual AP teacher(s), classmates, and Site Coordinator. Please indicate how frequently you agree with the statements below. (2 minutes 30 seconds)

Never Some of the time Most of the time All of the time Not Applicable

* 1. I feel I belong in this virtual AP course.
	2. I feel supported by my virtual AP teacher.
	3. I feel supported by my Site Coordinator.
	4. I feel supported by my virtual AP classmates.
	5. I feel I am treated fairly by my virtual AP teacher.
	6. I feel I am treated fairly by my Site Coordinator.
	7. I feel I am treated fairly by my virtual AP classmates.
	8. I feel I can be my authentic self with my virtual AP teacher.
	9. I feel I can be my authentic self with my Site Coordinator.
	10. I feel I can be my authentic self with my virtual AP classmates.
1. Please indicate the extent to which you have improved the skills listed below *as a result of your participation in the Expanding Access initiative*. (*Eval 2C; 6, 8*) (1 minute 45 seconds)

Neutral (no change) Small improvement

Moderate improvement Significant improvement

1. Critical thinking skills
2. Communication skills
3. Creativity
4. Ability to generate solutions to complex problems
5. Ability to work on my own
6. Time management skills
7. Confidence using technology

### AP Exam Intent [15 seconds]

1. Do you intend to take the AP exam(s) associated with the virtual AP STEM course(s) you are taking through the Expanding Access initiative? (*Eval 3A*) (15 seconds)
2. Yes
3. No
4. Not sure

### Wrap Up [3 minute 45 seconds]

1. What virtual AP STEM course(s) are you currently enrolled in through the Expanding Access initiative? (Please select all that apply) (30 seconds)
	1. AP Biology
	2. AP Calculus AB
	3. AP Chemistry
	4. AP Computer Science Principles
	5. AP Environmental Science
	6. AP Physics 1
	7. AP Statistics
2. What school do you attend? (Choose from list) (15 seconds)
3. Have you previously taken an AP course? (15 seconds)
	1. Yes
	2. No
4. Have you previously taken a virtual course through VHS Learning? (15 seconds)
	1. Yes
	2. No
5. Which of the following best describes your gender? (Please select all that apply) (15 seconds)
	1. Female
	2. Male
	3. Non-binary
	4. I choose not to respond
	5. Other (please describe if you like):
6. What is your race or ethnicity? (Please select all that apply) (15 seconds)
	1. Hispanic or Latino/a/x
	2. Not Hispanic or Latino/a/x
	3. American Indian or Alaskan Native
	4. Asian
	5. Black or African American
	6. Native Hawaiian or Other Pacific Islander
	7. White
	8. I choose not to respond
7. Do you have any additional feedback or reflections on your experience with the Expanding Access initiative that might help improve experiences for other students? (Short answer response) (*Eval 1A*) (2 minutes)

# Appendix L: Parent/guardian survey protocol

## Introduction and Consent [2 minutes]

Thank you for taking the time to complete this survey. You are being invited to participate in an evaluation of the Expanding Access (also known as SAPAO) initiative because you are a parent or guardian of a child that is enrolled in at least one virtual Advanced Placement (AP) course offered through the initiative. These courses are run by VHS Learning. This evaluation is being conducted by the UMass Donahue Institute (UMDI)—an independent third-party evaluator working with Massachusetts Department of Elementary and Secondary Education (DESE).

**Why are we doing this survey?**

The purpose of this survey is to learn more about how the initiative works, and how to improve students’ experiences with the initiative.

**What will I be asked to do and how much time will it take?**

If you agree to participate, you will be asked to complete a survey about your observations of your child’s experiences so far in their virtual AP course(s). The survey will take about 10 minutes to complete**.**

**Will completing this survey help me in any way?**

While there are limited direct benefits, the information you provide will be used to improve the Expanding Access initiative for students. You may also benefit by reflecting on your child’s experience in the initiative.

**How will my personal information be protected?**

To the best of our ability, your answers will remain confidential. To protect your confidentiality, only members of the UMDI team will have access to the survey data. Survey findings will only be reported to DESE as aggregate data, which combines responses from all parents and guardians. Your responses will not be shared with your child or their teachers or classmates, and will not impact your child’s course grade.

**Will I be given any money or other compensation for completing this survey?**

We do not offer participation incentives for your involvement in this study.

**What happens if I say yes, but I change my mind later?**You do not have to participate in this survey if you do not want to. If you agree to participate, but later change your mind, you may stop taking the survey at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

**Who can I talk to if I have questions?**You can ask any questions that you may have about the study or the program evaluation. If you have a question, you can call Jeremiah Johnson at 413-455-7377 or Hanni Thoma at 413-577-2005, or email jeremiah@donahue.umass.edu or hanni@donahue.umass.edu.

By clicking “I agree” below you are indicating that you have read this consent form and agree to participate in this activity. You are free to skip any question that you choose.

Please print a copy of this page for your records.

### Pre-AP [30 seconds]

1. How involved were you in your child’s decision to enroll in a virtual AP STEM course through the Expanding Access initiative? (*Eval 2C*) (15 seconds)

Not at all involved Slightly involved Moderately involved Extremely involved

1. How motivated do you believe your child is to succeed in their virtual AP course through the Expanding Access initiative? (*Eval 1A*) (15 seconds)

Not at all motivated Slightly motivated Moderately motivated Extremely motivated

### School and VHS Learning Supports [2 minutes 30 seconds]

1. While there was no requirement for students to do any preparation during the summer, please share whether the supports listed below were available to your child, *and* what supports they utilized, if any, to prepare for their virtual AP STEM course(s) with the Expanding Access initiative. (*Eval 1A, 2C, 3*) (2 minutes)

This was not available during the summer.

This was available during the summer, but my child did **not** use it.

This was available during the summer, and my child **did** use it.

I don’t know if this was available during the summer.

1. Meetings with counselors or teachers
2. Reading list
3. Library access
4. Virtual learning opportunities (such as lectures or courses)
5. Tutoring
6. VHS Summer Orientation
7. Summer coursework
8. Other (please specify):
9. What resources does your child **currently** utilize when they need help with their virtual AP STEM course through the Expanding Access initiative? (Please select all that apply) (*Eval 1A; 3*) (30 seconds)
	1. Study skills
	2. The internet (such as Google or YouTube)
	3. Tutoring
	4. Course content from a previous year
	5. Virtual AP teacher-provided office hours
	6. Individualized meetings with their virtual teacher
	7. Virtual study group with their virtual AP classmates
	8. In-person study groups with other students at their school
	9. Support from Site Coordinator
	10. Support from faculty or staff at their high school
	11. School-provided summer resources
	12. VHS Learning-provided summer resources
	13. Other (please specify):
	14. I don’t know

### Course Experience [5 minute 30 seconds]

1. To what extent do you agree that your child is receiving enough support from their: (*Eval 3*) (45 seconds)

Strongly disagree Disagree Agree Strongly agree No basis for opinion

* 1. Virtual AP teacher
	2. Virtual AP classmates
	3. AP Site Coordinator
1. What **additional** resources or supports (provided by either the school or VHS Learning) would your child benefit from in their virtual AP course through the Expanding Access initiative? If you are not sure, please write “I don’t know.” (*Eval 3*) (Short answer) (2 minutes)
2. Does your child receive educational support from an IEP? *Individualized Education Plans (IEP) provide special learning accommodations or supports to students*. (15 seconds)
	1. Yes
	2. No
	3. I don’t know
3. Does your child receive educational support from a 504 plan? *504 Plans provide special learning accommodations or supports to students*. (15 seconds)
	1. Yes
	2. No
	3. I don’t know
4. **Display logic if yes to Q7 or Q8** To what extent do you believe that your child’s learning needs, as outlined in their IEP or 504 plan, are being met? (15 seconds)
	1. All of their needs are being met
	2. Some of their needs are being met
	3. Few of their needs are being met
	4. None of their needs are being met
5. Please describe a memorable experience that your child has shared with you about their virtual AP STEM course through the Expanding Access initiative. This might include, for example, comments on their course, their teacher, interactions with classmates, or another component of their virtual AP STEM class. (Short answer) (*Eval 1A*) (2 minutes)

### AP Exam Intent [30 seconds]

1. Prompt: An important component of many students’ experiences in advance placement (AP) courses is taking an AP exam. One benefit of taking this exam is that students may receive a qualifying score which could make them eligible for college credit. Please review and respond to the questions below. (*Eval 3A*) (30 seconds)

Yes No I don’t know

* 1. Has your child talked to you about taking the AP exam(s) associated with their virtual AP course(s)?
	2. Does your child plan to take the AP exam(s) associated with their virtual AP course(s)?

### Demographics [1 minute 30 seconds]

1. What school does your child attend? (Drop down list) (15 seconds)
2. What Expanding Access initiative course(s) is your child enrolled in? (Please select all that apply) (30 seconds)
	1. AP Biology
	2. AP Calculus AB
	3. AP Chemistry
	4. AP Computer Science Principles
	5. AP Environmental Science
	6. AP Physics 1
	7. AP Statistics
	8. I don’t know
3. What is your child’s age? (15 seconds)

(Drop down list)

1. Which of the following best describes your child’s gender? (15 seconds)
	1. Female
	2. Male
	3. Non-binary
	4. Other (please describe if you like):
	5. I choose not to respond
2. What is your child’s race or ethnicity? (Please select all that apply) (15 seconds)
	1. Hispanic or Latino/a/x
	2. Not Hispanic or Latino/a/x
	3. American Indian or Alaskan Native
	4. Asian
	5. Black or African American
	6. Native Hawaiian or Other Pacific Islander
	7. I choose not to respond

# Appendix M: School survey protocol

## Introduction and Consent [2 minutes]

Thank you for taking the time to complete this survey. You are being invited to participate in an evaluation of the Expanding Access initiative, also known as “SAPAO,” because your school is offering at least one virtual Advanced Placement (AP) course through this initiative with VHS Learning. This evaluation is being conducted by the UMass Donahue Institute (UMDI)—an independent third-party evaluator working with the Massachusetts Department of Elementary and Secondary Education (DESE).

**Who is being asked to complete this survey?**

We ask that your school’s VHS Learning Site Coordinator and one school administrator collaborate to complete this survey. The responses you provide should represent the perspective/experience of your school (rather than your individual perspective).

**Why are we doing this survey?**

The purpose of this survey is to learn more about how the initiative works, and how to improve participants’ experiences with the initiative.

**What will I be asked to do and how much time will it take?**

If you agree to participate, you will be asked to complete a survey about your school’s experience so far in the Expanding Access initiative. The survey will take approximately 25 minutes to complete**.**

**Will completing this survey help me in any way?**

While there are limited direct benefits, the information you provide will be used to improve the Expanding Access initiative for students. You may also benefit by reflecting on your experience in the initiative.

**How will my personal information be protected?**

To the best of our ability, your answers will remain confidential. To protect your confidentiality, only members of the UMDI team will have access to the survey data. Survey findings will only be reported to DESE as aggregate data, which combines responses from all respondents. Your individual responses will not be shared, and will not impact your school’s participation in the initiative.

**Will I be given any money or other compensation for completing this survey?**

We do not offer participation incentives for your involvement in this survey.

**What happens if I say yes, but I change my mind later?**You do not have to participate in this survey if you do not want to. If you agree to participate, but later change your mind, you may stop taking the survey at any time. There are no penalties or consequences of any kind if you decide that you do not want to participate.

**Who can I talk to if I have questions?**You can ask any questions that you may have about this survey or the program evaluation. If you have a question, you can call Jeremiah Johnson at 413-455-7377 or Hanni Thoma at 413-577-2005, or email the evaluation team at expandingaccesseval@donahue.umass.edu.

By clicking “I agree” below you are indicating that you have read this consent form and agree to participate in this survey. You are free to skip any question that you choose.

Please print a copy of this page for your records.

### School Participation [4 minutes]

1. What influenced your school’s decision to participate in the Expanding Access initiative? Please select all that apply. (Multiple choice, 15 seconds) (*Eval 5*)
	1. Low financial cost
	2. Students have wanted a wider selection of AP STEM courses offered
	3. Teachers have wanted a wider selection of AP STEM courses offered
	4. Parents/guardians have wanted a wider selection of AP STEM courses offered
	5. Our school administration wanted to offer a wider selection of AP STEM courses
	6. Other (please specify):
2. What were the previous barriers to your school offering AP STEM courses? Please select all that apply. (Multiple choice, 15 seconds)
	1. Limited student interest
	2. Limited number of students adequately prepared to participate
	3. Limited teacher interest
	4. Limited teacher capacity due to high demand for other classes
	5. Lack of, or no, qualified teachers
	6. Did not fit within our existing curriculum/schedule
	7. Other (please specify):
3. Please rate the extent to which you agree with the statements below. (3 minutes 45 seconds)

Strongly Disagree Disagree Agree Strongly Agree

* 1. Our school is excited to partner with DESE for the Expanding Access initiative.
	2. Our school is excited to partner with VHS Learning for the Expanding Access initiative.
	3. The benefits of the Expanding Access initiative (to the school or to students) outweigh the financial costs to the school or students. (*Eval 5*)
	4. The benefits of the Expanding Access initiative (to the school or to students) outweighs the time required to support the implementation of the initiative.
	5. The Expanding Access initiative provides a valuable expansion to our school’s existing AP STEM course offerings.
	6. The Expanding Access initiative meets a need at our school that is not met by any other course or program.
	7. The Expanding Access initiative compliments and builds upon courses we currently offer. (*Eval 1A*)
	8. The Expanding Access initiative courses fit easily within our schools’ existing schedule. (*Eval 1A*)
	9. Most students (75% or more) meet (in-person or virtually) with their Site Coordinator at least once per week. (*Eval 7*)
	10. Students participating in the Expanding Access initiative are well-supported by VHS Learning. (*Eval 1A*)
	11. Prior to participation, students selected to participate in the Expanding Access initiative were academically well-prepared to succeed in the virtual AP STEM courses offered through the initiative.
	12. Our school has the resources necessary to fully support students in their Expanding Access initiative course(s). (*Eval 7B*)
	13. Our school wants students to have long-term access to AP STEM courses beyond the life of the Expanding Access initiative. (*Eval 7C*)
	14. Our school has the staffing capacity necessary to offer (in person) the same AP STEM courses that our students are currently participating in through the Expanding Access Initiative. (*Eval 7B*)
	15. **Display logic if 3N is ‘Disagree’ or ‘Strongly Disagree:’** Our school wants to develop the staffing capacity necessary to offer (in person) the same AP STEM courses that our students are currently participating in through the Expanding Access initiative. (*Eval 7B*)

### Site Coordinator [2 minutes 15 seconds]

1. Please describe your school’s process for selecting a Site Coordinator for the Expanding Access Initiative. (Short answer, 2 minutes)
2. What role does the Expanding Access Site Coordinator have at your school? Please select all that apply. (Multiple choice, 15 seconds)
	1. School administrator
	2. Guidance counselor
	3. Teacher
	4. IT or technology specialist
	5. Other (please describe):

### Student Recruitment and Selection [3 minutes 45 seconds]

1. Please describe the ways in which your school prioritized recruitment of students for participation in courses offered through the Expanding Access Initiative, including whether and how any particular group (e.g., students who are English learners and/or former English language learners, those receiving special education services, economically disadvantaged students, and/or members of traditionally underserved racial and ethnic minority groups ) was intentionally targeted for the Expanding Access initiative. (Short answer, 2 minutes)
2. What types of information did you use to select students to participate in the Expanding Access initiative? Please select all that apply. (Multiple choice, 15 seconds) (*Eval 1B*)
	1. Student expressed interest in enrolling in a virtual AP STEM course
	2. Student met specific academic criteria (e.g., MCAS scores, GPA, course history)
	3. Student’s exhibited non-academic personal qualifications (such as time management skills)
	4. Teacher or guidance counselor recommendations/nominations
	5. Other (please describe):
3. **If 7B is selected:** What data did your school use to select students? Please select all that apply. (Multiple choice, 15 seconds) (*Eval 1B*)
	1. MCAS scores
	2. PSAT scores
	3. GPA
	4. Student’s course history
	5. Student’s past course or academic performance
	6. Other (please specify):
4. VHS Learning lists pre-requisites for students before enrolling in a virtual AP STEM course ([Online Advanced Placement® | VHS Learning](https://vhslearning.org/advanced-placement)).

Approximately what portion of students at your school enrolled in one or more courses through the Expanding Access initiative met the course’s pre-requisites as outlined by VHS Learning’s AP course descriptions?(Multiple choice; 1 minute) (*Eval 1B*)

* 1. All participating students
	2. Most participating students (more than half)
	3. Some participating students (less than half)
	4. No participating students
	5. Unsure
1. To what extent were parents/guardians typically involved in the decision-making process of a student enrolling in the Expanding Access initiative? (15 seconds) (*Eval 1B*)
2. Highly involved
3. Moderately involved
4. Slightly involved
5. Not involved
6. Unsure

### School Supports [5 minutes]

1. Do any students currently enrolled in the Expanding Access initiative at your school have an IEP? (15 seconds)
2. Yes
3. No
4. Unsure
5. Do any students currently enrolled in the Expanding Access initiative at your school have a 504 plan? (15 seconds)
6. Yes
7. No
8. Unsure
9. **If yes to Q12 or Q13**: Please describe the ways in which students’ (with either an IEP or 504 plan) learning needs are being met. (Short answer response, 2 minutes)
10. What summer supports did your school offer to Expanding Access initiative-enrolled students? Please select all that apply. (15 seconds) (*Eval 2B*)
	1. Meeting with a counselor or teacher
	2. Reading list
	3. Library access
	4. In-school tutoring
	5. Summer coursework
	6. Other (please specify):
11. What kinds of supports does your school currently offer to Expanding Access initiative-enrolled students? Please select all that apply. (15 seconds) (*Eval 3*)
	1. Meeting with a counselor or teacher
	2. Meetings with the Site Coordinator
	3. In-school tutoring
	4. Support for lab exercises
	5. Cohorting (grouping of students to provide peer academic support)
	6. Technology support
	7. Other (please specify):
12. What additional supports does your school want or need to improve student success in virtual AP STEM courses offered through the Expanding Access initiative? (Short answer; 2 minutes) (*Eval 7; 7B*)

### Student Experience [15 seconds]

1. Does your school build time into students’ regular schedules to complete their Expanding Access initiative coursework? (15 seconds)
2. Yes
3. No

### Student Experience - Withdrawals [2 minutes 30 seconds]

1. Have any students at your school decided to withdraw from their Expanding Access initiative virtual STEM AP course(s)? (15 seconds)
2. Yes
3. No
4. **If yes to Q18**: Are these withdrawals recorded in any way on a student’s transcript, such as ‘Incomplete’ or ‘Fail’? (15 seconds)
5. Yes
6. No
7. Unsure
8. **If yes to Q19:**  What factor(s) do you believe most contributed to students’ decision to withdraw from their Expanding Access virtual STEM AP course(s)? Please describe below. (Short answer, 2 minutes)

### AP Exam Intent [30 seconds]

1. Approximately how many students enrolled in a course through the Expanding Access initiative are registered to take the AP exam associated with their Expanding Access initiative course(s)? (15 seconds) (*Eval 3A*)
	1. All students
	2. Most students (More than half)
	3. Some students (Less than half)
	4. No students
2. What supports, if any, are being offered by the school for students to take the AP exam associated with their Expanding Access initiative course(s)? Please select all that apply. (Multiple choice, 15 seconds) (*Eval 3A*)
	1. Tutoring
	2. Study groups
	3. Meetings with virtual AP teacher(s)
	4. Meetings with school-based teacher(s)
	5. Other (please specify):

### Next Year [30 seconds]

1. Does your school intend to offer STEM AP courses though the Expanding Access initiative next year? (15 seconds) (*Eval 7A*)
2. Yes
3. No
4. Unsure
5. Does your school have interest in expanding student enrollment in the initiative? (15 seconds) (*Eval 7A*)
6. Yes
7. No
8. Unsure

**Wrap Up [4 minutes]**

1. How can the Expanding Access initiative be improved? (Short answer response, 2 minutes) (*Eval 1A*)
2. What, if any, additional AP STEM courses do you wish were available as part of Expanding Access initiative? (Short answer response, 2 minutes)

# Appendix N: Summary of student survey responses

**Introduction and Consent**

Total Responses: 22

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| I Agree | 21 | 95.45% |
| I Do Not Agree | 1 | 4.55% |

**Question 1:** How did you first learn about the Expanding Access initiative? Please select all that apply.

Total Responses: 17

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| My school notified me (either via email, phone, face-to-face, or through a virtual meeting) that I was eligible to participate. | 15 | 88.24% |
| A teacher or guidance counselor told me about the initiative. | 5 | 29.41% |
| A family member told me about the initiative. | 1 | 5.88% |
| A classmate or friend told me about the initiative. | 1 | 5.88% |
| Other (please specify)\* | 1 | 5.88% |

\*Responses to ‘other’ are provided in Question 1a

**Question 1a:** How did you first learn about the Expanding Access initiative? Please select all that apply - Other (please specify)

Total Responses: 1

One student selected ‘other.’ They indicated that they “saw it on the roster of classes [they] could take and [they] chose it from that.”

**Question 2:** What influenced your decision to enroll in an AP STEM course with the Expanding Access initiative? Please select all that apply.

Total Responses: 15

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| I was interested in the subject. | 14 | 93.33% |
| I wanted to challenge myself academically. | 11 | 73.33% |
| I wanted to earn college credit. | 11 | 73.33% |
| I thought it would help me get into a good college or university. | 8 | 53.33% |
| I thought it would improve my GPA. | 5 | 33.33% |
| My school encouraged me to enroll. | 4 | 26.67% |
| My family encouraged me to enroll. | 2 | 13.33% |
| I wanted to continue taking virtual learning courses. | 1 | 6.67% |
| My friends encouraged me to enroll. | 1 | 6.67% |
| Other (please specify)\* | 1 | 6.67% |

\*Responses to ‘other’ are provided in Question 2a

**Question 2a:** What influenced your decision to enroll in an AP STEM course with the Expanding Access initiative? Please select all that apply - Other (please specify)

Total Responses: 14

One student selected ‘other.’ They indicated they had “no choice” but to enroll in their Expanding Access course.

**Question 3:** Who encouraged you to enroll in an AP STEM course through the Expanding Access initiative? Please select all that apply.

Total Responses: 14

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| My teacher/counselor/coach/principal or other school staff member encouraged me to enroll. | 7 | 50.00% |
| Other (please specify)\* | 7 | 50.00% |
| No one encouraged me to enroll in a virtual AP course. | 5 | 35.71% |
| My parents or a family member encouraged me to enroll. | 2 | 14.29% |
| My friend(s) encouraged me to enroll. | 2 | 14.29% |

\*Responses to ‘other’ are provided in Question 3a

**Question 3a:** Who encouraged you to enroll in an AP STEM course through the Expanding Access initiative? Please select all that apply - Other (please specify)

Total Responses: 7

Seven students selected ‘other,’ but none provided any specification.

**Question 4:** How prepared did you feel when you began your virtual AP STEM course(s)?

Total Responses: 13

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Well prepared | 2 | 15.38% |
| Somewhat prepared | 3 | 23.08% |
| Somewhat unprepared | 4 | 30.77% |
| Unprepared | 4 | 30.77% |

**Question 5:** What most contributed to your preparedness? Please select all that apply.

Total Responses: 5

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Course content from a previous year | 3 | 60.00% |
| A previous virtual learning experience | 2 | 40.00% |
| VHS Learning-provided summer resources | 2 | 40.00% |
| Rigor or difficulty of course from a previous year | 1 | 20.00% |
| Independent study | 1 | 20.00% |
| Study skills | 1 | 20.00% |
| School-provided summer resources | 1 | 20.00% |
| Tutoring | 0 | 0.00% |
| Summer school | 0 | 0.00% |
| Other (please specify) | 0 | 0.00% |

**Question 6:** While there was no requirement for students to do any preparation over the summer, please share whether the supports listed below were available to you and what supports you utilized, if any, to prepare for your virtual AP STEM course(s) with the Expanding Access initiative.

**Question 6a:** Meeting with a counselor or teacher

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 2 | 16.67% |
| This was available, but I did not use it. | 3 | 25.00% |
| This was available, and I did use it. | 4 | 33.33% |
| I do not know whether this was available or not. | 3 | 25.00% |

**Question 6b:** Reading list

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 3 | 25.00% |
| This was available, but I did not use it. | 2 | 16.67% |
| This was available, and I did use it. | 1 | 8.33% |
| I do not know whether this was available or not. | 6 | 50.00% |

**Question 6c:** Library access

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 3 | 25.00% |
| This was available, but I did not use it. | 2 | 16.67% |
| This was available, and I did use it. | 0 | 0.00% |
| I do not know whether this was available or not. | 7 | 58.33% |

**Question 6d:** Virtual learning opportunities (such as lectures or courses)

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 1 | 8.33% |
| This was available, but I did not use it. | 3 | 25.00% |
| This was available, and I did use it. | 2 | 16.67% |
| I do not know whether this was available or not. | 6 | 50.00% |

**Question 6e:** Tutoring

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 4 | 33.33% |
| This was available, but I did not use it. | 4 | 33.33% |
| This was available, and I did use it. | 0 | 0.00% |
| I do not know whether this was available or not. | 4 | 33.33% |

**Question 6f:** VHS Learning summer orientation

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 1 | 8.33% |
| This was available, but I did not use it. | 1 | 8.33% |
| This was available, and I did use it. | 5 | 41.67% |
| I do not know whether this was available or not. | 5 | 41.67% |

**Question 6g:** Summer coursework

Total Responses: 13

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 1 | 7.69% |
| This was available, but I did not use it. | 1 | 7.69% |
| This was available, and I did use it. | 9 | 69.23% |
| I do not know whether this was available or not. | 2 | 15.38% |

**Question 6h:** Other (please specify)

Total Responses: 2

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| This was not available. | 1 | 50.00% |
| This was available, but I did not use it. | 0 | 0.00% |
| This was available, and I did use it. | 0 | 0.00% |
| I do not know whether this was available or not. | 1 | 50.00% |
| Other (please specify) | 0 | 0.00% |

**Question 7:** Please indicate the extent to which you agree with the statements below.

**Question 7a:** This course(s) is more difficult than I expected when I enrolled.

Total Responses: 13

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 5 | 38.46% |
| Agree | 3 | 23.08% |
| Disagree | 4 | 30.77% |
| Strongly Disagree | 1 | 7.69% |

**Question 7b:** My academic course load this year has been manageable.

Total Responses: 13

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 1 | 7.69% |
| Agree | 8 | 61.54% |
| Disagree | 4 | 30.77% |
| Strongly Disagree | 0 | 0.00% |

**Question 7c:** This course(s) requires significantly more time (studying and completing course assignments) than the other courses I’m currently taking.

Total Responses: 13

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 7 | 53.85% |
| Agree | 4 | 30.77% |
| Disagree | 2 | 15.38% |
| Strongly Disagree | 0 | 0.00% |

**Question 7d:** My participation in this course(s) has positively impacted my performance in other courses.

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 0 | 0.00% |
| Agree | 7 | 58.33% |
| Disagree | 4 | 33.33% |
| Strongly Disagree | 1 | 8.33% |

**Question 7e:** My virtual AP course(s) has increased my interest in pursuing a STEM major or a career in STEM.

Total Responses: 13

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 4 | 30.77% |
| Agree | 5 | 38.46% |
| Disagree | 0 | 0.00% |
| Strongly Disagree | 4 | 30.77% |

**Question 8:** How much time do you spend each week completing the asynchronous assignments for your course(s)?

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Less than 3 hours | 1 | 8.33% |
| Between 3 and 6 hours | 4 | 33.33% |
| Between 7 and 12 hours | 5 | 41.67% |
| Over 12 hours | 2 | 16.67% |

**Question 9:** How much do you interact (such as over the telephone, online, or through face-to-face communications) with the following individuals?

**Question 9a:** My virtual AP teacher

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Never | 2 | 16.67% |
| A few times a month | 8 | 66.67% |
| A few times a week | 2 | 16.67% |
| Every day | 0 | 0.00% |

**Question 9b:** My AP Site Coordinator

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Never | 7 | 63.64% |
| A few times a month | 2 | 18.18% |
| A few times a week | 1 | 9.09% |
| Every day | 1 | 9.09% |

**Question 9c:** My virtual AP classmates

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Never | 3 | 27.27% |
| A few times a month | 3 | 27.27% |
| A few times a week | 4 | 36.36% |
| Every day | 0 | 0.00% |

**Question 10:** Who do you seek out when you need help with your AP course(s)? Please select all that apply.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| My virtual AP teacher | 8 | 72.73% |
| Other (please specify)\* | 6 | 54.55% |
| My virtual AP classmates | 3 | 27.27% |
| My Site Coordinator | 1 | 9.09% |
| A teacher at my school | 1 | 9.09% |

\*Responses to ‘other’ are provided in Question 10a

**Question 10a:** Who do you seek out when you need help with your AP course(s)? Please select all that apply - Other (please specify)

Total Responses: 6

Six students selected ‘other.’ These students shared that when they need additional assistance with their AP course, they seek out the following resources:

* Tutors
* I have a friend who also takes the course who I can go to for help.
* A classmate at my school
* I was unable to log in all this time.
* Parent
* My friends who take the class

**Question 11:** The following questions pertain to your experiences with your virtual AP teacher(s), classmates, and Site Coordinator. Please indicate how frequently you agree with the statements below.

**Question 11a:** I feel I belong in this virtual AP course.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 2 | 18.18% |
| Most of the time | 4 | 36.36% |
| Some of the time | 4 | 36.36% |
| Never | 1 | 9.09% |
| Not applicable | 0 | 0.00% |

**Question 11b:** I feel supported by my virtual AP teacher.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 6 | 54.55% |
| Most of the time | 4 | 36.36% |
| Some of the time | 0 | 0.00% |
| Never | 1 | 9.09% |
| Not applicable | 0 | 0.00% |

**Question 11c:** I feel I am treated fairly by my virtual AP teacher.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 7 | 63.64% |
| Most of the time | 3 | 27.27% |
| Some of the time | 0 | 0.00% |
| Never | 1 | 9.09% |
| Not applicable | 0 | 0.00% |

**Question 11d:** I feel I can be my authentic self with my virtual AP teacher.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 4 | 36.36% |
| Most of the time | 3 | 27.27% |
| Some of the time | 1 | 9.09% |
| Never | 1 | 9.09% |
| Not applicable | 2 | 18.18% |

**Question 11e:** I feel supported by my Site Coordinator.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 4 | 36.36% |
| Most of the time | 2 | 18.18% |
| Some of the time | 1 | 9.09% |
| Never | 2 | 18.18% |
| Not applicable | 2 | 18.18% |

**Question 11f:** I feel I am treated fairly by my Site Coordinator.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 5 | 45.45% |
| Most of the time | 2 | 18.18% |
| Some of the time | 0 | 0.00% |
| Never | 1 | 9.09% |
| Not applicable | 3 | 27.27% |

**Question 11g:** I feel I can be my authentic self with my Site Coordinator.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 4 | 36.36% |
| Most of the time | 1 | 9.09% |
| Some of the time | 1 | 9.09% |
| Never | 1 | 9.09% |
| Not applicable | 4 | 36.36% |

**Question 11h:** I feel supported by my virtual AP classmates.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 4 | 36.36% |
| Most of the time | 4 | 36.36% |
| Some of the time | 0 | 0.00% |
| Never | 1 | 9.09% |
| Not applicable | 2 | 18.18% |

**Question 11i:** I feel I am treated fairly by my virtual AP classmates.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 4 | 36.36% |
| Most of the time | 4 | 36.36% |
| Some of the time | 0 | 0.00% |
| Never | 1 | 9.09% |
| Not applicable | 2 | 18.18% |

**Question 11j:** I feel I can be my authentic self with my virtual AP classmates.

Total Responses: 11

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All the time | 5 | 45.45% |
| Most of the time | 2 | 18.18% |
| Some of the time | 0 | 0.00% |
| Never | 1 | 9.09% |
| Not applicable | 3 | 27.27% |

**Question 12:** Please indicate the extent to which you have improved the skills listed below as a result of your participation in the Expanding Access initiative.

**Question 12a:** Critical thinking skills

Total Responses: 10

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Significant Improvement | 2 | 20.00% |
| Moderate improvement | 5 | 50.00% |
| Small improvement | 2 | 20.00% |
| Neutral (no change) | 1 | 10.00% |

**Question 12b:** Communication skills

Total Responses: 10

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Significant Improvement | 3 | 30.00% |
| Moderate improvement | 4 | 40.00% |
| Small improvement | 2 | 20.00% |
| Neutral (no change) | 1 | 10.00% |

**Question 12c:** Creativity

Total Responses: 10

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Significant Improvement | 1 | 10.00% |
| Moderate improvement | 2 | 20.00% |
| Small improvement | 5 | 50.00% |
| Neutral (no change) | 2 | 20.00% |

**Question 12d:** Ability to generate solutions to complex problems

Total Responses: 10

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Significant Improvement | 3 | 30.00% |
| Moderate improvement | 4 | 40.00% |
| Small improvement | 2 | 20.00% |
| Neutral (no change) | 1 | 10.00% |

**Question 12e:** Ability to work on my own

Total Responses: 9

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Significant Improvement | 4 | 44.44% |
| Moderate improvement | 3 | 33.33% |
| Small improvement | 1 | 11.11% |
| Neutral (no change) | 1 | 11.11% |

**Question 12f:** Time management skills

Total Responses: 9

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Significant Improvement | 4 | 44.44% |
| Moderate improvement | 4 | 44.44% |
| Small improvement | 1 | 11.11% |
| Neutral (no change) | 0 | 0.00% |

**Question 12g:** Confidence using technology

Total Responses: 9

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Significant Improvement | 4 | 44.44% |
| Moderate improvement | 2 | 22.22% |
| Small improvement | 2 | 22.22% |
| Neutral (no change) | 1 | 11.11% |

**Question 13:** Do you intend to take the AP exam(s) associated with the virtual AP STEM course(s) you are taking through the Expanding Access initiative?

Total Responses: 9

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 9 | 100.00% |
| No | 0 | 0.00% |
| Not Sure | 0 | 0.00% |

**Question 14:** What virtual AP STEM course(s) are you currently enrolled in through the Expanding Access initiative? Please select all that apply.

Total Responses: 9

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| AP Computer Science Principles | 4 | 44.44% |
| AP Biology | 3 | 33.33% |
| AP Calculus AB | 1 | 11.11% |
| AP Environmental Science | 1 | 11.11% |
| AP Physics 1 | 1 | 11.11% |
| AP Chemistry | 0 | 0.00% |
| AP Statistics | 0 | 0.00% |

**Question 15:** What school do you attend? Please choose from list – School

Total Responses: 10

**Question 16:** Have you previously taken an AP course?

Total Responses: 10

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 4 | 40.00% |
| No | 6 | 60.00% |

**Question 17**: Have you previously taken a virtual course through VHS Learning?

Total Responses: 10

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 0 | 0.00% |
| No | 10 | 100.00% |

**Question 18:** Which of the following best describes your gender? Please select all that apply.

Total Responses: 9

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Female | 5 | 55.56% |
| Male | 4 | 44.44% |
| Non-binary | 0 | 0.00% |
| I choose not to respond | 0 | 0.00% |
| Other (please specify) | 0 | 0.00% |

**Question 19:** What is your race or ethnicity? Please select all that apply.

Total Responses: 9

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| White | 6 | 66.67% |
| Hispanic or Latino/a/x | 3 | 33.33% |
| Not Hispanic or Latino/a/x | 2 | 22.22% |
| Asian | 1 | 11.11% |
| Black or African American | 1 | 11.11% |
| American Indian or Alaskan Native | 0 | 0.00% |
| Native Hawaiian or Other Pacific Islander | 0 | 0.00% |

**Question 20:** Do you have any additional feedback or reflections on your experience with the Expanding Access initiative that might help improve experiences for other students?

Total Responses: 2

Two students provided additional feedback through the short answer response:

* “I have not enjoyed my time with this virtual course. The VHS website is difficult to navigate through for a while and the assignments are incredibly and unnecessarily difficult. I understand that this is an AP course but this was over and above all expectations. I have never felt so lost as I have taking this AP Computer Science Principles course. I have to spend probably over 12 hours a week on assignments and get incredible amounts of help. The VHS website said that I do not need prior experience but I most certainly did. This course has made me never ever want to do anything even remotely related to Computer Science. I also never want to do a virtual class again. I have never hated a class more than this and this course taught me to avoid STEM classes with every fiber of my being. If anyone was considering taking this course I would tell them that they should be prepared for one of the worst experiences of their life.”
* “The VHS classes are really really bad and do not actually help prepare for the exam.”

# Appendix O: Summary of school survey responses

**Introduction and Consent**

Total Responses: 27

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Agree | 26 | 96.30% |
| Disagree | 1 | 3.70% |

**Question 1:** How many people, including yourself, are collaborating to complete this survey?

Total Responses: 26

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| 1 person | 20 | 76.92% |
| 2 people | 5 | 19.23% |
| 3 people | 1 | 3.85% |

**Question 2:** What are the primary roles of the individuals who are completing this survey? Please select all that apply.

Total Responses: 26

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| VHS Learning Site Coordinator | 18 | 69.23% |
| Guidance Counselor | 8 | 30.77% |
| Principal (8) | 7 | 26.92% |
| Other (please describe) | 6 | 23.08% |
| Vice Principal | 4 | 15.38% |
| Teacher | 3 | 11.54% |

\*Responses to ‘other’ are provided in Question 2a

**Question 2a:** What are the primary roles of the individuals who are completing this survey? Please select all that apply. - Other (please describe)

Total Responses: 6

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Curriculum Director/Asst. Director | 3 | 50.00%% |
| Secondary Transition Coordinator | 1 | 16.67% |
| School Counselor | 1 | 16.67% |
| AP Coordinator | 1 | 16.67% |

**Question 3:** Does your school currently have students enrolled in the Expanding Access (SAPAO) initiative?

Total Responses: 26

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 17 | 65.38% |
| No | 9 | 34.62% |

**Question 4:** What influenced your school’s decision to participate in the Expanding Access initiative? Please select all that apply.

Total Responses: 26

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Students have wanted a wider selection of AP STEM courses offered | 18 | 69.23% |
| Low financial cost | 16 | 61.54% |
| Our school administration wanted to offer a wider selection of AP STEM courses | 16 | 61.54% |
| Parents/guardians have wanted a wider selection of AP STEM courses offered | 7 | 26.92% |
| Teachers have wanted a wider selection of AP STEM courses offered | 2 | 7.69% |
| Other (please specify)\* | 2 | 7.69% |

\*Responses to ‘other’ are provided in Question 4a

**Question 4a:** What influenced your school’s decision to participate in the Expanding Access initiative? Please select all that apply. - Other (please specify)

Total Responses: 2

Two respondents indicated ‘other.’ Both respondents reported that their schools had a prior relationship with VHS Learning. Specifically, one respondent shared that the transition into the Expanding Access initiative was “naturally a fit” given their existing partnership, and another noted that they felt a “sense of duty” to participate, as their school was among the original members of the VHS Learning system.

**Question 5:** What were the previous barriers to your school offering AP STEM courses? Please select all that apply.

Total Responses: 26

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Limited teacher capacity due to high demand for other classes | 14 | 53.85% |
| Did not fit within our existing curriculum/schedule | 10 | 38.46% |
| Lack of, or no, qualified teachers | 7 | 26.92% |
| Other (please specify)\* | 7 | 26.92% |
| Limited student interest | 6 | 23.08% |
| Limited number of students adequately prepared to participate | 2 | 7.69% |
| Limited teacher interest | 1 | 3.85% |

\*Responses to ‘other’ are provided in Question 5a

**Question 5a:** What were the previous barriers to your school offering AP STEM courses? Please select all that apply. - Other (please specify)

Total Responses: 7

Seven respondents selected ‘other.’ Several noted that their capacity to offer additional classes was limited due to smaller student populations or their lack of resources:

* “As a Vocational school, not much room for electives”
* “Willing Teachers but haven't been AP Trained. Being a small school it is hard to encapsulate this program without adding Staff members to facilitate.”
* “we are a small school with limited capacity for electives”
* “As a new virtual school, we did not have the resources to offer them.”
* “Smaller student population, not able to offer as many choices”
* “Budget”
* “N/A”

**Question 6:** Please rate the extent to which you agree with the statements below:

**Question 6a:** Our school is excited to partner with DESE for the Expanding Access initiative.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 10 | 40.00% |
| Agree | 12 | 48.00% |
| Disagree | 2 | 8.00% |
| Strongly Disagree | 1 | 4.00% |

**Question 6b:** Our school is excited to partner with VHS Learning for the Expanding Access initiative.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 7 | 28.00% |
| Agree | 11 | 44.00% |
| Disagree | 5 | 20.00% |
| Strongly Disagree | 2 | 8.00% |

**Question 6c:** The benefits of the Expanding Access initiative (to the school or to students) outweigh the financial costs to the school or students.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 4 | 16.00% |
| Agree | 16 | 64.00% |
| Disagree | 4 | 16.00% |
| Strongly Disagree | 1 | 4.00% |

**Question 6d:** The benefits of the Expanding Access initiative (to the school or to students) outweigh the time required to support the implementation of the initiative.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 5 | 20.00% |
| Agree | 16 | 64.00% |
| Disagree | 3 | 12.00% |
| Strongly Disagree | 1 | 4.00% |

**Question 6e:** The Expanding Access initiative provides a valuable expansion to our school’s existing AP STEM course offerings.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 7 | 28.00% |
| Agree | 14 | 56.00% |
| Disagree | 3 | 12.00% |
| Strongly Disagree | 1 | 4.00% |

**Question 6f:** The Expanding Access initiative meets a need at our school that is not met by any other course or program.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 6 | 24.00% |
| Agree | 14 | 56.00% |
| Disagree | 4 | 16.00% |
| Strongly Disagree | 1 | 4.00% |

**Question 6g:** The Expanding Access initiative complements and builds upon courses we currently offer.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 8 | 32.00% |
| Agree | 14 | 56.00% |
| Disagree | 2 | 8.00% |
| Strongly Disagree | 1 | 4.00% |

**Question 6h:** The Expanding Access initiative courses fit easily within our schools’ existing schedule.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 7 | 28.00% |
| Agree | 8 | 32.00% |
| Disagree | 7 | 28.00% |
| Strongly Disagree | 3 | 12.00% |

**Question 6i:** Most students (75% or more) meet (in-person or virtually) with their Site Coordinator at least once per week.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 4 | 16.00% |
| Agree | 9 | 36.00% |
| Disagree | 6 | 24.00% |
| Strongly Disagree | 6 | 24.00% |

**Question 6j:** Students participating in the Expanding Access initiative are well-supported by VHS Learning.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 6 | 24.00% |
| Agree | 12 | 48.00% |
| Disagree | 3 | 12.00% |
| Strongly Disagree | 4 | 16.00% |

**Question 6k:** Prior to participation, students selected to participate in the Expanding Access initiative were academically well-prepared to succeed in the virtual AP STEM courses offered through the initiative.

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 4 | 16.67% |
| Agree | 14 | 58.33% |
| Disagree | 6 | 25.00% |
| Strongly Disagree | 0 | 0.00% |

**Question 6l:** Our school has the resources necessary to fully support students in their Expanding Access initiative course(s).

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 4 | 16.00% |
| Agree | 12 | 48.00% |
| Disagree | 9 | 36.00% |
| Strongly Disagree | 0 | 0.00% |

**Question 6m:** Our school wants students to have long-term access to AP STEM courses beyond the life of the Expanding Access initiative.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 7 | 28.00% |
| Agree | 17 | 68.00% |
| Disagree | 1 | 4.00% |
| Strongly Disagree | 0 | 0.00% |

**Question 6n:** Our school has the staffing capacity necessary to offer (in person) the same AP STEM courses that our students are currently participating in through the Expanding Access Initiative.

Total Responses: 25

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 1 | 4.00% |
| Agree | 6 | 24.00% |
| Disagree | 10 | 40.00% |
| Strongly Disagree | 8 | 32.00% |

**Question 7:**

Question displayed if respondent indicated in Question 6n that their school does not currently have the staffing capacity necessary to offer (in person) the same AP STEM courses that students are currently participating in through the Expanding Access Initiative.

Please indicate the extent to which you agree or disagree with the following statement: Our school wants to develop the staffing capacity necessary to offer (in person) the same AP STEM courses that our students are currently participating in through the Expanding Access initiative.

Total Responses: 18

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Strongly Agree | 2 | 11.11% |
| Agree | 11 | 61.11% |
| Disagree | 3 | 16.67% |
| Strongly Disagree | 2 | 11.11% |

**Question 8:** Please describe your school’s process for selecting a Site Coordinator for the Expanding Access Initiative.

Total Responses: 24

* I was already the site coordinator for VHS classes that our students were taking.
* I have been the VHS Site Coordinator for the past 5 years. It seemed logical that the Expanding Access Initiative would fall under my perview.
* pre-existing site coordinator for VHS program
* I was selected because I am already the VHS Coordinator here at our school.
* As the current AP Coordinator, this role naturally fell within my current responsibilities.
* We have a robust Early College High School program that this role fits nicely among the supervisory duties
* Secondary Transition Coordinator was asked to take this role by the Principal.
* We are using our current VHS site coordinator
* The process was based on the staff members who had the most capacity at the time.
* I was chosen because the College Counseling Office has the space for our 10 students (broken into 2 sections) enrolled in the program to complete coursework. It was a low lift for me to input their grades and print out their weekly checklists, and I can typically do my own work at my desk throughout their class periods.
* I don't think there was a process
* VHS Coordinator
* Traditional hiring and interview process
* Access to students
* We had a STEM teacher take on the role of VHS Site Coordinator. This allowed a person who is familiar with the students who will be taking this class and the courses that are offered.
* Internal Job Posting
* Due to lack of staffing, we chose the Librarian because she can supervise students during classes and coordinate support.
* Our counselor left, so the process fell to the principal
* We have a new all virtual high school, and these courses seemed like a natural fit for this role to take on.
* The Guidance Counselor fills this role.
* The Director of Academics was a) the only relevant administrator and b) was interested in developing online learning
* The site coordinator will be the person that oversees STEM at the building or district level.
* Scheduler/Guidance Counselor was selected due to previous experience.
* n/a

**Question 9:** What role does the Expanding Access Site Coordinator have at your school? Please select all that apply.

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| School Administrator | 8 | 33.33% |
| Other (please describe)\* | 8 | 33.33% |
| Guidance Counselor | 5 | 20.83% |
| Teacher | 4 | 16.67% |
| IT or technology specialist | 1 | 4.17% |

\*Responses to ‘other’ are provided in Question 9a

**Question 9a:** What role does the Expanding Access Site Coordinator have at your school? Please select all that apply. - Other (please describe)

Total Responses: 8

Eight respondents selected ‘other.’ These respondents shared that their schools’ Expanding Access Site Coordinators held the following roles:

* College Counselor
* Instructional Support Liaison
* Dual Enrollment
* Instructional Coach
* Librarian
* Principal
* Secondary Transition Coordinator
* Support Staff: School to Career Liaison (Guidance Office)

**Question 10:** Please describe the ways in which your school prioritized recruitment of students for participation in courses offered through the Expanding Access Initiative, including whether and how any particular group (e.g., students who are English learners and/or former English language learners, those receiving special education services, economically disadvantaged students, and/or members of traditionally underserved racial and ethnic minority groups) was intentionally targeted for the Expanding Access initiative.

Total Responses: 22

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All students | 8 | 36.36% |
| Students interested/successful in STEM coursework/academic achievement | 4 | 18.18% |
| Self-selection | 2 | 9.09% |
| N/A | 2 | 9.09% |
| Post-secondary goals/career plans | 1 | 4.55% |
| Completion of pre-requisites | 1 | 4.55% |
| GPA requirements | 1 | 4.55% |
| Teacher recommendations | 1 | 4.55% |
| Low-income students | 1 | 4.55% |
| ELL/marginalized student group | 1 | 4.55% |

**Question 11:** What types of information did you use to select students to participate in the Expanding Access initiative? Please select all that apply.

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Students expressed interest in enrolling in a virtual AP STEM course | 23 | 95.83% |
| Teacher or guidance counselor recommendations/nominations | 14 | 58.33% |
| Students met specific academic criteria (e.g., MCAS scores, GPA, course history) | 12 | 50.00% |
| Students exhibited non-academic personal qualifications (such as time management skills) | 7 | 29.17% |
| Other (please describe)\* | 2 | 8.33% |

\*Responses to ‘other’ are provided in Question 11a

**Question 11a:** What types of information did you use to select students to participate in the Expanding Access initiative? Please select all that apply. - Other (please describe):

Total Responses: 2

Two respondents selected ‘other.’ One shared that their school weighed parents’ requests for participation, and the other respondent elaborated on requirements relative to academic criteria, sharing that their school considered whether students had completed relevant course prerequisites prior to enrollment.

**Question 12:** What data did your school use to select students? Please select all that apply.

Total Responses: 12

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Student's past course or academic performance | 12 | 100.00% |
| Student's course history | 10 | 83.33% |
| GPA | 9 | 75.00% |
| MCAS scores | 3 | 25.00% |
| PSAT scores | 1 | 8.33% |
| Other (please specify)\* | 1 | 8.33% |

\*Responses to ‘other’ are provided in Question 12a

**Question 12a:** What data did your school use to select students? Please select all that apply. - Other (please specify):

Total Responses: 1

One respondent selected ‘other.’ They shared that their school took into consideration students’ interest in particular STEM courses when selecting participants for the Expanding Access initiative.

**Question 13:** VHS Learning lists pre-requisites for students before enrolling in a virtual AP STEM course (Online Advanced Placement® | VHS Learning). Approximately what portion of students at your school enrolled in one or more courses through the Expanding Access initiative met the course’s pre-requisites as outlined by VHS Learning’s AP course descriptions?

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All participating students | 16 | 66.67% |
| Most participating students (more than half) | 4 | 16.67% |
| Some participating students (less than half) | 3 | 12.50% |
| No participating students | 1 | 4.17% |
| Unsure | 0 | 0.00% |

**Question 14:** To what extent were parents/guardians typically involved in the decision-making process of a student enrolling in the Expanding Access initiative?

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Highly involved | 3 | 12.50% |
| Moderately involved | 7 | 29.17% |
| Slightly involved | 10 | 41.67% |
| Not involved | 3 | 12.50% |
| Unsure | 1 | 4.17% |

**Question 15:** Do any students currently enrolled in the Expanding Access initiative at your school have an IEP?

Total Responses: 17

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 4 | 23.53% |
| No | 13 | 76.47% |

**Question 16:** Do any students currently enrolled in the Expanding Access initiative at your school have a 504 plan?

Total Responses: 17

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 8 | 47.06% |
| No | 9 | 52.94% |

**Question 17:** Question displayed if respondent indicated in Question 16 that there are students currently enrolled in the Expanding Access initiative with either an IEP or 504 plan. Please describe the ways in which students’ learning needs are being met.

Total Responses: 8

|  |  |  |
| --- | --- | --- |
| Response[[61]](#footnote-62) | Number of responses | Frequency |
| Extended time | 3 | 38% |
| In-school support | 2 | 25% |
| Virtual support | 1 | 13% |
| Testing accommodations | 1 | 13% |
| N/A | 1 | 13% |

**Question 18:** What summer supports did your school offer to Expanding Access initiative-enrolled students? Please select all that apply.

Total Responses: 19

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Summer coursework | 8 | 42.10% |
| Other (please specify)\* | 8 | 42.10% |
| Meeting with a counselor or teacher | 4 | 21.05% |
| Reading list | 2 | 10.53% |
| Library access | 1 | 5.26% |
| In-school tutoring | 0 | 0.00% |

\*Responses to ‘other’ are provided in Question 18a

**Question 18a:** What summer supports did your school offer to Expanding Access initiative-enrolled students? Please select all that apply. - Other (please specify)

Total Responses: 8

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| None; N/A | 6 | 75% |
| Site Coordinator available | 1 | 13% |
| Time during school to complete VHS Learning summer coursework | 1 | 13% |

**Question 19:** What kinds of supports does your school currently offer to Expanding Access initiative-enrolled students? Please select all that apply.

Total Responses: 17

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Meeting with a counselor or teacher | 13 | 76.47% |
| Meetings with the Site Coordinator | 12 | 70.59% |
| Cohorting (grouping of students to provide peer academic support) | 8 | 47.06% |
| Technology support | 7 | 41.18% |
| In-school tutoring | 5 | 29.41% |
| Support for lab exercises | 4 | 23.53% |
| Other (please specify)\* | 3 | 17.65% |

\*Responses to ‘other’ are provided in Question 19a

**Question 19a:** What kinds of supports does your school currently offer to Expanding Access

initiative-enrolled students? Please select all that apply. - Other (please specify)

Total Responses: 3

Three respondents selected ‘other’ when considering additional supports for Expanding Access-enrolled students. One shared that their VHS Learning Site Coordinator is available for students as needed, one shared that students are offered assistance from in-person teachers with content-specific expertise, and the last responded indicated that they only have one student enrolled in the initiative, but that they anticipate increased enrollment next school year.

**Question 20:** What additional supports does your school want or need to improve student success in virtual AP STEM courses offered through the Expanding Access initiative?

Total Responses: 15

* “It needs to honor vocational scheduling model to allow students to focus on AP during their academic week only”
* “Additional virtual tutoring sessions for students to assist with summer work”
* “One of the supports that would have been beneficial would have been dedicated time during school in order to work on the courses.”
* “Having all of my 10 students in the same online course would be helpful. My 10 students have 4-5 different instructors from VHS Learning, and there is a wide variation in the instructor's willingness to support students.”
* “Regular meetings with the site coordinator, more frequent parent outreach, and summer coursework support.”
* “Flexibility in the start date for VHS”
* “More office hours, including summer hours, from the educators conducting the AP STEM classes.”
* “Funding for AP Teachers in-person and AP Tutoring twice per week. If with VHS, it would be great if the labs could be completed live via Zoom as a group with Instruction. If this program is continued virtually, tests should be proctored through the computer or there should be an increased stipend for the Site Coordinator to proctor in person for each test.”
* “We will look at next year's schedule closely to see if we can do more cohorting of students and provide more access to similar content teachers.”
* “More than half of students had to drop the classes in VHS. I didn't find the support on the teacher end to be effective at all. Students would be failing a course and only automated responses are generated (which went to our junk mail). There was no effort to reach our personally to the school or to parents. Overall, I am very disappointed. Our school's staffing shortages also contributed to the issue, to be fair. All and all, this was not a good experience for our school.”
* “More student training on the platform use”
* 4 respondents reported “None/N/A”

**Question 21:** Does your school build time into students’ regular schedules to complete their Expanding Access initiative coursework?

Total Responses: 23

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 20 | 86.96% |
| No | 3 | 13.04% |

**Question 22:** Have any students at your school decided to withdraw from their Expanding Access initiative virtual STEM AP course(s)?

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 18 | 75.00% |
| No | 6 | 25.00% |

**Question 23:** Are these withdrawals recorded in any way on a student’s transcript, such as ‘Incomplete’ or ‘Fail’?

Total Responses: 18

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 4 | 22.22% |
| No | 10 | 55.56% |
| Unsure | 4 | 22.22% |

**Question 24:** What factor(s) do you believe most contributed to students’ decision to withdraw from their Expanding Access virtual STEM AP course(s)?

Total Responses: 18

* *prefer to take a class in-person or did not have enough interest in subject to continue*
* *Lack of in-person help (i.e., on site teacher).*
* *Continuous assignments given during their vocational week*
* *Students struggled with time management and virtual learning.*
* *Once school started, students realized that they did not have as much time as they had anticipated to focus on their virtual AP STEM course. Since we returned to in person learning, students also reflected that they learned better in person and did not like the online format.*
* *Course load, and lack of time management skills.*
* *School Absences*
* *Time management*
* *They thought it resembled remote learning*
* *VHS Learning's lack of direct and/or live instruction or the ability to answer any questions throughout 2 of the 7 (not available on the weekend when students are completing the bulk of their work). Our students had a really difficult time adjusting to basically teaching themselves AP level curriculum through only a book and very few video references throughout the school year. Most AP classes were not directly utilizing the AP Classroom with videos and other resources to supplement the book. Instructors continually changed Office Hour times from week to week which created another barrier for many of our students who work afterschool. We brought all of these concerns to VHS Admin team in October 2021 and were met with little to no adjustments, just stating that the Site Coordinator needed to fill in more of the gaps in learning. Subsequently, our school hired tutors for each AP class who met with our students once or twice a week. This definitely helped, but by no means replaced having direct or live instruction from the same instructor who is grading their work. We initially had 21 students enrolled for 30 AP Classes, after the withdrawals we now have 15 students enrolled in 17 AP Classes.*
* *Some students withdrew in the first week based on scheduling and the amount of reading on the computer. After a year and a half of remote learning, some students struggled with the on-line format.*
* *Lack of connection to the instructor, failure of instructors to effectively reach out in a timely way to our school administration.*
* *workload*
* *There was not enough notification at the beginning of this school year to receive the information needed to properly inform students and families of the commitment. The student did not have a full understanding of what the commitment was for an AP class with the program.*
* *On the one hand, they were anxious to have in-person classes, especially after the pandemic. Live classes permit give-and-take, availability to answer questions as they come up, and scaffolding academic progress around personal relationships.
On the other hand, two students bailed out once they saw that VHS was nothing more than independent reading/viewing of material and handing in assignments. Both of them needed more contact with the teachers. The teacher of one was rigid and unforgiving about deadlines and assignments, as is VHS in general, which doesn't fit well with the religious Jewish calendar of our school. I doubt that we will be pursuing this in the future.*
* *Feeling of uncertainty and overwhelm.*
* *Level of difficulty, need for in-person teaching.*
* *AP Biology labs and coursework were taking away from students being successful in there in person courses*

**Question 25:** Approximately how many students enrolled in a course through the Expanding Access initiative are registered to take the AP exam associated with their Expanding Access initiative course(s)?

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| All students | 16 | 66.67% |
| Most students (more than half) | 2 | 8.33% |
| Some students (less than half) | 0 | 0.00% |
| No students | 6 | 25.00% |

**Question 26:** What supports, if any, are being offered by the school for students to take the AP exam associated with their Expanding Access initiative course(s)? Please select all that apply.

Total Responses: 17

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Meetings with school-based teacher(s) | 6 | 35.29% |
| Tutoring | 5 | 29.41% |
| Study groups | 5 | 29.41% |
| Other (please specify)\* | 5 | 29.41% |
| Meetings with virtual AP teacher(s) | 4 | 23.53% |

\*Responses to ‘other’ are provided in Question 26a

**Question 26a:** What supports, if any, are being offered by the school for students to take the AP exam associated with their Expanding Access initiative course(s)? Please select all that apply. - Other (please specify):

Total Responses: 5

Five respondents selected ‘other’ when considering additional supports offered to students relative to AP exams associated with Expanding Access initiative courses. Respondents shared that their schools make available the following resources:

* School liaison (1)
* Mock AP exam for initiative-enrolled students (1)
* Still determining (1)
* None (2)

**Question 27:** Does your school intend to offer STEM AP courses though the Expanding Access initiative next year?

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 18 | 75.00% |
| No | 3 | 12.50% |
| Unsure | 3 | 12.50% |

**Question 28:** Does your school have interest in expanding student enrollment in the initiative?

Total Responses: 24

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| Yes | 15 | 62.50% |
| No | 4 | 16.67% |
| Unsure | 5 | 20.83% |

**Question 29:** How can the Expanding Access initiative be improved?

Total Responses[[62]](#footnote-63): 16

* Current design is effective, no improvements needed (3)
* Resources for in-school tutoring (2)
* Flyers with course listings and pre-requisites
* Accommodate vocational schedules
* Outreach through guidance
* More diversity among VHS Learning staff
* Solicit more feedback from practitioners
* Increased advertisement
* Clearer communication relative to asynchronous course structure and subsequent expectations
* Needs more synchronous learning to accommodate students’ varying needs
* VHS Learning teachers need to be more proactive, communicate more effectively, and forge relationships with their students
* Better teacher selection
* Review coursework relative to time intensiveness
* Perhaps working with a different vendor
* Unsure

**Question 30:** What, if any, additional AP STEM courses do you wish were available as part of Expanding Access initiative?

Total Responses: 10

|  |  |  |
| --- | --- | --- |
| Response | Number of responses | Frequency |
| AP Computer Science A | 3 | 30.00% |
| AP Environmental Science | 2 | 20.00% |
| AP Calculus BC | 1 | 10.00% |
| AP Calculus | 1 | 10.00% |
| AP Statistics | 1 | 10.00% |
| AP Psychology | 1 | 10.00% |
| N/A | 1 | 10.00% |

# Appendix P: Site Coordinator school position

# Appendix Q: Site Coordinator demographic information, gender

|  |  |  |
| --- | --- | --- |
| Site Coordinator Gender  | Total   | Persistence Rate  |
| Female  | 32  | 43.68%  |
| Male  | 11  | 57.36%  |
| No EPIMS  | 7  | 16.67%  |
| Total  | 50  |   |

# Appendix R: Site Coordinator demographic information, race and ethnicity

Figure removed due to small sample size.

# Appendix S: Geographic location of participating schools

# Appendix T: Locales of participating schools

# Appendix U: Summary of participating schools

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Zone  | School Name  | Organization Type  | Region  | Locale Designation  | Starting Enrollment  |
| Priority Zone Schools  | Athol High School  | Public  | Central  | N  | 19  |
| Baystate Academy Charter Public School  | Public, Charter  | West  | U/GC  | 14  |
| Boston Community Leadership Academy  | Public  | East  | U  | 11  |
| Boston Green Academy Horace Mann Charter School  | Public, Charter  | East  | U  | 10  |
| Boston Prep Charter School  | Public, Charter  | East  | U  | 10  |
| Brighton High School  | Public  | East  | U  | 31  |
| Brockton High School  | Public  | East  | GC  | 4  |
| Chelsea High School  | Public  | East  | GC  | 2  |
| Claremont Academy  | Public  | Central  | U/GC  | 8  |
| Community Academy of Science and Health  | Public  | East  | U  | 5  |
| Dearborn Stem Academy  | Public  | East  | U  | 20  |
| Dr. William Henderson School Upper  | Public  | East  | U  | 12  |
| Everett High School  | Public  | East  | U/GC  | 4  |
| Excel High School  | Public  | East  | U  | 14  |
| Global Learning Charter Public School  | Public, Charter  | East  | GC  | 32  |
| Jeremiah E. Burke High School  | Public  | East  | U  | 5  |
| Mohawk Trail Regional School  | Public  | West  | N  | 3  |
| Mt. Everett Regional High School  | Public  | West  | N  | 7  |
| Ralph C. Mahar Regional School District  | Public  | West  | N  | 1  |
| Sizer: A North Central Charter Essential School  | Public, Charter  | Central  | GC  | 10  |
| Southeastern Regional Vocational High School  | Public, Vocational  | East  | N  | 8  |
| The English High School  | Public  | East  | U  | 20  |
| Worcester Technical High School  | Public, Vocational Technical  | Central  | U/GC  | 3  |
| Non-Priority Zone Schools | Ashland High School  | Public  | East  | N  | 3  |
| Attleboro High School  | Public  | East  | GC  | 12  |
| Community Charter School of Cambridge  | Public, Charter  | East  | U  | 2  |
| Francis W. Parker Charter Essential School  | Public, Charter  | East  | N  | 6  |
| Gateway Regional Middle & High School  | Public  | West  | N  | 2  |
| Groton-Dunstable Regional High School  | Public  | West  | N  | 4  |
| Hamilton Wenham Regional High School  | Public  | East  | N  | 4  |
| John D. O'Bryant School of Mathematics and Science  | Public  | East  | U  | 29  |
| KIPP Academy Lynn Collegiate Charter School  | Public, Charter  | East  | GC  | 13  |
| Leicester High School  | Public  | Central  | N  | 1  |
| Littleton High School  | Public  | East  | N  | 3  |
| Medway High School  | Public  | East  | N  | 5  |
| Notre Dame Cristo Rey High School  | Private  | East  | GC  | 1  |
| NuVu Studio  | Private  | East  | U  | 1  |
| Pioneer Charter School of Science  | Public, Charter  | East  | GC  | 15  |
| Pittsfield Public Virtual Academy  | Public  | West  | GC  | 1  |
| Quabbin Regional High School  | Public  | Central  | N  | 1  |
| Scituate High School  | Public  | East  | N  | 22  |
| Springfield Honors Academy  | Public  | West  | U/GC  | 17  |
| Springfield Virtual School  | Public  | West  | U/GC  | 1  |
| The Learning Center for the Deaf  | Private  | East  | N  | 1  |
| Westborough High School  | Public  | Central  | N  | 36  |
| Westport Middle / High School  | Public  | East  | N  | 3  |
| Wilmington High School  | Public  | East  | N  | 17  |
| Yeshiva Ohr Yisrael  | Private  | East  | N  | 3  |

# Appendix V: Persistence by course subject

# Appendix W: Persistence by course subject

|  |  |  |  |
| --- | --- | --- | --- |
| Course Subject | Peak Enrollment | Enrollment through June 2022 | Persistence rate |
| Biology | 45 | 15 | 33% |
| Calculus | 14 | 5 | 35% |
| Chemistry | 34 | 14 | 41% |
| Computer Science | 142 | 89 | 62% |
| Environmental Science | 85 | 30 | 35% |
| Physics | 107 | 47 | 44% |
| Statistics | 29 | 10 | 34% |

# Appendix X: Persistence by gender by priority zone

# Appendix Y: Persistence by race ethnicity by priority zone

Figure removed due to small sample size.

##

# Appendix Z: Persistence of economically disadvantaged students by priority zone

# Appendix AA: Persistence of students with a disability by priority zone

Figure removed due to small sample size.

# Appendix BB: Persistence of students with a 504 Plan by priority zone

Figure removed due to small sample size.

1. This initial enrollment goal was later amended, in agreement with DESE and VHS Learning, to 1,100 seats for FY22 and 1,300 seats for FY23. [↑](#footnote-ref-2)
2. This figure was discussed during a meeting between UMDI, DESE, and VHS Learning. [↑](#footnote-ref-3)
3. 4% (18) of the initiative’s total student population of 426 completed the student survey. [↑](#footnote-ref-4)
4. 54% (26) of the initiative’s participating schools completed the school survey. [↑](#footnote-ref-5)
5. The Boston Public School (BPS) system did not approve UMDI to conduct research (student and parent/guardian focus groups and student and parent/guardian surveys) within BPS; students and parents/guardians from BPS were therefore not included in these data collection activities. [↑](#footnote-ref-6)
6. In consultation with DESE, evaluation question six was deprioritized this first year of the initiative’s implementation in schools, as schools were just beginning to integrate the initiative into their schools. [↑](#footnote-ref-7)
7. In consultation with DESE, evaluation question seven was deprioritized during this first year of the initiative’s implementation in schools, as schools were just beginning to integrate the initiative into their schools. [↑](#footnote-ref-8)
8. These recruitment efforts included advertising teaching positions among staff at schools with existing VHS Learning partnerships. VHS Learning also prioritized the recruitment of teachers of color, so that the level of diversity in the teaching pools reflected that of participating schools; this was addressed through the promotion of teaching openings on a series of diversity job boards. Teachers licensed in Massachusetts were given first preference. [↑](#footnote-ref-9)
9. See Appendix O for additional information. [↑](#footnote-ref-10)
10. A comprehensive summary of survey responses is provided in Appendix N. [↑](#footnote-ref-11)
11. See Appendix O, survey question 26, for additional information. [↑](#footnote-ref-12)
12. See Appendix C for a summary of the student focus group. [↑](#footnote-ref-13)
13. See Appendix E for a summary of the parent/guardian focus groups. [↑](#footnote-ref-14)
14. See Appendix N, survey question 25, for additional information regarding AP exams. [↑](#footnote-ref-15)
15. This initial enrollment goal was later amended, in agreement with DESE and VHS Learning, to 1,100 seats for FY22 and 1,300 seats for FY23. [↑](#footnote-ref-16)
16. Site Coordinators across schools were additionally diverse (by school position, gender, and race and ethnicity). See Appendixes P, Q, and R, respectively, for additional information. [↑](#footnote-ref-17)
17. See Appendix S for additional information regarding school geographic locations. [↑](#footnote-ref-18)
18. See Appendix T for additional information regarding school locales. [↑](#footnote-ref-19)
19. See Appendix U for a comprehensive list of participating schools with their priority zone designation, organization type (public, public charter, public vocational, or private), region, locale, and the total number of students enrolled. [↑](#footnote-ref-20)
20. Identifiable individuals are the number of students that were successfully merged with SIMS data. [↑](#footnote-ref-21)
21. For additional information on this demographic variable, please refer to the DESE Handbook: https://www.doe.mass.edu/infoservices/data/sims/sims-datahandbook.docx [↑](#footnote-ref-22)
22. For this report. UMDI utilized the SIMS variable, ‘ECO-DIS.’ We recognize DESE also collects supplemental low-income data, recorded as SIMS DOE056, which was not included in this report. [↑](#footnote-ref-23)
23. This percentage was estimated by VHS Learning to UMDI during a monthly meeting. [↑](#footnote-ref-24)
24. See Appendixes V and W for persistence by course subject. [↑](#footnote-ref-25)
25. See Appendixes X-BB for additional information. [↑](#footnote-ref-26)
26. See Appendix X for additional information. [↑](#footnote-ref-27)
27. See Appendix Y for additional information. [↑](#footnote-ref-28)
28. Utilizing the SIMS variable ‘ECO-DIS.’ [↑](#footnote-ref-29)
29. For additional information regarding the persistence of students categorized as economically disadvantaged by priority zone, see Appendix Z. [↑](#footnote-ref-30)
30. For additional information regarding the persistence of students with a disability by priority zone, see Appendix AA. [↑](#footnote-ref-31)
31. For additional information regarding the persistence of students with 504 plans by priority zone, see Appendix BB. [↑](#footnote-ref-32)
32. For a summary of school survey responses regarding withdrawals, see Appendix O, question 24. [↑](#footnote-ref-33)
33. Protocols for students, parents/guardians, schools, DESE, and VHS Learning are in Appendixes C, D, E, F, and G, respectively. Evaluation questions are indicated within each protocol question among each Appendix item. [↑](#footnote-ref-34)
34. See Appendix C for the student focus group protocol and integrated evaluation questions. [↑](#footnote-ref-35)
35. See Appendix D for the complete summary of student focus group responses. [↑](#footnote-ref-36)
36. See Appendix E for the parent/guardian focus group protocol and integrated evaluation questions. [↑](#footnote-ref-37)
37. Only parents/guardians who had a child currently enrolled in the Expanding Access initiative at the time of recruitment were contacted to participate. [↑](#footnote-ref-38)
38. See Appendix F for the complete summary of parent/guardian focus group responses. [↑](#footnote-ref-39)
39. See Appendix G for the school group interview protocol and integrated evaluation questions. [↑](#footnote-ref-40)
40. An enrollment range minimum of three was determined to ensure some diversity of representation among schools with low overall enrollment. [↑](#footnote-ref-41)
41. An enrollment range maximum of seven was determined because it reflects the average enrollment among schools with a minimum enrollment of 3. [↑](#footnote-ref-42)
42. Schools in towns defined as Eastern (E) were located in the following counties: Essex, Middlesex, Norfolk, Suffolk, Plymouth, Bristol, Barnstable, Dukes, and Nantucket; schools in towns defined as Central (C) were located in Worcester county; and schools in towns defined as Western (W) were located in Berkshire, Franklin, Hampshire, and Hampden counties. [↑](#footnote-ref-43)
43. Towns where schools are located was determined utilizing the DESE School and District Profiles: https://profiles.doe.mass.edu/ [↑](#footnote-ref-44)
44. Schools were designated as being from urban locales if their respective towns were numerically labelled as 11, 12, or 13 on the NCES Locale Classifications Criteria: <https://nces.ed.gov/programs/edge/docs/LOCALE_CLASSIFICATIONS.pdf> [↑](#footnote-ref-45)
45. Schools were designated as being from gateway city locales if the school’s town was listed as such on the MassInc website: <https://massinc.org/our-work/policy-center/gateway-cities/about-the-gateway-cities/> [↑](#footnote-ref-46)
46. Urban/gateway city schools are those schools that are designated as both urban according to NCES Classifications, and gateway city, according to MassInc. [↑](#footnote-ref-47)
47. School names were shared with DESE, and DESE did not identify any schools that were ‘level five.’ [↑](#footnote-ref-48)
48. See Appendix H for the complete summary of school group interview responses. [↑](#footnote-ref-49)
49. See Appendix I for the DESE group interview protocol and integrated evaluation questions. [↑](#footnote-ref-50)
50. See Appendix J for the VHS Learning group interview protocol and integrated evaluation questions. [↑](#footnote-ref-51)
51. The parent/guardian survey was translated with support from the UMass Translation Center into Puerto Rican Spanish, Chinese, and Portuguese. [↑](#footnote-ref-52)
52. See Appendixes K, L, and M for student, parent/guardian, and school survey protocols and integrated evaluation questions. [↑](#footnote-ref-53)
53. In consultation with DESE, the parent/guardian survey was not distributed, and is currently on hold as the evaluation scope is being revised. [↑](#footnote-ref-54)
54. This percentage is relative to the total number of students who were successfully contacted to complete the survey. [↑](#footnote-ref-55)
55. See Appendix N for the complete summary of student survey responses. [↑](#footnote-ref-56)
56. Staff in schools were asked to submit a single joint survey representative of their schools perspectives/experiences. [↑](#footnote-ref-57)
57. This figure includes data from surveys that were either completely or partially completed and excludes data from respondents who opted out. [↑](#footnote-ref-58)
58. Due to course withdrawals, VHS Learning condensed several course sessions in November 2021. [↑](#footnote-ref-59)
59. We partially attribute the inability to have a 100% match rate to the enrollment of private schools, which are not recorded by DESE in the SIMS dataset. [↑](#footnote-ref-60)
60. We partially attribute the inability to have a 100% match rate of EPIMS data to the enrollment of private schools, which are not recorded by DESE in the EPIMS dataset. [↑](#footnote-ref-61)
61. Responses to Question 17 have been clustered into broader categories for brevity. [↑](#footnote-ref-62)
62. Responses to Question 29 have been clustered into broader categories for brevity. For this question, the number of categories listed does not match the number of total responses, as more substantive responses have been partitioned into multiple categories. [↑](#footnote-ref-63)