

Cost-Feasibility Analysis Toolkit for Supplemental Online Programs: User Guide

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Cost-Feasibility Analysis Toolkit for Supplemental Online Programs: User Guide

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Regional Educational Laboratory Appalachia researchers developed the Cost-Feasibility Analysis (CFA) Toolkit to help education leaders estimate whether implementing supplemental online programs is affordable given a school or district's available resources. The CFA Toolkit guides users through a four-stage process that yields cost information that can support decisionmaking about implementing such a program. The toolkit includes guidance, helpful resources, and an Excel-based cost-estimation tool that supports users with planning (stage 1), collecting data (stage 2), estimating program costs (stage 3), and determining the feasibility of implementing the supplemental online program (stage 4).

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INTRODUCTION

Online, blended, and digital learning programs in K–12 schools in the United States are growing in popularity and include an assortment of programs, courses, tools, and resources. During the 2016/17 fiscal year, state-operated [online learning programs](#) served more than 420,000 students and approached 1 million supplemental online course enrollments in 23 states (Digital Learning Collaborative, 2019). [Supplemental online programs](#) are a popular type of learning program that allow students to enroll in [online courses](#) in addition to the traditional face-to-face courses offered at their school. States and districts might choose to offer these programs for many reasons, including expanding the range of courses available to students, offering increased flexibility to students who have scheduling conflicts or who are otherwise unable to attend regular classes, providing credit-recovery options for students who have failed courses, and reducing per-student costs (Digital Learning Collaborative, 2019; Gemin & Pape, 2016).

Eligible students enroll in supplemental online programs through their local school, which maintains responsibility for student transcripts, administers required state assessments, offers diplomas, and provides student services. How schools implement supplemental online programs varies. For example, some schools have students take online courses during the school day in a school computer lab monitored by a facilitator, while other schools have students take online courses at home using a personal device. When making decisions about supplemental online programs, state and local education leaders need information on the resources required (such as staff, time, and materials) for implementing the programs and on their associated costs.

Supplemental online programs and the Cost-Feasibility Analysis Toolkit

This Cost-Feasibility Analysis (CFA) Toolkit can help you gather and create comprehensive program-cost information to inform the decisionmaking process around adopting programs. If you want to analyze more than one supplemental online program, you can use the toolkit materials and guidance to conduct multiple cost-feasibility analyses.

For whom is this toolkit useful?

The CFA Toolkit is designed for virtual learning specialists, analysts, education administrators, and other state and local education leaders who are interested in estimating the costs of a supplemental online program and determining whether adequate resources are available to initiate, sustain, or scale up the program. For example, you might be considering whether to sustain or expand a supplemental online program already in use in your district or whether to adopt a new supplemental online program that another district is implementing.

The CFA Toolkit allows you to gather information from schools or districts that are currently implementing a supplemental online program. The developer or vendor might be able to

provide a list of schools or districts that are implementing the program. State education agencies might also be able to provide this information. The CFA Toolkit materials have been tested by the Virginia Department of Education (VDOE) through its work with the Regional Educational Laboratory (REL) Appalachia. VDOE wanted to better understand the costs of implementing supplemental online programs without having to adapt a generic cost tool. A REL Appalachia research team provided coaching and technical support as VDOE created the Virginia CFA Toolkit (box 1). Development of the materials included extensive piloting with Virginia school division leaders and contributions from other online learning experts to ensure that the toolkit was useful for state and local education staff. REL Appalachia researchers then adapted and expanded the Virginia-focused materials to produce this CFA Toolkit for a nationwide audience of education leaders who might be considering a diverse array of supplemental online programs.

How can cost-feasibility analysis support decisions about supplemental online programs?

[Cost analysis](#) is the process of systematically collecting and analyzing data on comprehensive program costs. A cost analysis is an economic evaluation that provides a variety of data to inform decisions about initiating, sustaining, or scaling up programs. A [cost-feasibility analysis](#) is a type of cost analysis that compiles information about the resources and associated costs for program implementation and helps to determine whether implementation is affordable. To inform decisions about any new or expanded initiative, you need information about the resources required to implement it and their associated costs. You can use this information to make decisions that balance the need for a program with the resources available. While cost-feasibility analysis does not provide information on whether a program produces desired outcomes, it can help determine whether the payers can afford to implement the program as intended, also known as [implementation fidelity](#).

In addition to considering implementation fidelity when analyzing the cost-feasibility of a supplemental online program, it is important to weigh the [opportunity cost](#). Because the time and funding spent on the supplemental online program could instead be used for other initiatives or programs, it is important to consider whether implementing the supplemental online program is worth forgoing these other potential opportunities. After identifying the resources required for implementation and considering alternative implementation scenarios, you can use the results of the cost-feasibility analysis to help you decide whether it makes sense to implement the supplemental online program.

Conducting a cost-feasibility analysis requires substantial time and effort. Before starting such an analysis, first weigh its pros and cons. A significant expenditure of time and effort might be justified if you expect to expand the program to many schools or districts or expect it to serve a large number of students. Analysis will cost less if you have access to staff who can easily answer questions about expenses or if few resources are involved in implementation, which would reduce the required level of effort for data collection. When resources to conduct a cost-feasibility analysis are limited, you can seek real-time guidance from researchers with cost-feasibility analysis experience, including the [Regional Educational Laboratory](#) that serves your state or district.

Box 1. Background on the development of the Cost-Feasibility Analysis Toolkit

To support fiscally responsible use of state resources, the Virginia Joint Legislative Audit and Review Commission recommended that the Virginia Department of Education (VDOE) develop a methodology for estimating the per-student costs of online programs. The commission conducts program evaluation, policy analysis, and oversight of state agencies on behalf of the Virginia General Assembly, with the goals of achieving effectiveness, efficiency, and cost savings (Joint Legislative Audit and Review Commission of Virginia, n.d.). Regional Educational Laboratory (REL) Appalachia staff provided coaching and technical support to VDOE in developing a cost-feasibility analysis toolkit specific to the online learning context in Virginia. Development included piloting the materials and tools extensively, soliciting input from a range of Virginia stakeholders and experts, and holding conversations with Virginia school and district online learning program leaders. VDOE staff, with support from REL Appalachia staff, piloted the [Implementation resource list](#) and [Interview protocols](#) with seven school division program leaders to ensure that instructions and questions were clear, relevant, comprehensive, and feasible to answer.

To ensure the toolkit's relevance in the virtual learning context, overall quality, and usability, the REL Appalachia team solicited additional feedback from two virtual learning specialists at the VDOE; a research scientist at a nonprofit organization with expertise in virtual learning; the VDOE's director of Science, Technology, Engineering, Mathematics & Innovation; and the VDOE's assistant superintendent of Data, Research, and Technology. At VDOE's request REL Appalachia staff shared the Virginia Cost-Feasibility Analysis Toolkit with VDOE's Virtual Learning Advisory Committee to solicit input and feedback. REL Appalachia and VDOE staff revised the Virginia toolkit materials in response to the feedback.

The REL Appalachia team then adapted these tested Virginia materials to create the materials and guidance included in this toolkit so that it can be used by a wider national audience.

Cost-feasibility analysis

The CFA Toolkit focuses on cost-feasibility analysis. A cost-feasibility analysis answers the question of whether resources are adequate to implement a new policy or program or to scale up an existing one. Three other types of cost analysis—[cost-effectiveness](#), [cost-benefit](#) (also referred to as benefit-cost), and [cost-utility](#)—each answer different questions about program cost (table 1; Levin et al., 2017). A cost analysis can provide education leaders with information to inform decisions such as whether to pilot, initiate, continue, or scale up supplemental online programs or other programs. (To learn more about the other types of cost analyses, see *The Critical Importance of Costs for Education*, listed in the [Supporting materials](#) section.)

Each type of cost analysis starts with the same approach to assess resource costs, the [ingredients method](#) (Levin et al., 2017), but the analytic method to answer specific cost-related questions varies (see table 1). The ingredients method is a detailed process for identifying

Table 1. Types of cost analysis

Type	Questions answered
Cost-feasibility	Are resources adequate to implement a new policy or program or to scale up an existing one?
Cost-effectiveness	Which of several policies or programs produce the desired outcome for the lowest cost? Which one maximizes the desired outcome for a given cost?
Cost-benefit	Are the economic benefits of a program greater than the costs, particularly over time?
Cost-utility	Do stakeholders, such as parents or students, value the usefulness of a policy or program compared with the costs?

Source: Pratt-Williams & Mislevy, 2019.

and calculating the cost of all the resources needed to initiate and carry out a program or intervention. A large element of conducting a cost-feasibility analysis is the detailed data gathering that is part of the ingredients method.

What does the Cost-Feasibility Analysis Toolkit include?

The CFA Toolkit consists of the CFA Estimator (a Microsoft Excel document¹) and this user guide. The guide explains how to conduct a cost-feasibility analysis using the CFA Estimator, including detailed steps and tips to help you carry out the analysis. The CFA Estimator is a data collection tool that helps you compile resource and cost information and then estimates the cost of implementing the supplemental online program by resource category and year of program implementation. After inputting data on the quantity, time, and monetary value of the supplemental online program implementation resources, you can use the CFA Estimator to examine the cost of implementation across a two- to three-year period.

At the end of this user guide you will find additional information, tools, and materials to support you in conducting a cost-feasibility analysis:

- [Glossary](#). Defines key terms related to cost analysis, sampling, and online learning.
- [Supporting materials](#). Describes materials that provide supplemental information about the importance of cost analysis in education decisionmaking and the resources that support cost analysis.
- Appendixes. Provide additional tools and information to support the cost-feasibility analysis for supplemental online programs:
 - Appendix A, [Implementation resource list](#), includes a categorized list of the resources needed to implement a supplemental online program and to maintain it annually. The categories include personnel, facilities, materials and equipment, required student or family inputs, and other resources necessary for program implementation.

1. The Excel document can be accessed at <https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=6714>.

Introduction

- Appendix B, [Interview protocols](#), provides guides for conversations with school and district staff to collect information about resources and associated costs for implementing the supplemental online program. There are four protocols, all seeking the same information but with questions tailored to the interviewee's role.
- Appendix C includes an [Interview protocol mapping to Cost-Feasibility Analysis Estimator](#) that provides guidance on how the information gathered from each question in the interview protocols can be used or entered into the CFA Estimator.
- Appendix C also includes [Technical tips](#), which offer instructions for how to enter data, use features of the tool, and modify the prepopulated CFA Toolkit resources in the CFA Estimator to reflect resources specific to your supplemental online program of interest.
- [References](#). Lists resources that supported the development of the CFA Toolkit.

How do the toolkit materials support the stages of a cost-feasibility analysis?

The CFA Toolkit supports the four stages of a cost-feasibility analysis of a supplemental online program:

- **Stage 1 Planning.** Establish who will conduct the analysis, identify the resources needed to implement the supplemental online program, and develop the timeline and other logistical aspects of the cost-feasibility analysis process.
- **Stage 2 Collecting data.** Collect data about resource quantities, time, and monetary values from existing data sources and from interviews with implementers of the supplemental online program.
- **Stage 3 Estimating cost.** Enter data, update data, and estimate the costs of resources needed to implement the supplemental online program with fidelity.
- **Stage 4 Determining feasibility.** Identify the resources available to support the supplemental online program and explore potential implementation scenarios to decide whether implementing the program is feasible.

The overall cost-feasibility analysis process is summarized in figure 1, which includes the four main stages and the key associated steps. The figure also includes a range of time estimates for each stage. Overall, the estimated time needed to complete the full analysis ranges from approximately two months to a little less than eight months. The figure highlights the CFA Toolkit materials that can support your work during the given stage.

Figure 1. Stages of cost-feasibility analysis

Stage	Stage 1. Planning	Stage 2. Collecting data	Stage 3. Estimating cost	Stage 4. Determining feasibility
Key steps	<ul style="list-style-type: none"> <input type="checkbox"/> Step 1. Assemble your cost-feasibility analysis team, and establish a timeline <input type="checkbox"/> Step 2. Describe the program of interest and the necessary resources <input type="checkbox"/> Step 3. Define the population of interest (the set of schools or districts to which the cost-feasibility analysis will apply) for the program of interest <p style="text-align: center;">Go to planning section</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Step 1. Collect data from existing sources <input type="checkbox"/> Step 2. Interview supplemental online program implementers <ul style="list-style-type: none"> <input type="checkbox"/> Step 2a. Identify interview sites <input type="checkbox"/> Step 2b. Identify interviewees at the selected sites <input type="checkbox"/> Step 2c. Set up and prepare for the interviews <input type="checkbox"/> Step 2d. Conduct interviews with program implementers <p style="text-align: center;">Go to collecting data section</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Step 1. Update the list of resources in the Cost-Feasibility Analysis Estimator <input type="checkbox"/> Step 2. Enter the initial-year quantities, time, and cost of each resource into the Cost-Feasibility Analysis Estimator <input type="checkbox"/> Step 3. Enter resources used in subsequent years of program implementation into the Cost-Feasibility Analysis Estimator <input type="checkbox"/> Step 4. Determine the estimated program costs, including subtotals <p style="text-align: center;">Go to estimating cost section</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Step 1. Identify available resources and compare them with your cost estimates <input type="checkbox"/> Step 2. Modify estimates to explore potential implementation approaches <p style="text-align: center;">Go to determining feasibility section</p>
Estimated time	1–3 weeks	5–15 weeks	2–8 weeks	1–4 weeks
Corresponding Cost-Feasibility Analysis Toolkit materials	<ul style="list-style-type: none"> • Implementation resource list 	<ul style="list-style-type: none"> • Interview protocols • Cost-Feasibility Analysis Estimator 	<ul style="list-style-type: none"> • Cost-Feasibility Analysis Estimator • Cost-Feasibility Analysis user guide 	<ul style="list-style-type: none"> • Cost-Feasibility Analysis Estimator • Cost-Feasibility Analysis user guide

COST-FEASIBILITY ANALYSIS STAGES

There are four main stages of a cost-feasibility analysis once you have identified a supplemental online program: planning, collecting data, estimating cost, and determining feasibility. This section describes each stage and the steps you can take to complete each one. The guidance for each stage also includes notes on the cost-feasibility analysis tools that can support the stage and tips to consider while conducting the cost-feasibility analysis. If you decide to analyze more than one supplemental online program, you will conduct the four stages of a cost-feasibility analysis for each program. There could be efficiencies in conducting multiple cost-feasibility analyses at one time if you can collect data for different programs at the same time. As you become more familiar with the toolkit, conducting additional analyses will become easier.

Stage 1. Planning

Starting your cost-feasibility analysis by planning helps ensure that you have everything you need to conduct the analysis before you start. Spending time upfront to plan should enhance the efficiency of your cost-feasibility analysis and save time and effort in the long run. Familiarizing yourself with the resources typically involved in implementing a supplemental online program should make data collection easier, as you will be less likely to overlook resources for which you require information. During this stage you will identify what you need to conduct the cost-feasibility analysis as well as the resources that will be required to implement the supplemental online program. You will assemble your cost-feasibility analysis team and establish a timeline (step 1), describe the program of interest and its necessary resources (step 2), and define the population of interest for the online supplemental program (step 3). Then you will determine the scope of the cost-feasibility analysis. Once you have completed these steps, you will be ready to begin [Stage 2 collecting data](#).



Cost-feasibility analysis tool for planning

The Cost-Feasibility Analysis (CFA) Toolkit includes an [Implementation resource list](#) (appendix A), which is the primary tool used in the planning stage. The list includes the ingredients that are necessary for program implementation: personnel, facilities, materials and equipment, required student or family inputs, and any other necessary resources. The list is prepopulated with resources that are commonly used in the implementation of supplemental online programs, but the list is not exhaustive or applicable to every program. You might need to revise the list to fit the program of interest. The Implementation resource list includes items to consider for both [initial costs](#) and [ongoing costs](#). The initial costs list includes the items commonly used at the beginning of implementation. The ongoing costs list includes items commonly needed in following years to maintain the supplemental online program.

Step 1. Assemble your cost-feasibility analysis team and establish a timeline

The first planning step is setting up your cost-feasibility analysis team and timeline. (You can also conduct a cost-feasibility analysis as an individual.) The CFA Toolkit is designed to support a diverse group of users who might be interested in conducting a cost-feasibility analysis for a supplemental online program. Although the team can include individuals with different job titles, it is helpful for the members to have some knowledge of the supplemental online program of interest and its sources of funding. The team will also benefit from including someone with research and analysis skills.

When creating the timeline for your cost-feasibility analysis, consider factors such as the size of the team, the amount of time each team member can devote to the analysis, the skill level of team members, and the availability of data and program personnel. Figure 1 presents the estimated duration for each stage, which you can use as a reference when constructing your timeline. One full-time employee working solely on the cost-feasibility analysis would likely be able to complete the stages in the mid-range of the time indicated for each stage. For example, the planning stage could require one to three weeks. One full-time team member might be able to complete the planning stage in two weeks, if they have some experience conducting cost analysis. Two or more full-time team members might be able to complete the planning stage in one to two weeks.

While not required, having at least two people collaborate on the cost-feasibility analysis is ideal. Having more team members would be helpful if members are devoting only a portion of their time to the cost-feasibility analysis or if the analysis will include a larger data collection effort in multiple districts and schools. Beyond taking on individual tasks, team members can collaborate throughout each stage on the planning, data collection, and analysis.

Step 2. Describe the program of interest and its necessary resources

To prepare for data collection ([stage 2](#)), use the CFA Toolkit [Implementation resource list](#) (appendix A) as a starting point to compile a list of ingredients for the supplemental online program of interest. The foundation of a cost-feasibility analysis is identifying the ingredients necessary to implement and sustain the supplemental online program. This list should include all the needed resources, including those that might not be new expenditures, such as a current teacher or an existing computer lab. Although each program is unique, several categories of ingredients are usually required to implement a supplemental online program: personnel, facilities, materials and equipment, required student or family inputs, and other program resources, each of which is described below. These categories include direct costs such as a computer and indirect costs such as computer maintenance.

- **Personnel.** Any staff member, consultant/outside vendor, or volunteer needed to implement the supplemental online program, even if the commitment is part-time or for just a

few hours. These staff can be school or district personnel and can include administrators, technology staff, and support staff.

- **Facilities.** Structures, such as buildings, classrooms, labs, offices, and libraries, needed as a location for program training or implementation.
- **Materials and equipment.** Any items, such as computers, textbooks, and internet infrastructure, needed for program training or implementation.
- **Required student or family inputs.** Any materials or time commitment required of students or families to participate in or use the supplemental online program, such as trainings, meetings, or Internet access.
- **Other program resources.** Any other items or categories other than the four main categories above that are important for implementation, such as fees or subscription costs.

Updating the CFA Estimator (described in [Stage 3 estimating cost](#)) with any changes you made to the [Implementation resource list](#) during the planning stage will facilitate [Stage 2 data collection](#). [Appendix C](#) demonstrates how to add new items to the CFA Estimator.

Step 3. Define the population of interest for the program of interest

The final step in the planning stage is defining your [population of interest](#), or future users, for the supplemental online program. This step involves identifying schools or districts that are not currently using the supplemental online program but that are candidates for future use. For example, for state personnel conducting a cost-feasibility analysis, the population of interest might be all the high schools in the state that would implement the supplemental online program. District personnel conducting a cost-feasibility analysis will likely have a smaller population of interest.

Defining your population of interest also involves identifying key characteristics of the group—characteristics likely to be related to differences in costs or access to resources. Key characteristics could include school or district size, urbanicity, and revenue. For example, urban districts might have better access to computers and the Internet or lower per-student costs than rural districts. Defining your population of interest will help determine the scope of the analysis and identify an appropriate [sample](#) for data collection, which involves current users of the supplemental program of interest (stage 2).

Stage 2. Collecting data

After planning your cost-feasibility analysis ([stage 1](#)), you are ready to begin collecting the data you will use to estimate the cost ([stage 3](#)) and determine the feasibility ([stage 4](#)) of your supplemental online program. The data collection stage will likely take the most time and resources. You will collect data on the quantities, time, and costs associated with each ingredient you will need in order to implement your supplemental online program.

Collecting data involves gathering information from existing sources, such as budgets or expenditure documents (step 1), and collecting additional data through interviews with program implementers (step 2). Collect as much data as possible from existing data sources before conducting the interviews. This will allow you to focus the interviews on gathering additional information and verifying the information you collected from existing data sources. If you collect data from existing sources before your interviews, you can identify any information gaps about specific resources and add questions to the [Interview protocols](#) (appendix B) to fill those gaps.

Step 1. Collect data from existing sources

First, you will collect information from existing sources about the resources needed to implement a supplemental online program. This step should include information to estimate the cost of the needed resources, such as quantities, amount of time, and prices. For example:

- *Quantities:* How many school counselors will be needed? How many computers?
- *Time:* How much of a school counselor's time will be needed? What proportion of computer time will be used for the supplemental online program?
- *Value/price:* What is the school counselor's salary, including benefits? What is the price of a computer?



Cost-feasibility analysis tool for collecting interview data

The Cost-Feasibility Analysis Toolkit includes four [Interview protocols](#) that can be used to guide a roughly 45-minute interview with staff involved in the supplemental online program implementation. Depending on the design of the program and the data that you seek, you might not need all the protocols, or you might need to add different staff roles and associated questions.

The four Interview protocols:

- Provide questions and language that you can use to collect additional data about supplemental online program resources and costs.
- Have similar content but are customized for different types of staff.
 - School counselors or school supplemental online program leads.
 - District supplemental online program administrators (central office).
 - Superintendents or other district administrators.
 - Other staff (any staff member other than those above, such as a technology staff member).
- Use a [semi-structured interview](#) format, which does not require you to read the questions exactly as written. You can rephrase, reorder, or add questions to these protocols to meet your needs.

Resources. As you collect existing data, you will try to identify all the required resources and the associated costs. Potential sources of information about required supplemental online program resources include:

- Lists of resources provided by the supplemental online program developer.
- Lists of resources drawn from research reports and publications related to the supplemental online program of interest, such as efficacy or implementation studies.

Costs. Potential sources of information about costs include:

- Staff salary schedules and contracts from schools or districts that are already implementing the supplemental online program.
- District and school budgets from schools or districts that are already implementing the supplemental online program.
- Expenditure documentation within the state’s department of education or school district, such as construction or renovation costs for computer labs.
- Cost estimates from school or district vendors.
- Information from publicly available data sources, such as the [CostOut](#) tool created by the Center for Benefit-Cost Studies in Education (see the [Supporting materials](#) section), which contains a range of example prices.
- Program estimates provided by the supplemental online program developer.
- Estimates of prices and quantities drawn from research reports and publications related to the supplemental online program of interest.

Throughout your data collection activities, consider entering the data you collect into the CFA Estimator (described in [Stage 3 estimating cost](#)). This process can help you identify any missing information, which you can then gather during the interviews, and will more quickly prepare you for estimating cost. You can add these data about resources to the Year 1, Year 2, and Year 3 tabs in the CFA Estimator, as appropriate.

Step 2. Interview supplemental online program implementers

The purpose of the interviews with educators who are already implementing the supplemental online program of interest is to gather information and insights from people who are using the program. Focus your interviews on collecting information about educators’ experiences with respect to time, costs, instructional materials, technology, and policies related to the supplemental online program. Questions about educators’ opinions or perceptions about individuals or students involved in the supplemental online program might require approval from an institutional or research review board (University of Iowa, n.d.).

Cost-feasibility analysis stages

Beyond the details and facts that you identify from existing sources, supplemental online program implementers can share nuances about their experiences on the ground with the program in their school or district. You can use the interviews to identify additional resources and costs that you might not have identified while collecting data from existing sources as well as to verify the information that you have collected. The suggestions that follow describe best practices for semi-structured interviews, but they might not fit every context. To gather the insights needed for your district, you can adjust your approach to your specific needs.

Step 2a. Identify interview sites

To find potential interview sites, you should first identify schools or districts that are currently implementing the supplemental online program of interest. If you do not know of a school or district that is implementing the program, you could ask the program developer or vendor. State education agencies might also be able to provide this information. It is important to identify actual implementers in order to understand the cost of implementation in practice and to determine feasibility.

The number of schools or districts to include in your interview sample depends on your team's capacity to conduct interviews, the number of schools or districts currently implementing the supplemental online program of interest, and the extent to which you expect implementation to vary across schools or districts. You can interview representatives in all the schools or districts that are implementing the supplemental online program of interest or only in some of them. For example, if three districts are currently implementing the supplemental online program, you or your team might have the capacity to interview staff from all three districts. If, however, there are more districts or schools than you can interview or if not all sites are willing to participate, you can identify a sample of schools or districts for your interviews.

There are multiple ways to identify a sample, and you should consider several factors when deciding on a sampling strategy, such as the availability of resources for data collection, ease of access to interviewees, and the purpose of the analysis. To reduce time and costs, you could use [convenience sampling](#) to include schools or districts that are easily accessible. This approach could limit how well the sample represents the population of interest, however. Alternatively, you could use [purposive sampling](#), intentionally selecting schools or districts that represent important characteristics of the population of interest that you identified in stage 1. For example, you might try to include both urban and rural districts in your sample. If you want to cost out a specific implementation scenario or estimate a cost range in different settings because you expect implementation to differ across school or district settings, a purposive sample could address these issues in a way that a convenience sample might not. To learn more about sampling, see *Survey Methods for Educators: Selecting Samples and Administering Surveys*, one of three guides developed by REL Northeast & Islands on survey methods for educators (see [Supporting materials](#)).

Step 2b. Identify interviewees at the selected sites

After selecting your sample of schools or districts for the interviews, you need to identify potential interviewees from your sample. The goal of the interviews is to gather information from staff with varied roles and responsibilities to provide a complete picture of the day-to-day implementation of the supplemental online program and the resources needed for implementation. For example, technology staff will likely have information about technology costs, while supplemental online program leads will probably have more information about costs related to instructional time and preparation. The staff you interview could be a part of your school district—for example, if you want to determine whether to expand the use of the supplemental online program beyond your school—or from another district that uses the program of interest.

The types of staff to interview will depend on the kind of information you still need after collecting existing data, as well the types of staff who would be involved in the supplemental online program implementation. The number and variety of staff to interview also depend on the resources you have available to conduct interviews, such as staff, time, and finances. If you are not sure whom to interview, you can contact school or district administrators for recommendations.

After identifying potential interview participants, you can ask them about their willingness to participate. You can also ask for their suggestions about other people to interview. Sharing the following information could be helpful:

- Who you are (organization and role).
- Purpose of the interview and analysis, including the expected benefits of the analysis.
- Expectations for confidentiality.
- Amount of time that the interview will likely take.
- When you expect to conduct the interview.

Step 2c. Set up and prepare for the interviews

Once you have selected your sample and identified potential interview participants, you should prepare for the interviews. Preparation will make your interviews more productive by ensuring that interviewers and interviewees know what to expect and by reducing technical challenges during the interviews. The Interview checklist (box 2) summarizes these steps.

Step 2d. Conduct interviews with program implementers

During the interviews use the relevant [Interview protocol](#) to collect information about supplemental online program implementation resources and to verify information previously collected from existing sources. The Interview protocols suggest introductory language to

Box 2. Interview checklist

Some steps to assist you in setting up and preparing for interviews:

- Customize your [Interview protocols](#) for each interviewee. Identify the most appropriate protocol for each interviewee, and customize the questions to collect the information that you need. You might want to share the protocol with the interviewees beforehand to give them time to gather data or to identify a colleague better positioned to respond to the questions.
- Establish technical logistics. Determine whether your interview will be in person, over the phone, via video call, or in some other modality.
- Identify someone to lead the interview and someone to take notes (if possible).
 - The interview lead will need to devote full attention to responses to manage the flow of the conversation and to probe when necessary.
 - The notetaker can document responses, to reduce the burden on the interviewer.
 - Consider recording the interview if no one is available to take notes. You must obtain the interviewee's consent in advance of recording.
- Reach out to the interviewee to provide information and set up a time. Be sure to include:
 - Who you are (organization and role) and who will be conducting the interview.
 - Technical logistics (phone, video call, in person, other).
 - Suggested meeting times.
 - Sample questions, the section headers, or full interview protocol.
 - A contact person to answer questions.
 - Time commitment (roughly 45 minutes).
- Read through the interview protocol and any background information before the interview to ensure that everything is fresh in your mind.
- Test your technology setup in advance. Examples include:
 - Videoconferencing connection.
 - Note-taking platform.
 - Recording devices.

explain the purpose of the interview and how you will use the information collected from the interview. The tips in box 3 provide some guidance on conducting a semi-structured interview. The [Supporting materials](#) section also includes information about the *Handbook of Practical Program Evaluation*, an outside resource that provides an overview of semi-structured interviews, how to conduct them, and additional tips (Adams, 2015).

After the interviews you can enter the data collected into the CFA Estimator (described in [Stage 3 Estimating cost](#)). The data can be item names, time estimates, quantities, or dollar values. The [Interview protocol mapping to CFA Estimator](#) section in appendix C provides guidance on how to use the data from each question in the Interview protocols, including where to enter the data in the CFA Estimator, if appropriate. Entering data into the CFA Estimator will allow you to maintain accuracy and identify areas where data are still missing, or alternatively, areas that might lead you to conclude your interviews with staff from a particular site before interviewing all intended participants if you find that you have all the data you need.

Box 3. Tips for conducting a semi-structured interview

- Before the interview note the critical questions that you need to ask to gather all the information you require. It is possible that all the questions are critical.
- Set a welcoming tone so that the interviewee feels comfortable.
- Ask the questions in the order in which they appear in the protocol, as appropriate.
- Try to keep the interview conversational, as a semi-structured interview is meant to resemble a conversation.
- Ask questions from the protocol and probe, or ask additional questions that seem appropriate based on the interviewee's responses.
- Allow the interviewee to offer information beyond what you asked in a particular question, if the interviewee prefers.
- Make notes of when the interviewee addresses a topic you have not yet asked about. Taking notes shows the interviewees that you are listening and that the interview has a flexible structure. The [Interview checklist](#) (see box 2) includes some tips on taking notes.
- Consider skipping questions that the interviewee has already answered, or paraphrase what you heard to confirm that you gathered information accurately.
- Ask interviewees to verify information that you have already collected (which you might have entered in the Cost-Feasibility Analysis Estimator).
- Describe the information/data that you have already collected, and ask the interviewee for input, if appropriate. You can share the data with the interviewee in advance to review and provide feedback, if that seems appropriate.
- Keep track of the time throughout the interview so that you can cover all the questions and topics that you need to cover. Because a semi-structured interview is conversational, interviewees might provide longer responses, and thus probes might require additional time.
- While still maintaining a conversational tone, remind the interviewee that you want to allow time to cover all the topics. You can use phrases such as "I don't mean to cut you off, but I want to make sure we're able to talk about a few other elements of the program."

Stage 3. Estimating cost

During the Estimating cost stage your goal is to complete the list of resources in the CFA Estimator (step 1) and make any other updates needed after you complete the data collection in [stage 2](#). You will also finalize all data, including the quantities, time, and price for the initial year (step 2), followed by entering the estimates for Year 2 and, if planned, Year 3 (step 3). Finally, you will estimate the program costs, which will likely be the total costs. You can disaggregate costs by resource category, by the party responsible for paying, by year, or by another relevant dimension (step 4), which will help you understand the costs of the overall program and the costs of the individual dimensions that you select for disaggregation. Investing in accurately capturing these costs will help ensure that you can produce the best estimates of the actual costs your school or district will incur.



Cost-feasibility analysis tool for cost estimation

The Cost-Feasibility Analysis (CFA) Estimator is the primary tool for the cost estimation stage. It facilitates data entry and automates the analysis. After you input data on the quantity, time, and value of resources, the CFA Estimator uses embedded formulas to calculate the costs of initiating and maintaining a supplemental online program.

The CFA Estimator includes:

- The same five main categories of potential resources featured in the [Implementation resource list](#) and [Interview protocols](#): personnel, facilities, materials and equipment, required student or family inputs, and other program inputs.
- The ability to estimate initial costs (Year 1).
- The ability to estimate ongoing costs for another year (Year 2) or two (Year 3).
- The [Technical tips](#) section in appendix C provides guidance on customizing the CFA Estimator.

Step 1. Update the list of resources in the Cost-Feasibility Analysis Estimator

The list of resources in the CFA Estimator is critical for accurate estimates, so you should update it and confirm that you are accounting for all the resources required to support the supplemental online program, even for resources that do not constitute a new expenditure, such as for a current teacher or an existing computer lab. During stages 1 and 2 you began revising the [Implementation resource list](#) based on the data collected and the needs of your supplemental online program. Stage 3 is the time to make certain that you included all those revisions in the CFA Estimator. The [Technical tips](#) section in appendix C provides guidance on how to customize the CFA Estimator and enter new resources.

Be as specific as possible when listing subcategories and subitems to ensure that you capture the aspect of the resource associated with the larger category. For example, the Implementation resource list includes a subcategory for other costs associated with the supplemental online program, which includes subitems such as a “license cost,” “annual registration fee/rate,” “annual student tuition,” and “any additional online program fees.” This level of detail is important across the subcategories because it can help you see where you have adequate resources for implementation and where you need to adjust to achieve implementation fidelity in your school or district. You will revise the list of resources for the initial year in the Year 1 tab and for any ongoing years in the Year 2 and Year 3 tabs.

Step 2. Enter the initial-year quantities, time, and price of each resource into the Cost-Feasibility Analysis Estimator

Use the CFA Estimator to enter estimates for the quantity, price/value, and time of each resource for the initial year based on the data you gathered from existing data sources and

the interview participants. The [Technical tips](#) section in appendix C provides guidance on how to enter these values.

Start with the initial year to identify any costs that can be spread across the subsequent years of implementation as part of the [annualizing](#) process (see box 4). For example, if you purchase a computer in Year 1 to support the supplemental online program but also plan to use it in Year 2, you can spread—or annualize—the cost over the two years. The CFA Estimator includes an [Annualization of resources](#) feature that can calculate the annualized costs (see appendix C) after you enter the data in Year 1. Starting with the initial costs also helps you think about what new resources you might need to include in the ongoing implementation estimates for Year 2. Note that personnel salaries and benefits are not annualized. The CFA Estimator grays out this section as a reminder.

Reminder: Use public data sources for costs, if needed

To maximize local relevance, use local and program-specific costs when available. If you are not able to identify a source that provides local costs, you can use publicly available data sources such as [CostOut](#), which provides national costs for resources and allows you to adjust to local costs using geographic indices.

The interviewees might specify a range in the resource quantities or time required, depending on their approach to implementation. The same could be true for the existing data that you gathered. There are a few ways to account for this range:

- If the most common answer or data point seems to be typical for implementation based on the information gathered in the interviews and from existing sources, you could enter that answer or data point. Interviewing staff and identifying existing data from a representative sample of schools or districts from the population of interest will be important for this option.

Box 4. Annualizing and the Cost-Feasibility Analysis Estimator feature

Annualizing is the process of dividing a cost across the time period that a resource, such as a computer or a building, can be used and discounting the value of the resource in subsequent years. This spreads out the costs of these resources, accounts for [depreciation](#) over time, and demonstrates the opportunity cost associated with using resources for the program as opposed to using them for an alternative purpose.

The Cost-Feasibility Analysis (CFA) Estimator includes an option in the year 1 tab to account for annualized resources. The CFA Estimator allows users to choose between automatically annualizing the cost in Year 2, Year 3, or both. The CFA Estimator has a built-in depreciation rate of 5 percent, a commonly accepted rate within the recommended range of 3–7 percent. Cost will be higher with annualized estimation, which accounts for inflation and depreciation, than if you account only for the number of years the resource is used. The CFA Estimator assumes that it will cost more to replace an item in the future because the value of a dollar is expected to decline (due to inflation) and because an item's value often depreciates the spending power of current dollars.

Source: Levin et al., 2017.

Cost-feasibility analysis stages

- If the range of numbers is relatively small, you could enter the average.
- If there appear to be clear differences in the estimates for certain categories, you could create multiple scenarios based on the varying estimates to get an array of costs for a range of approaches to implementation. This method can be helpful when assessing the feasibility of the supplemental online program since it creates multiple options to consider.

Below you will find additional tips to consider as you enter data for the personnel, facilities, and materials and equipment categories.

Personnel

- Include detailed subcategories identifying the roles and responsibilities of each staff member. Noting the time estimate for each role is especially important because it can help determine whether you need more than one staff person for certain activities.
 - For example, you might have one full-time employee dedicated to the supplemental online program. Family outreach might require 30 percent of the person's time (entered as 0.3) but, when you consider the other roles and responsibilities that you have listed for the dedicated staff member, you realize that 30 percent of staff member's time cannot be dedicated to outreach if the person is to fulfill other program roles and responsibilities; an additional part-time employee to support family outreach will be needed.
- Include the monetary value of any volunteer's time. You can use a comparable staff member's salary for this estimate. This provides an idea of the compensation that would be required in case your school or district must use a staff member for this role because a volunteer is not available.

Facilities

- Include structures such as buildings, classrooms, labs, offices, and libraries needed to enable program activities to take place and their estimated value.
- If the supplemental online program would require building a new structure (for example, a computer lab), add this space and its costs to the facilities category (and include the facility's expected lifespan to annualize the costs).
- Enter any new Internet-related resources such as providing students with Internet access at home. The CFA Estimator assumes that Internet connections are required and are already installed to accommodate delivery of the supplemental online program.

Materials and equipment

- Include costs of computers; additional software (if needed beyond the supplemental online program); printers; and large volumes of copies or office supplies, such as pens and paper, needed for the full school year.
- Do not include negligible costs of items such as a few photocopies or a small quantity of office supplies such as a single box of paper clips.

Step 3. Enter resources used in subsequent years of program implementation into the Cost-Feasibility Analysis Estimator

Many supplemental online programs are expected to operate for more than one year. Much as you did in step 2, you will enter and update estimates for the quantities, time, and costs of resources for subsequent years (see [Technical tips](#) in appendix C). The CFA Estimator includes Year 2 and Year 3 tabs for estimating the ongoing costs of implementing the program in a second or third year. The list of resources could be longer in Year 2 than in Year 1 because Year 2 costs account for the costs of initial resources shared across the years as well as for resources that are one-time costs incurred in Year 2 of implementation, such as refresher training for personnel. As you enter the estimates of resources and costs for Year 2, account for things such as repairs and replacements. As you did in step 2, account in detail for each item to inform your overall estimates and eventual determination about feasibility.

Step 4. Determine the estimated program costs, including subtotals

When you finish entering all the information across the year or years of the program's expected operation, the CFA Estimator will display total cost estimates by year and per student, as well as subtotals within each year, by category. Accounting for the total cost of implementing the supplemental online program gives you a more comprehensive understanding of the resources required and of how you might need to reallocate existing resources to support implementation.

Depending on what costs you need to consider, you can also begin to review subtotals for categories, subcategories, or other groupings of resources. For example, you might want to consider the costs within the personnel category or even within subitems such as "initial recruitment and training/onboardings." Reviewing subtotals can enable you to better understand the proportion of the total cost accounted for by different types of resources.

The "Customized calculations" feature in the CFA Estimator helps you calculate a subtotal for any combination of subitems. This feature is useful for estimating costs that are added to existing expenditures and costs to individual stakeholders, such as specific costs for the district or for the school. Calculating the added costs separately from the total cost can help you identify existing costs and the additional costs that the supplemental online program implementation requires. For example, you can exclude the salary costs of an existing employee whose time will be reallocated to implement the supplemental online program

because the cost of this employee is not a new expenditure, but you should include a new employee hired to implement the supplemental online program.

Using the “Customized calculations” feature for calculating costs for specific entities (such as the school, district, or state) can be helpful when considering funding sources. For example, you might want to see the costs a school would incur separately from the costs the district or other funding entity would incur. To obtain the subtotal cost for the school, you would select only the subitems supported by the school. The “Customized calculations” feature can be used to estimate the subtotals that are important for your school or district. The [Technical tips](#) section in appendix C provides additional guidance on this feature, along with an example.

Stage 4. Determining feasibility

The final stage 4 of the cost-feasibility analysis involves determining whether the resources you have or can access are adequate to implement the supplemental online program based on your estimates. This process is likely to be familiar to you and other education leaders who often gather data and make financial decisions. This stage might require revisiting [stage 3](#) to review the collected data on implementation to adjust your cost estimates or even [stage 2](#) to collect more data.

You might find that your initial cost estimate is really an estimate of the most ideal or comprehensive way to approach implementation. It might be possible to implement the supplemental online program with fidelity using different, less costly resources, such as alternative

Box 5. Cost-feasibility questions to consider

Below are questions to consider as you review the collected data and think about your school or district context. Steps 1 and 2 of determining feasibility provide details on how you can explore these questions.

- What resources are or will be available to support the supplemental online program?
- Which resource categories require the most funding? Can you revise any of the estimates in light of your district’s or school’s context and still implement the supplemental online program as intended?
- Should you consider an alternate way of implementing this supplemental online program, such as a pilot? If so, do per student estimates change at all?
- Should your school or district consider the cost-feasibility of a different supplemental online program?
- How do funding sources such as state or federal funding affect your decisions? Are there other funding sources such as grants from foundations that you need to consider as available resources?
- What need will implementing this supplemental online program fill? Are there other programs or uses for these resources that would better serve your school or district?

materials or staff in alternative roles. You can consider the nuances that you learned from the interviews about day-to-day implementation in addition to the data that you analyzed using the CFA Estimator to determine whether the supplemental online program is truly unaffordable or whether it is reasonable to consider alternative, less costly implementation scenarios. Step 2 provides some examples of these adjustments and considerations.

To make the feasibility determination, you will begin by collecting information on available resources that could support the supplemental online program and comparing them with the cost estimates (step 1). Based on the comparison analysis, you will decide whether you need to modify any estimates (step 2). These steps will support you in determining how to proceed. Refer to box 5 for a summary of the important questions to consider during this stage.

Step 1. Identify available resources and compare them with your cost estimates

In this step you will identify the monetary and nonmonetary resources that your school or district could allocate to implement the supplemental online program and compare them with the resource estimates in the CFA Estimator. The updated CFA Estimator ([stage 3](#)) will be critical in this step because it identifies the required resources and associated costs. It provides the total program cost; the subtotals for each resource category, such as personnel and per student costs; and subtotals that you create with the “Customized calculations” feature. Review the subtotals and various cost breakdowns and compare them with your school or district’s available resources. The information you learn from these comparisons will inform your decisions and help you determine whether to make any modifications.

Step 2. Modify estimates to explore potential implementation approaches

Next, you can modify your estimates by considering alternative implementation approaches that either reduce costs or reallocate resources, depending on the needs of your school or district. In thinking about how to adjust and examine costs, you might start by reexamining the subcategories or subitems that require the most funding. For example:

- **Personnel.** Ensure that the identified staff are required to implement the program with fidelity. An example of potential alternative implementation approach would be to use staff with different roles than the staff in the implementation model you explored. Could staff other than teachers support the supplemental online program? If so, you would modify the CFA Estimator to reduce some of the required teacher time and add the costs associated with the other staff members, such as paraprofessionals.
- **Materials.** You might be able to reduce costs by choosing a different vendor or renegotiating prices with existing vendors, if possible.

Use insights from your interviews and your understanding of your district’s needs to inform potential implementation approaches, especially as you consider revising the quantities or

amount of time for required supplemental online program resources. For example, if you know that your district has fewer students for whom English is a second language than the implementing district where you conducted interviews, you might not need as many staff members to support participating students.

You can include any adjustments to your estimates in the CFA Estimator and save multiple versions of the estimates, one for each approach. These modifications are critical to capture estimates that are close to the actual costs your school or district would incur, which will inform your decision.

Conclusion

Now that you understand whether implementing the supplemental online program is feasible given the available resource constraints and your school's or district's context, you can make an informed decision about how to proceed. As with any cost analysis, always consider the opportunity costs: remember that the resources you decide to invest in a supplemental online program could be invested in other programs or initiatives. If adequate resources are available, you might decide to implement the supplemental online program. Or you might determine that further exploration is warranted, such as considering a different supplemental online program and conducting an additional cost-feasibility analysis. Whatever you decide, you will have the data needed to revisit the costs associated with implementing this supplemental online program and an understanding of how to carry out the stages and steps of a cost-feasibility analysis.

GLOSSARY

Annualizing cost. Dividing the cost of a resource across the time period that the resource can be used.

Convenience sampling. A form of sampling that selects members into a sample because they are easily accessible.

Cost analysis. An economic evaluation of resources (Hollands & Levin, 2017).

Cost-benefit analysis. A type of cost analysis that determines whether the economic benefits of a program exceed the costs.

Cost-effectiveness analysis. A type of cost analysis that assesses which of several programs produces the desired outcomes for the lowest cost or maximizes outcomes for a given amount of investment.

Cost-feasibility analysis. A type of cost analysis that assesses whether adequate resources are available to implement a new program as intended or to scale up an existing one.

Cost-utility analysis. A type of cost analysis that compares the costs of a program with its perceived usefulness to the program stakeholders.

Depreciation. The reduction in value of a resource over time, typically due to wear and tear.

Implementation fidelity. The degree to which a program is implemented as intended.

Ingredients method. A detailed process of identifying, valuing and pricing, and calculating the total cost of all the resources needed to initiate and carry out a program or intervention.

Initial cost. Costs associated with program start-up or costs of resources in the first year of implementation.

Ongoing cost. Costs of resources needed beyond the first year of implementation; costs associated with maintaining the program (for example, repair and replacement costs).

Online course. Any course offered over the Internet.

Online learning program. An organized offering of courses delivered primarily over the Internet.

Opportunity cost. The loss of potential gain from alternative programs associated with choosing one option over its alternatives.

Glossary

Population of interest. The group of entities or people to whom the findings of the analysis can be generalized.

Purposive sampling. A form of sampling in which personal judgment and particular characteristics determine which members are selected.

Sample. A subset of the population of interest (Pazzaglia et al., 2016).

Semi-structured interview. An interview format that does not strictly follow a formalized protocol but allows the interviewer to skip or add questions according to interviewee answers to other questions.

Supplemental online program. An online program that allows students to enroll in online courses in addition to the traditional face-to-face courses offered at their school.

SUPPORTING MATERIALS

This section describes materials that provide supplemental information about the importance of cost analysis in education decisionmaking and the resources that support cost analysis.

Cost materials

- [The Critical Importance of Costs for Education](#) is a good resource for learning more about cost analyses and their importance in education decisions (Hollands & Levin, 2017). With support from the Regional Educational Laboratory program, Hollands and Levin provide a succinct but detailed overview of cost analyses.
- [Using Cost Analysis To Guide Resource Decisions](#) is a Regional Educational Laboratory Appalachia blog that provides an overview of cost analyses and their use in education decisionmaking.
- [CostOut](#) is a free tool from the Center for Benefit-Cost Studies of Education, which can facilitate the collection of cost data and the execution of cost and cost-effectiveness analyses. It was developed under a grant from the U.S. Department of Education, Institute of Education Sciences (Award #R305U130001), to help education practitioners, researchers, and policymakers conduct cost analyses and cost-effectiveness analyses of education interventions to facilitate resource allocation decisions.
- [Center for Benefit-Cost Studies of Education](#) is a research center based at the University of Pennsylvania that conducts research on the productivity of education programs. It conducts cost analyses and provides many resources for education practitioners, researchers, and policymakers interested in conducting their own analyses.
- [Cost Analysis: A Starter Kit](#) from the U.S. Department of Education’s Institute of Education Sciences (2020) provides a three-phase approach to the basics of cost analysis. Its goal is to present information that is accessible and user-friendly for those who are new to the topic, are less experienced with it, or simply want a refresher.

Additional reading

- [Conducting semi-structured interviews](#). This chapter in *Handbook of Practical Program Evaluation* focuses on semi-structured interviews and how they combine closed- and open-ended questions that may be followed by “why” or “how” questions (Adams, 2015). It also offers recommendations for conducting semi-structured interviews.
- [Survey Methods for Educators: Selecting Samples and Administering Surveys](#) provides guidance on sampling approaches and broader guidance on administering surveys (Pazaglia et al., 2016).

APPENDIX A. IMPLEMENTATION RESOURCE LIST

The Cost-Feasibility Analysis (CFA) Toolkit Implementation resource list is the primary tool you will use in the planning stage ([stage 1](#)). It includes personnel, facilities, materials and equipment, required student or family inputs, and other resources necessary for program implementation. The list is prepopulated with resources that are commonly used in the implementation of supplemental online programs, but it is not exhaustive or applicable to every program. You might need to revise the list to fit the program of interest.

The Implementation resource list contains two sections, one for initial costs or resources and the other for ongoing costs or resources. The initial cost list includes the resources commonly needed to initiate implementation of the supplemental online program. The ongoing cost list includes resources commonly needed in the years after initial implementation to sustain the supplemental online program. Details on how to use the Implementation resource list can be found in the discussion of [stage 1 step 2](#).

Initial costs or resources

Any cost or resource that a school or school district would need to begin implementation and use of the supplemental online program.

1. Personnel

- 1.1. Program specific staff
 - 1.1.1. Initial recruitment and training/onboarding
 - 1.1.2. Program responsibilities
 - 1.1.3. Outreach/communication
- 1.2. School counselors
 - 1.2.1. Initial recruitment and training/onboarding
 - 1.2.2. Program responsibilities
 - 1.2.3. Outreach/communication
- 1.3. Information technology staff
 - 1.3.1. Initial recruitment, onboarding, and training
 - 1.3.2. Program responsibilities
 - 1.3.3. Outreach/communication
- 1.4. Other staff (e.g., district administrators, school administrators, school staff)
 - 1.4.1. Initial recruitment and training/onboarding
 - 1.4.2. Program responsibilities
 - 1.4.3. Outreach/communication

2. Facilities

- 2.1. Classroom/computer lab
 - 2.1.1. Initial setup
 - 2.1.2. Maintenance

3. Equipment, technology, and materials

- 3.1. Internet (with adequate bandwidth)
 - 3.1.1. Internet access
- 3.2. Computers (or other compatible devices)
 - 3.2.1. Staff laptop *[insert brand and model]*
 - 3.2.2. Student laptop *[insert brand and model]*
 - 3.2.3. Desktop computer *[insert brand and model]*

- 3.3. Hardware (e.g., keyboards, cameras, tablets, scanners, etc.)
 - 3.3.1. Headphones/headsets
- 3.4. Software (e.g., Zoom)
 - 3.4.1. *[insert software name]*
- 3.5. Textbooks and other course materials (e.g., science experiment/lab kits)
 - 3.5.1. *[Insert name]*
- 3.6. Network infrastructure resources (e.g., servers)
 - 3.6.1. Network initial install
- 3.7. Assessments
 - 3.7.1. Standardized test materials
 - 3.7.2. Other test materials (e.g., Advanced Placement exam materials)
- 3.8. Other materials
 - 3.8.1. Miscellaneous start-up materials
 - 3.8.2. Training materials

4. Required student and family inputs

- 4.1. Computer/devices
 - 4.1.1. *[Insert brand and model]*
 - 4.1.2. *[Insert brand and model]* replacement/repairs/new
- 4.2. Internet
 - 4.2.1. Internet install
 - 4.2.2. Internet maintenance/repairs
- 4.3. Summer course fees

5. Other

- 5.1. Additional fees
 - 5.1.1. Enrollment fee
- 5.2. Supplemental online program
 - 5.2.1. License cost
 - 5.2.2. Annual registration fee/rate
 - 5.2.3. Annual student tuition
 - 5.2.4. Any additional program fees

Ongoing costs or resources

Any ongoing costs or resources that a school or school district would need in order to continue implementation and use of the supplemental online program each year.

1. Personnel

- 1.1. Program-specific staff
 - 1.1.1. Annual or refresher training
 - 1.1.2. Program responsibilities
 - 1.1.3. Outreach/communication
- 1.2. School counselors
 - 1.2.1. Annual or refresher training
 - 1.2.2. Program responsibilities
 - 1.2.3. Outreach/communication
- 1.3. Information technology staff
 - 1.3.1. Annual or refresher training
 - 1.3.2. Program responsibilities
 - 1.3.3. Outreach/communication
- 1.4. Other staff (e.g., district administrators, school administrators, school staff)
 - 1.4.1. Annual or refresher training
 - 1.4.2. Program responsibilities
 - 1.4.3. Outreach/communication

2. Facilities

- 2.1. Classroom/computer lab
 - 2.1.1. Initial setup
 - 2.1.2. Maintenance

3. Equipment, technology, and materials

- 3.1. Internet (with adequate bandwidth)
 - 3.1.1. Internet access
 - 3.1.2. Upgrades/repairs
- 3.2. Computers (or other compatible devices)
 - 3.2.1. Staff laptop *[Insert brand and model]*
 - 3.2.2. Student laptop *[Insert brand and model]*
 - 3.2.3. Desktop computer *[Insert brand and model]*
 - 3.2.4. Staff laptop *[Insert brand and model]* replacement/repairs/new
 - 3.2.5. Student laptop *[Insert brand and model]* replacement/repairs/new
 - 3.2.6. Desktop computer *[Insert brand and model]* replacement/repairs/new
- 3.3. Hardware (e.g., keyboards, cameras, tablets, scanners)
 - 3.3.1. Headphones/headsets
 - 3.3.2. Headphones/headsets replacement/repairs

3.4. Software (e.g., Zoom)

- 3.4.1. *[Insert software name]*
- 3.4.2. *[Insert software name]* upgrades/repairs

3.5. Textbooks and other course materials (e.g., science experiment/lab kits)

- 3.5.1. *[Insert name]*
- 3.5.2. *[Insert name]* replacement/new

3.6. Network infrastructure resources (e.g., servers)

- 3.6.1. Network initial install
- 3.6.2. Network upgrades/repairs

3.7. Assessments

- 3.7.1. Standardized test materials
- 3.7.2. Other test materials (e.g., Advanced Placement exam materials)
- 3.7.3. Standardized test materials replacement/new
- 3.7.4. Other test materials (e.g., Advanced Placement exam materials) replacement/new

3.8. Other materials

- 3.8.1. Miscellaneous start-up materials
- 3.8.2. Training materials
- 3.8.3. Miscellaneous maintenance materials

4. Required student and family inputs

- 4.1. Computer/devices
 - 4.1.1. *[Inset brand and model]*
 - 4.1.2. *[insert brand and model]* replacement/repairs/new
- 4.2. Internet
 - 4.2.1. Internet install
 - 4.2.2. Internet maintenance/repairs
- 4.3. Summer course fees

5. Other

- 5.1. Additional fees
 - 5.1.1. Enrollment fees
- 5.2. Supplemental online program
 - 5.2.1. License cost
 - 5.2.2. Annual registration fee/rate
 - 5.2.3. Annual student tuition
 - 5.2.4. Any additional program fees

APPENDIX B. INTERVIEW PROTOCOLS

The Interview protocols are a guide for conversations with school and district staff who are already implementing the supplemental online program of interest. These staff could be a part of your school district—for example, if you want to determine whether to expand the use of the supplemental online program beyond your school—or staff from another district that uses the program of interest. You can use the protocols to collect information about resources and costs associated with the interviewee’s implementation of the supplemental online program.

There are four Interview protocols, each tailored for specific roles that each supplemental online program implementer might have:

1. [School counselor or school supplemental online program lead.](#)
2. [District supplemental online program administrator.](#)
3. [Superintendent or other district administrator.](#)
4. [Other staff](#) (any staff member whose role is not one of the other three, such as a technology staff member).

The wording of the questions in each protocol varies according to the interviewee’s role and the information the interviewee might be able to provide. However, the overall themes of the questions are the same so the questions are numbered the same across the four protocols. Depending on the design of the supplemental online program and the data you want to collect, you might not need all four versions of the protocol, or you might need to add staff roles and associated questions. The interviews will provide nuanced information about the interviewees’ practical experiences implementing the program, which will in turn inform data entered into the Cost-Feasibility Analysis Estimator. For more about how to use the protocols to conduct interviews, see [stage 2 step 2](#).

Interview Protocol 1—School counselor or school supplemental online program lead

Thank you for making time to speak with me. Before we start, I would like to tell you a bit more about the purpose of our conversation.

Today, I'm hoping to learn more about how you use [SUPPLEMENTAL ONLINE PROGRAM] in your school. Your participation is strictly voluntary. I will be asking you about the resources (mostly time and funds) needed to use [SUPPLEMENTAL ONLINE PROGRAM]. I am looking for your best estimate and understand that you might not be able to answer all of the questions. If I ask a question that does not fit with what you see in your day-to-day implementation, please let me know and feel free to share what would be more realistic or appropriate. If you think someone else is better able to share information about a question that I ask, please let me know.

The conversation should take about 45 minutes. Do you have any questions for me before we start?

FOR THE INTERVIEWER: All notes are in *italics*. Notes that are underlined are tips for the interviewer only. Notes without the underline can be read to the participant.

Background

1. Can you describe your role in supporting the use of [SUPPLEMENTAL ONLINE PROGRAM] in your school and district?
2. How many years has your school been implementing [SUPPLEMENTAL ONLINE PROGRAM]?
 - a. On average, about how many students participate in [SUPPLEMENTAL ONLINE PROGRAM]?
3. In what types of courses do students typically enroll? *(For example, Advanced Placement, electives, core courses.)*

Personnel

4. How much time, on average, would you estimate that you allocate to supporting and implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(You can tell me in hours per day, per week, or per month. Include any management or oversight for [SUPPLEMENTAL ONLINE PROGRAM] at your school/district. This may include time for supporting staff, students, and families, as well as other time.)*
 - a. *(This question is most appropriate for schools that are in their first few years of implementing [SUPPLEMENTAL ONLINE PROGRAM].)* Compared with how you allocated your time before using [SUPPLEMENTAL ONLINE PROGRAM], on average, how much additional time are you spending implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(Please estimate the average number of additional hours in a typical day, week, or month.)*

5. Which staff members at your school support or have a role with [SUPPLEMENTAL ONLINE PROGRAM]?
 - a. How much time does each person allocate to use and support [SUPPLEMENTAL ONLINE PROGRAM]? (*Remind participant that an estimate/best guess is fine. Probe about the time and roles of specific team members if the participant indicates they allocate a noteworthy number of hours to the program.*)
 - b. What are their activities and responsibilities related to [SUPPLEMENTAL ONLINE PROGRAM]? Do they have other roles or responsibilities at the school?
6. How much time is typically required of teachers or paraprofessionals to implement any aspect of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
7. How much time is typically required of IT or technology staff for the day-to-day aspects of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
 - a. How much time was required of IT staff to set up [SUPPLEMENTAL ONLINE PROGRAM]?
8. Does your school need to set aside time for any training or preparation specific to implementing [SUPPLEMENTAL ONLINE PROGRAM] for you or your team? If so, how much time do you estimate the training/preparation takes? (*This training or preparation could be initiated at the school or district level because it might not be required by [SUPPLEMENTAL ONLINE PROGRAM].*)
9. Does your school use contractors or volunteers to help implement [SUPPLEMENTAL ONLINE PROGRAM]? If so, about how many, and what are their roles? For approximately how many hours are they used?

Facilities

10. What spaces in the school are provided for students to use [SUPPLEMENTAL ONLINE PROGRAM], including learning spaces?
 - a. What would be your best estimate of how much space is used? (*For example, how many square feet, or how many average-sized classrooms, computer labs, or office spaces?*)
 - b. How many hours per day/week or what percentage of the time are these spaces used for [SUPPLEMENTAL ONLINE PROGRAM]?
11. What spaces and facilities do you use to support [SUPPLEMENTAL ONLINE PROGRAM]? (*It can be any space including offices, shared instructional space, planning and preparation spaces, resource rooms, etc.*)
 - a. Are there any other designated spaces for staff who support [SUPPLEMENTAL ONLINE PROGRAM]? If so, what kind?

Materials/equipment

12. Does the school or school district provide any materials or equipment—for example, computers, software, printers, phones, books, office/school supplies—to implement [SUPPLEMENTAL ONLINE PROGRAM]? If so,
 - a. What kind of materials or equipment?
 - b. Can you provide an estimate of the quantities involved?
 - c. Who uses these materials?

Appendix B. Interview protocols

Required student or family inputs

13. How much time would you estimate families spend supporting students who participate in [SUPPLEMENTAL ONLINE PROGRAM]? (*Types of support may include guidance with content, technology support, general guidance, providing materials, and so on.*)
14. Is there any technology that students and families need to provide in order to use [SUPPLEMENTAL ONLINE PROGRAM], such as a personal computer, software, or the Internet?

Other resources

15. Are there any fees associated with implementing [SUPPLEMENTAL ONLINE PROGRAM] that the school or district pays? If so, how much are the fees, and what are they for?
 - a. Are there enrollment fees?
16. Are there any fees that families/students pay?

Closing questions

17. Is there anything else about implementing [SUPPLEMENTAL ONLINE PROGRAM] or its costs that you think we should consider?

Interview Protocol 2—District supplemental online program administrator

Thank you for making time to speak with me. Before we start, I would like to tell you a bit more about the purpose of our conversation.

Today, I'm hoping to learn more about how you use [SUPPLEMENTAL ONLINE PROGRAM] in your district. Your participation is strictly voluntary. I will be asking you about the resources (mostly time and funds) needed to use [SUPPLEMENTAL ONLINE PROGRAM]. I am looking for your best estimate and understand that you might not be able to answer all of the questions. If I ask a question that does not fit with what you see in your day-to-day implementation, please let me know and feel free to share what would be more realistic or appropriate. If you think someone else is better able to share information about a question that I ask, please let me know.

The conversation should take about 45 minutes. Do you have any questions for me before we start?

FOR THE INTERVIEWER: All notes are in *italics*. Notes that are underlined are tips for the interviewer only. Notes without the underline can be read to the participant.

Background

1. Can you describe your role in supporting the use of [SUPPLEMENTAL ONLINE PROGRAM] in the schools and district?
2. How many years has your school district been implementing [SUPPLEMENTAL ONLINE PROGRAM]?
 - a. On average, about how many students participate in [SUPPLEMENTAL ONLINE PROGRAM]?
3. In what types of courses do students typically enroll? *(For example, Advanced Placement, electives, core courses.)*

Personnel

4. How much time, on average, would you estimate that you allocate to supporting and implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(You can tell me in hours per day, per week, or per month. Include any management or oversight for [SUPPLEMENTAL ONLINE PROGRAM] in your district. This may include time for supporting staff, students, and families, as well as other time.)*
 - a. *(This question is most appropriate for districts that are in their first few years of implementing [SUPPLEMENTAL ONLINE PROGRAM].)* Compared with how you allocated your time before using [SUPPLEMENTAL ONLINE PROGRAM], on average, how much additional time are you spending implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(Please estimate the average number of additional hours in a typical day, week, or month.)*
5. Which staff members in your district support or have a role with [SUPPLEMENTAL ONLINE PROGRAM]?

Appendix B. Interview protocols

- a. How much time does each person allocate to use and support [SUPPLEMENTAL ONLINE PROGRAM]? (*Remind participant that an estimate/best guess is fine. Probe about the time and roles of specific team members if the participant indicates they allocate a noteworthy number of hours to the program.*)
- b. What are their activities and responsibilities related to [SUPPLEMENTAL ONLINE PROGRAM]? Do they have other roles or responsibilities in the district?
6. How much time is typically required of teachers or paraprofessionals to implement aspects of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
7. How much time is typically required of IT or technology staff for the day-to-day aspects of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
 - a. How much time was required of IT staff to set up [SUPPLEMENTAL ONLINE PROGRAM]?
8. Do you need to set aside time for any training or preparation specific to implementing [SUPPLEMENTAL ONLINE PROGRAM] for you or your team? If so, how much time do you estimate the training/preparation takes? (*This training or preparation could be initiated at district level because it might not be required by [SUPPLEMENTAL ONLINE PROGRAM].*)
9. Does your district use contractors or volunteers at the school(s) to help implement [SUPPLEMENTAL ONLINE PROGRAM]? If so, about how many, and what are their roles? For approximately how many hours are they used?

Facilities

10. What spaces in the school(s) are provided for students to use [SUPPLEMENTAL ONLINE PROGRAM], including learning spaces?
 - a. What would be your best estimate of how much space is used? (*For example, how many square feet, or how many average-sized classrooms, computer labs, or office spaces?*)
 - b. How many hours per day/week or what percentage of the time are these spaces used for-[SUPPLEMENTAL ONLINE PROGRAM]?
11. What spaces and facilities do you and district staff use to support [SUPPLEMENTAL ONLINE PROGRAM]? (*It can be any space including offices, shared instructional space, planning and preparation spaces, resource rooms, etc.*)
 - a. Are there any other designated spaces for staff who support [SUPPLEMENTAL ONLINE PROGRAM]? If so, what kind?

Materials/equipment

12. Does the district provide any materials or equipment—for example, computers, software, printers, phones, books, office/school supplies—to implement [SUPPLEMENTAL ONLINE PROGRAM]? If so,
 - a. What kind of materials or equipment?
 - b. Can you provide an estimate of the quantities involved?
 - c. Who uses these materials?

Appendix B. Interview protocols

Required student or family inputs

13. How much time would you estimate families spend supporting students who participate in [SUPPLEMENTAL ONLINE PROGRAM]? (*Types of support may include guidance with content, technology support, general guidance, providing materials, and so on.*)
14. Is there any technology that students and families need to provide in order to use [SUPPLEMENTAL ONLINE PROGRAM], such as a personal computer, software, or the Internet?

Other resources

15. Are there any fees associated with implementing [SUPPLEMENTAL ONLINE PROGRAM] that the school or district pays? If so, how much are the fees and what are they for?
 - a. Are there enrollment fees?
16. Are there any fees that families/students pay?

Closing questions

17. Is there anything else about implementing [SUPPLEMENTAL ONLINE PROGRAM] or its costs that you think we should consider?

Interview Protocol 3—Superintendent or other district administrator

Thank you for making time to speak with me. Before we start, I would like to tell you a bit more about the purpose of our conversation.

Today, I'm hoping to learn more about how you use [SUPPLEMENTAL ONLINE PROGRAM] in your [school or district]. Your participation is strictly voluntary. I will be asking you about the resources (mostly time and funds) needed to use [SUPPLEMENTAL ONLINE PROGRAM]. I am looking for your best estimate and understand that you might not be able to answer all of the questions. If I ask a question that does not fit with what you see in your day-to-day implementation, please let me know and feel free to share what would be more realistic or appropriate. If you think someone else is better able to share information about a question that I ask, please let me know.

The conversation should take about 45 minutes. Do you have any questions for me before we start?

FOR THE INTERVIEWER: All notes are in *italics*. Notes that are underlined are tips for the interviewer only. Notes without the underline can be read to the participant.

Background

1. Can you describe your role in supporting the use of [SUPPLEMENTAL ONLINE PROGRAM] in schools and the district?
2. How many years has your district been implementing [SUPPLEMENTAL ONLINE PROGRAM]?
 - a. On average, about how many students participate in [SUPPLEMENTAL ONLINE PROGRAM]?
3. In what types of courses do students typically enroll? *(For example, Advanced Placement, electives, core courses.)*

Personnel

4. How much time, on average, would you estimate that you allocate to supporting and implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(You can tell me in hours per day, per week, or per month. Include any management or oversight for [SUPPLEMENTAL ONLINE PROGRAM] at your school/district. May include time for supporting staff, students, and families, as well as other time.)*
 - a. *(This question is most appropriate for districts that are in their first few years of implementing [SUPPLEMENTAL ONLINE PROGRAM].)* Compared with how you allocated time before using [SUPPLEMENTAL ONLINE PROGRAM], on average, how much additional time are you spending implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(Please estimate the average number of additional hours dedicated to [SUPPLEMENTAL ONLINE PROGRAM] in a typical day, week, or month.)*

Appendix B. Interview protocols

5. Which staff members in your district support or have a role with [SUPPLEMENTAL ONLINE PROGRAM]?
 - a. How much time does each person allocate to use and support [SUPPLEMENTAL ONLINE PROGRAM]? (*Remind participant that an estimate/best guess is fine. Probe about the time and roles of specific team members if the participant indicates they allocate a noteworthy number of hours to the program.*)
 - b. What are their activities and responsibilities related to [SUPPLEMENTAL ONLINE PROGRAM]? Do they have other roles or responsibilities in the district?
6. How much time is typically required of teachers or paraprofessionals to implement aspects of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
7. How much time is typically required of IT or technology staff for the day-to-day aspects of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
 - a. How much time was required of IT staff to set up [SUPPLEMENTAL ONLINE PROGRAM]?
8. Do you need to set aside time for any training or preparation specific to implementing [SUPPLEMENTAL ONLINE PROGRAM] for you or your team? If so, how much time do you estimate the training/preparation takes? (*This training or preparation could be initiated at district level because it might not be required by [SUPPLEMENTAL ONLINE PROGRAM].*)
9. Does your district use contractors or volunteers to help implement [SUPPLEMENTAL ONLINE PROGRAM]? If so, about how many, and what are their roles? For approximately how many hours are they used?

Facilities

10. What spaces in the school(s) are provided for students to use [SUPPLEMENTAL ONLINE PROGRAM], including learning spaces?
 - a. What would be your best estimate of how much space is used? (*For example, how many square feet, or how many average-sized classrooms, computer labs, or office spaces?*)
 - b. How many hours per day/week or what percentage of the time are these spaces used for [SUPPLEMENTAL ONLINE PROGRAM]?
11. What spaces and facilities do school staff use to support [SUPPLEMENTAL ONLINE PROGRAM]? (*It can be any space including offices, shared instructional space, planning and preparation spaces, resource rooms, etc.*)

Materials/equipment

12. Does the district provide any materials or equipment—for example, computers, software, printers, phones, books, office/school supplies—to implement [SUPPLEMENTAL ONLINE PROGRAM]? If so,
 - a. What kind of materials or equipment?
 - b. Can you provide an estimate of the quantities involved?
 - c. Who uses these materials?

Appendix B. Interview protocols

Required student or family inputs

13. How much time would you estimate families spend supporting students who participate in [SUPPLEMENTAL ONLINE PROGRAM]? (*Types of support may include guidance with content, technology support, general guidance, providing materials, and so on.*)
14. Is there any technology that students and families need to provide in order to use [SUPPLEMENTAL ONLINE PROGRAM] such as a personal computer, software, or the Internet?

Other resources

15. Are there any fees associated with implementing [SUPPLEMENTAL ONLINE PROGRAM] that schools or the district pays? If so, how much are the fees, and what are they for?
 - a. Are there enrollment fees?
16. Are there any fees that families/students pay?

Closing questions

17. Is there anything else about implementing [SUPPLEMENTAL ONLINE PROGRAM] or its costs that you think we should consider?

Interview Protocol 4—Other staff

(Any other staff member whose role does not fit in the other categories, such as a technology staff member)

Thank you for making time to speak with me. Before we start, I would like to tell you a bit more about the purpose of our conversation.

Today, I'm hoping to learn more about how you use [SUPPLEMENTAL ONLINE PROGRAM] in your [school or district]. Your participation is strictly voluntary. I will be asking you about the resources (mostly time and funds) needed to use [SUPPLEMENTAL ONLINE PROGRAM]. I am looking for your best estimate and understand that you might not be able to answer all of the questions. If I ask a question that does not fit with what you see in your day-to-day implementation, please let me know and feel free to share what would be more realistic or appropriate. If you think someone else is better able to share information about a question that I ask, please let me know.

The conversation should take about 45 minutes. Do you have any questions for me before we start?

FOR THE INTERVIEWER: All notes are in *italics*. Notes that are underlined are tips for the interviewer only. Notes without the underline can be read to the participant.

Background

1. Can you describe how you support the use of [SUPPLEMENTAL ONLINE PROGRAM] in schools and the district?
2. How many years has your school or district been implementing [SUPPLEMENTAL ONLINE PROGRAM]?
 - a. On average, about how many students participate in [SUPPLEMENTAL ONLINE PROGRAM]?
3. In what types of courses do students typically enroll? *(For example, Advanced Placement, electives, core courses.)*

Personnel

4. How much time, on average, would you estimate that you allocate to supporting and implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(You can tell me in hours per day, per week, or per month. Include any management or oversight for [SUPPLEMENTAL ONLINE PROGRAM]. This may include time for supporting staff, students, and families, as well as other time.)*
 - a. *(This question is most appropriate for districts/schools that are in their first few years of implementing [SUPPLEMENTAL ONLINE PROGRAM].)* Compared with how you allocated your time before using [SUPPLEMENTAL ONLINE PROGRAM], on average, how much additional time are you spending implementing [SUPPLEMENTAL ONLINE PROGRAM]? *(Please estimate the average number of additional hours in a typical day, week, or month.)*

Appendix B. Interview protocols

5. Which staff members in the district or at your school support or have a role with [SUPPLEMENTAL ONLINE PROGRAM]?
 - a. How much time does each person allocate to use and support [SUPPLEMENTAL ONLINE PROGRAM]? (*Remind participant that an estimate/best guess is fine. Probe about the time and roles of specific team members if the participant indicates they allocate a noteworthy number of hours to the program.*)
 - b. What are their activities and responsibilities related to [SUPPLEMENTAL ONLINE PROGRAM]? Do they have other roles or responsibilities at the school or in the district?
6. How much time is typically required of teachers or paraprofessionals to implement any aspects of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
7. How much time is typically required of IT or technology staff for the day-to-day aspects of [SUPPLEMENTAL ONLINE PROGRAM]? (*Ask if the information has not already been provided in question 5.*)
 - a. How much time was required of IT staff to set up [SUPPLEMENTAL ONLINE PROGRAM]?
8. Do you need to set aside time for any training or preparation specific to implementing [SUPPLEMENTAL ONLINE PROGRAM] for you or those implementing the program? If so, how much time do you estimate the training/preparation takes? (*This training or preparation could be initiated at the school or district level because it might not be required by [SUPPLEMENTAL ONLINE PROGRAM].*)
9. Does your school or district use contractors or volunteers at the school(s) to help implement [SUPPLEMENTAL ONLINE PROGRAM]? If so, about how many and what are their roles? For approximately how many hours are they used?

Facilities

10. What spaces in the school(s) or district are provided for students to use [SUPPLEMENTAL ONLINE PROGRAM], including learning spaces?
 - a. What would be your best estimate of how much space is used? (*For example, how many square feet, or how many average-sized classrooms, computer labs, or office spaces?*)
 - b. How many hours or what percentage of time each day or week are these spaces used for [SUPPLEMENTAL ONLINE PROGRAM]?
11. What spaces and facilities do you and school or district staff use to support [SUPPLEMENTAL ONLINE PROGRAM]? (*It can be any space including offices, shared instructional space, planning and preparation spaces, resource rooms, etc.*)
 - a. Are there any other designated spaces for staff who support [SUPPLEMENTAL ONLINE PROGRAM]? If so, what kind?

Materials/equipment

12. Does the school or school district provide any materials or equipment—for example, computers, software, printers, phones, books, office/school supplies—to implement [SUPPLEMENTAL ONLINE PROGRAM]? If so,
 - a. What kind of materials or equipment?
 - b. Can you provide an estimate of the quantities involved?
 - c. Who uses these materials?

Required student or family inputs

13. How much time would you estimate families spend supporting students who participate in [SUPPLEMENTAL ONLINE PROGRAM]? (Types of support may include guidance with content, technology support, general guidance, providing materials, and so on.)
14. Is there any technology that students and families need to provide in order to use [SUPPLEMENTAL ONLINE PROGRAM], such as a personal computer, software or the Internet?

Other resources

15. Are there any fees associated with implementing [SUPPLEMENTAL ONLINE PROGRAM] that the school or district pays? If so, how much are the fees and what are they for?
 - a. Are there enrollment fees?
16. Are there any fees that families/students pay?

Closing questions

17. Is there anything else about implementing [SUPPLEMENTAL ONLINE PROGRAM] or its costs that you think we should consider?

APPENDIX C. SUPPORTING INFORMATION FOR THE COST-FEASIBILITY ANALYSIS ESTIMATOR

The Cost-Feasibility Analysis (CFA) Estimator (a separate Microsoft Excel document, accessible at <https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=6714>) is a data collection tool for listing and estimating the costs of the resources needed to implement a supplemental online program. It is designed to estimate the resource costs across a two- or three-year period. The CFA Estimator enables data entry and automates the analysis with embedded formulas. You input data on the quantity, time, and value of resources to calculate the costs of initiating and maintaining a supplemental online program. This appendix contains information on how to use the data from the interviews, including where to enter it. It also includes tips on how to enter other data, customize the CFA Estimator, and use built-in features such as annualizing costs and exploring cost scenarios.

Interview protocol mapping to Cost-Feasibility Analysis Estimator

Information on resources and costs associated with a supplemental online program that is gathered through interviews can be used to revise or verify data in the CFA Estimator. Table C1 provides guidance on where to enter responses in the CFA Estimator by mapping interview protocol numbers to the corresponding resource number in the CFA Estimator. In some cases the questions in the protocols do not correspond directly to the data you will enter. In these instances, the protocol mapping indicates how the responses to these interview protocol questions can inform data in the CFA Estimator. The wording of the protocol questions varies according to the interviewee's role, but the overall themes of the questions are the same, so the questions are numbered the same across the four protocols.

Table C1. Interview protocol mapping to Cost-Feasibility Analysis Estimator

Protocol question number	Corresponding Cost-Feasibility Analysis (CFA) Estimator section			
	School counselor or program lead	District program administrator	Superintendent or other district administrator	Other staff
1	This question can provide background information on the role and responsibilities for different program personnel, which can be used to categorize responses into the appropriate "Personnel" subsection (1.1–1.4).			
2	Knowing the number of years that a program has been in place allows you to determine whether a particular school or district is incurring expenses related to initial implementation costs or ongoing costs, which are expensed in separate tabs in the CFA Estimator.			
2a	Number of students estimated to be participating in the supplemental online program.			
3	Responses to this question can inform understanding of the types of students who enroll in supplemental online programs. The type of course enrollments could affect items such as textbook costs (3.5) and enrollment fees (5.1.1).			
4	1.1 or 1.2	1.1 or 1.4	1.4	1.4
4a	1.1 or 1.2	1.1 or 1.4	1.4	1.4
5	1.1–1.4	1.1–1.4	1.1–1.4	1.1–1.4
5a	1.1–1.4	1.1–1.4	1.1–1.4	1.1–1.4
5b	1.1–1.4	1.1–1.4	1.1–1.4	1.1–1.4
6	1.1 or 1.4	1.1 or 1.4	1.1 or 1.4	1.1 or 1.4
7	1.3	1.3	1.3	1.3
7a	1.3	1.3	1.3	1.3
8	1.1.1, 1.2.1, 1.3.1, 1.4.1	1.1.1, 1.2.1, 1.3.1, 1.4.1	1.1.1, 1.2.1, 1.3.1, 1.4.1	1.1.1, 1.2.1, 1.3.1, 1.4.1
9	1.4	1.4	1.4	1.4
10	2	2	2	2
10a	2	2	2	2
10b	2	2	2	2
11	2	2	2	2
11a	2	2		2
12	3.1–3.8	3.1–3.8	3.1–3.8	3.1–3.8
12a	3.1–3.8	3.1–3.8	3.1–3.8	3.1–3.8
12b	3.1–3.8	3.1–3.8	3.1–3.8	3.1–3.8
12c	3.1–3.8	3.1–3.8	3.1–3.8	3.1–3.8
13	This question provides information on time commitments from families. Significant time commitments can be included in section 4, "Required Student/Family Inputs."			
14	4.1 or 4.2	4.1 or 4.2	4.1 or 4.2	4.1 or 4.2
15	5.1	5.1	5.1	5.1
15a	5.1.1	5.1.1	5.1.1	5.1.1
16	4.3 or 4.4	4.3 or 4.4	4.3 or 4.4	4.3 or 4.4
17	5	5	5	5

Technical tips: Using the Cost-Feasibility Analysis Estimator

The following technical tips offer guidance on how to enter data, customize the CFA Estimator, and use built-in features such as annualizing costs and exploring cost scenarios. All these tips are also included in the How to Customize tab in the CFA Estimator; you can access this guidance by referring to this tab while working in the CFA Estimator.

HINT

Throughout the Cost-Feasibility Analysis Estimator tabs, notes in the data cells provide additional information and guidance. If a cell contains a note, it has a small red arrow in the top right corner. To view the note, hover your mouse above the cell (figure C1).

Figure C1. Data-cell notes in the Cost-Feasibility Analysis Estimator

	A	B	C	D	E	F	G
1	YEAR 2 IMPLEMENTATION						
2	This sheet is for detailing the annual costs associated with the ongoing implementation of a supplemental online program. It also details the costs associated with maintaining the program at a school/district once it has been implemented.						
3	Overview of Resources						
4	Categories and Subcategories	Subitems		Quantity/Units	Price/Value	Time	
5	01. Personnel				Salary with Benefits, Price, OR Annual Value	Proportion of full-time employee (FTE) or percentage of usable time. Example: .2	
6	1.1 Program specific staff						
7		1.1.1 Annual or refresher training					
8		1.1.2 Program responsibilities					
9		1.1.3 Outreach/communication					

Entering data in the Cost-Feasibility Analysis Estimator

You will input data on the quantity, cost, and time for each resource in columns E, F, and G in the CFA Estimator, respectively. All quantities are entered as whole numbers, costs are entered as annual values, and time is entered as a proportion of a year or time used (decimal value ≤ 1). For example:

- Quantity/units (column E): How many school counselors are needed? How many computers are needed?
- Price/value (column F): What is the school counselor’s salary, including benefits? How much does the computer cost?
- Time (column G): How much of a school counselor’s time is needed to support the supplemental online program? For what proportion of time are the computers used for the program?

For example, there might be one program-specific staff member earning an annual salary of \$40,000, 90 percent of whose time is dedicated to supplemental online program

Figure C2. Example: How to enter data for a program-specific staff member

INITIAL IMPLEMENTATION COSTS:							
This sheet is for detailing the costs associated with the initial implementation of a supplemental online program for the school year. Costs on this sheet include the costs associated with setting up the program at a school.							
Overview of Resources							
Categories and Subcategories	Subitems	Quantity/Units	Price/Value	Time	Program Cost by Item		
			Salary with Benefits, Price, OR Annual Value	Proportion of full-time employee (FTE) or percentage of usable time. Example: .2			
11. Personnel							
1.1 Program specific staff	1.1.1 Initial recruitment and training/onboarding					\$ -	
	1.1.2 Program responsibilities	1	\$ 40,000.00	0.9		\$ 36,000.00	
	1.1.3 Outreach/communication					\$ -	

Note: The example data are not based on any actual school, district, or supplemental online program or on any actual quantity or cost of any item and are not meant to be representative in any way. They are intended only to demonstrate how each entry feeds into the CFA Estimator to provide an overall estimate.

responsibilities and 10 percent to other school activities. To add this information into the CFA Estimator, you would enter 1 for Quantity/Units, \$40,000 for Price/Value, and 0.9 for Time (figure C2). Once you enter this information, the CFA Estimator will automatically calculate the Program Cost by Item (column H), which in this example is \$36,000.

Additionally, the CFA Estimator includes example tabs containing hypothetical data. These tabs demonstrate how you could enter data for Year 1 initial costs, Year 2 ongoing costs, and Year 3 ongoing costs. These tabs are named Example_Y1_Initial, Example_Y2_Ongoing, and Example_Y3_Ongoing, respectively.

Customizing the Cost-Feasibility Analysis Estimator

To estimate the costs of the supplemental online program, you might decide to customize the CFA Estimator. The resources included in the CFA Estimator and complementary [Implementation resource list](#) include materials, staff, and other items commonly needed to implement a supplemental online program, but the list is not exhaustive. Blank rows are built into each category (personnel, facilities, materials and equipment, required student or family inputs, and other items) with all necessary formulas preprogrammed to enter resources. This allows you to easily add additional subitems required by the program of interest that are not already included. Simply replace the placeholder text with new text to describe the additional resource (figure C3).

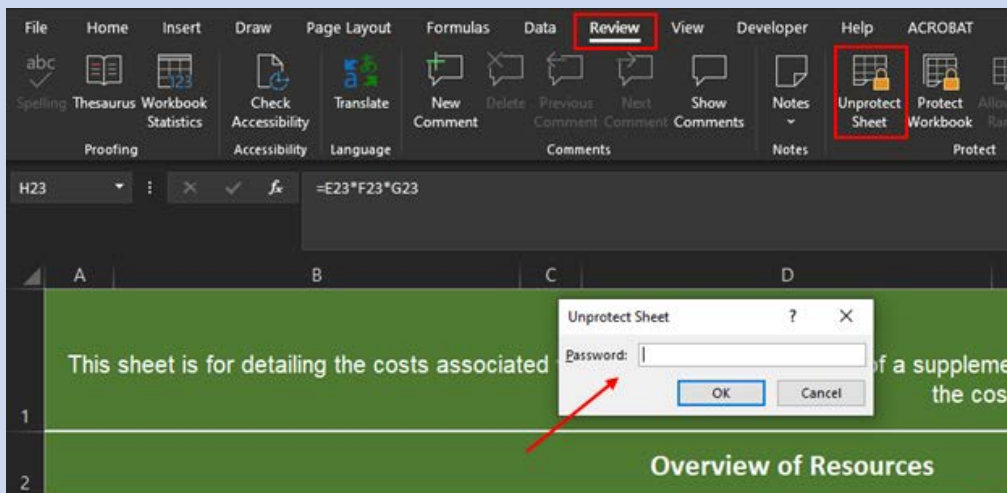
Figure C3. Blank rows in the Cost-Feasibility Analysis Estimator

21	I2. Facilities	
22	2.1 Classroom/computer lab	2.1.1 Initial setup
23		2.1.2 Maintenance
24	2.2 [INSERT TEXT HERE]	2.2.1 [INSERT TEXT HERE]
25		2.2.2 [INSERT TEXT HERE]
26	Subtotal	

If you need more rows in addition to the preprogrammed blank ones, you can modify the CFA Estimator to include more subitems. Cells containing formulas in the CFA Estimator are locked to prevent accidentally deleting or changing the programmed calculations. You can copy the contents of locked cells, but you cannot edit them without unlocking the formulas. To add rows, you need to unlock the spreadsheet (box C1) and incorporate the appropriate formula calculations; see the example below for further details.

Box C1. Unlocking cells in the Cost-Feasibility Analysis Estimator

1. To unlock cells: Click the “Review” tab at the top of the file, then click “Unprotect Sheet” and enter the password in the dialog box (preset to “REL”). See image below.
2. To relock the cells: Click the “Review” tab, then click “Protect Sheet,” and enter a new password, which may be the same or different from the one previously entered.

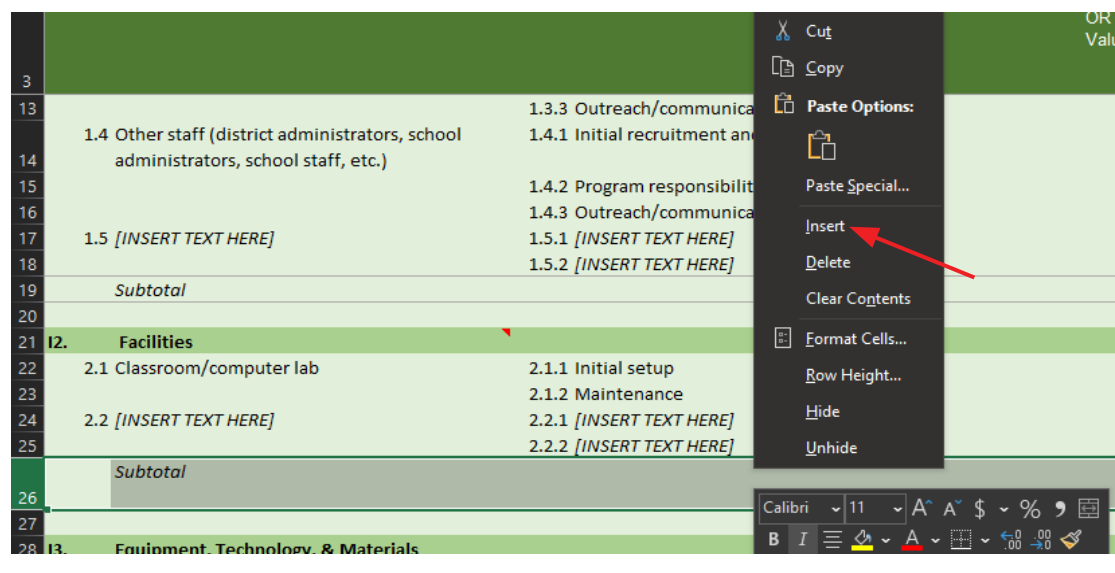


Example: How to add a library to the Y1_Initial_Costs tab in the Cost-Feasibility Analysis Estimator

This example illustrates how to insert additional subcategories and subitems to the Facilities category in the Y1_Initial_Costs tab. These subcategories could be a library, offices, or other spaces in a school or district needed for the supplemental online program to function. You would include the subcategory, such as “Library,” and include the rows needed for subitems, such as the initial setup and maintenance. You would follow these steps:

1. Unlock the spreadsheet (see box C1 for further details).
2. Locate item I2. Facilities (see row 21 in figure C4). The new item for the library will be number 2.3.

Figure C4. How to insert a row in the Cost-Feasibility Analysis Estimator



3. Right-click on row 26 (the row below the one where you want to insert the new item) and click “Insert” on the drop-down menu (see figure C4). A new row will appear.
4. Repeat step 3 to add another row and enter titles for your items (2.3 Library) and sub-items (2.3.1 Initial setup and 2.3.2 Maintenance).
5. Copy the formulas found in similar cells; in this example, use the formulas from 2.1 Classroom/computer lab (cells H22 to L23) by first selecting the cells, then right-click and copy.
6. Select the cells where the new formulas will appear (in this example, cells H26 to L27), then right-click and paste (figure C5).
7. Be sure to lock the spreadsheet when you are done with this (see box C1 for further details).

Repeat this process to change the Y2_Ongoing_Costs and Y3_Ongoing_Costs tabs, if needed.

Figure C5. How to copy formulas to new rows in the Cost-Feasibility Analysis Estimator

INITIAL IMPLEMENTATION COSTS:						
ated with the initial implementation of a supplemental online program for the school year. Costs on this sheet should not include those associated with creating the online program rather than the costs associated with setting up the program at a school/district.						
Overview of Resources				Annualization of Resources		
Subitems	Quantity/Units	Price/Value	Time	Program Cost by Item	Annual Program Cost by Item	One-time Resource Cost by Item
		Salary with Benefits, Price, OR Annual Value	Proportion of full-time employee (FTE) or percentage of usable time. Example: .2			(Enter "1")
22	2.1.1	Initial setup		\$ -	\$ -	
23	2.1.2	Maintenance		\$ -	\$ -	
24	2.2.1	[INSERT TEXT HERE]		\$ -	\$ -	
25	2.2.2	[INSERT TEXT HERE]		\$ -	\$ -	
26	2.3.1	Initial setup		\$ -	\$ -	
27	2.3.2	Maintenance		\$ -	\$ -	
				Subtotal with one-time costs (Column H)	\$ -	\$ -

Annualizing costs

The CFA Estimator also includes an Annualization of Resources feature in the Year 1 tab to annualize resources to be used in future years. Annualizing is the process of spreading the cost of a resource (such as a computer or a building) across the time period that the resource can be used and discounting its value in subsequent years. Along with spreading the costs of the resource, annualization accounts for the [depreciation](#) of a resource over time and reveals the opportunity cost associated with using resources for the program rather than for an alternative purpose. Personnel costs cannot be annualized because salary and benefit expenses recur annually and cannot be spread out over time; as such, the annualization columns are grayed out for personnel costs.

If a resource purchased in Year 1 will still be used in Year 2, you can annualize the cost. To do this, go to the Y1_Initial_Costs tab and enter a “1” in column K, “One-time cost resource that can be used in Year 2,” as shown in figure C6. If the resource will continue to be used in Year 3, enter a “1” in column L, “One-time cost resource that can be used in Year 3.” Repeat this process for any resource costs that need to be annualized.

Figure C6. Indicating that a resource cost should be annualized

INITIAL IMPLEMENTATION COSTS:						
ed with the initial implementation of a supplemental online program for the school year. Costs on this sheet should not include those associated with creating the online program the costs associated with setting up the program at a school/district.						
Overview of Resources				Annualization of Resources		
Subitems	Quantity/Units	Price/Value	Time	Program Cost by Item	Annual Program Cost by Item	One-time Cost Resource that can be used in Year 2 (Enter "1")
		Salary with Benefits, Price, OR Annual Value	Proportion of full-time employee (FTE) or percentage of usable time. Example: .2			One-time Cost Resource that can be used in Year 3 (Enter "1")
29	3.1.1	Internet		\$ -	\$ -	1
30	3.2.1	Staff laptop [Insert brand and model]		\$ -	\$ -	1
31	3.2.2	Student laptop [Insert brand and model]		\$ -	\$ -	
32	3.2.3	Desktop computer [Insert brand and model]		\$ -	\$ -	
33	3.3.1	Headphones/headsets		\$ -	\$ -	
34	3.4.1	[Insert software name]		\$ -	\$ -	

Example: How to annualize the cost of a computer lab set up in Year 1 that will be used in Year 2 and Year 3

This example uses setting up a computer lab to illustrate how to annualize the cost of a resource purchased in Year 1 and used in future years. It also demonstrates how the CFA Estimator populates the Y2_Ongoing_Costs and Y3_Ongoing_Costs tabs with the information entered in the Y1_Initial_Costs tab.

To annualize the cost of the computer lab, you would:

1. Enter the information for quantity/units, price/value, and time associated with the initial setup of the computer lab in the Y1_Initial_Costs tab of the CFA Estimator.
 - a. For this example the computer lab setup is item 2.1.1 (see row 22 in figure C7).
 - b. The entered quantity is “1,” the price/value is “\$180,000,” and the usable time is “1.”
2. Add a “1” to columns J and K to indicate that the computer lab will be used in Year 2 and Year 3, so that the setup costs can be shared across those years (see figure C7).
 - a. Once you enter this information, the CFA Estimator calculates the “Annual program cost by item” (cell J22), which is \$60,000.

Figure C7. How to enter data for an annualized cost in the Y1_Initial_Costs tab of the Cost-Feasibility Analysis Estimator

INITIAL IMPLEMENTATION COSTS:									
This sheet is for detailing the costs associated with the initial implementation of a supplemental online program for the school year. Costs on this sheet should not include those associated with creating the program at a school/district.									
Overview of Resources						Annualization of Resources			
Categories and Subcategories	Subitems	Quantity/ Units	Price/Value Salary with Benefits, Price, OR Annual Value	Time Proportion of full- time employee (FTE) or percentage of usable time. Example: .2	Program Cost by Item	Annual Program Cost by Item	One-time Cost Resource that can be used in Year 2 (Enter "1")	One-time Cost Resource that can be used in Year 3 (Enter "1")	
Facilities									
2.1 Classroom/computer lab	2.1.1 Initial setup	1	\$ 180,000.00	1	\$ 180,000.00	\$ 60,000.00	1	1	
	2.1.2 Maintenance		\$ -		\$ -				
2.2 [INSERT TEXT HERE]	2.2.1 [INSERT TEXT HERE]		\$ -		\$ -				
	2.2.2 [INSERT TEXT HERE]		\$ -		\$ -				
	Subtotal				\$ 180,000.00	Subtotal with one-time costs (Column H)	\$ 60,000.00		

3. In the Y2_Ongoing_Costs tab, you can add the “Lifespan” for the computer lab to cell K22. For this example, enter “7” because the lifespan of the computer lab is seven years (figure C8).
 - a. The CFA Estimator automatically populates \$60,000 in the Y2_Ongoing_Costs tab for the computer lab and uses this amount to calculate the annualized value.
 - b. To account for the value in the future, the “Discount interest rate” in column L is preset to 5% in the Y2_Ongoing_Costs tab. You can edit this interest rate if desired.

Figure C8. How to add the lifespan and discount interest rate to the Y2_Ongoing_Costs tab for an annualized cost

YEAR 2 IMPLEMENTATION COSTS:										
This sheet is for detailing the annual costs associated with the ongoing implementation of a supplemental online learning program. Costs on this sheet should not include those associated with creating the program at a school/district once it has been established. This sheet allows for estimating the costs for the second year										
Overview of Resources					Annualization of Resources					
Categories and Subcategories	Subitems	Price/Value	Time	Y2 Annual Program Cost by Item	Y1 Annual Program Cost by Item	Annualized Program Cost by Item	Lifespan (Years)	Discount Interest Rate	Annualization Rate/Factor	
										Quantity/Units
O2. Facilities										
2.1 Classroom/computer lab	2.1.1 Initial setup			\$ 60,000.00	\$ 60,000.00	\$ 10,369.19	7	5%	0.17	
	2.1.2 Maintenance			\$ -	\$ -					
2.2 [INSERT TEXT HERE]	2.2.1 [INSERT TEXT HERE]			\$ -						
	2.2.2 [INSERT TEXT HERE]			\$ -						
	Subtotal			\$ 60,000.00		\$ 10,369.19				

c. Once you enter the lifespan and interest rate, the CFA Estimator calculates “Annualized program cost by item” (cell J22) and “Annualization rate/factor” (cell M22). The annualized cost for the computer lab is \$10,369.19 in Year 2 after considering the lifespan, depreciation, and opportunity cost.

4. All of the information you entered in the Y1 tab and Y2 tab will be automatically populated in the Y3_Ongoing_Costs tab (figure C9).

Exploring cost considerations: Customized calculations

Once you enter all your data in the CFA Estimator, the “Customized calculations” function allows you to explore different cost considerations. You can choose to examine a subset of the resources required for implementing the supplemental online program, such as only personnel or only the costs a school will incur. These customized calculations can provide you with specific cost subtotals, which might be useful if you need to consider the costs for specific items or categories, such as the total cost of personnel for the supplemental online program.

To use this function, mark an “X” in the “Customized calculations” column (column M in the Y1_Initial_Costs tab, column N in the Y2_Ongoing_Costs and Y3_Ongoing_Costs tabs) in each row for the items you would like to include in the total. Your new total, which sums only the resources you selected, will appear at the bottom of the “Customized calculations” column

Figure C9. Data populated for an annualized cost in the Y3_Ongoing_Costs tab

YEAR 3 IMPLEMENTATION COSTS:										
This sheet is for detailing the annual costs associated with the ongoing implementation of a supplemental online program. Costs on this sheet should not include those associated with creating the program at a school/district once it has been established. This sheet allows for estimating the costs for the third year of implem										
Overview of Resources					Annualization of Resources					
Categories and Subcategories	Subitems	Price/Value	Time	Y3 Annual Program Cost by Item	Y1 Annual Program Cost by Item	Annualized Program Cost by Item	Lifespan (Years)	Discount Interest Rate	Annualization Rate/Factor	
										Quantity/Units
O2. Facilities										
2.1 Classroom/computer lab	2.1.1 Initial setup			\$ 60,000.00	\$ 60,000.00	\$ 10,369.19	7	5%	0.17	
	2.1.2 Maintenance			\$ -	\$ -					
2.2 [INSERT TEXT HERE]	2.2.1 [INSERT TEXT HERE]			\$ -						
	2.2.2 [INSERT TEXT HERE]			\$ -						
	Subtotal			\$ 60,000.00		\$ 10,369.19				

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