



MODULE 3 VIDEO 8 INGREDIENTS DATA: FACILITIES

Hello and welcome to Module 3 Video 8. This video will follow the same pattern as Module 3: Videos 6 and 7 but, instead of focusing on personnel or materials, I'll be talking about the specific data you need to collect for each facilities ingredient and showing you how to enter this into CAPCAT 1.2 Plus. By facilities we mean the physical spaces in which program activities take place. I'll continue using ingredients needed to implement Reading Recovery.

Hopefully, by now, you'll have it well memorized that there are 4 pieces of information you need to gather for each ingredient used to implement each component of the program: type, quantity, percentage of use, and price.

For facilities, the type is captured by indicating details on some or all of the following: what the space is, for example, a medium-sized elementary school classroom and, if available, the maximum number of occupants; the size of the space, for example, in square feet; what program implementation activities take place in the space and for how many occupants at once; any special features that are needed such as wi-fi, electrical outlets for each occupant, or a sink with running water, and the useful lifetime of the space, which means how often it needs to be renovated or replaced. For buildings, this is usually a long time unless you are renting in which case you aren't responsible for this and it's likely to be built into the rental rate anyway.

For quantity, you need to know how many of these spaces or how many square feet total are required to implement the program.

One caution is that people often find it hard to estimate square footage. CAP Project's Cost of Facilities Calculator includes a tab listing typical sizes of educational facilities that you may find more reliable than some of the wild guesses you might get from interviewees.

In Module 3: Video 5, I introduced the idea of creating overview tables where you can collect and summarize key details about ingredients before you start entering

data row by row in the ingredients tabs. Here's my overview table summarizing type and quantity information for facilities used in Reading Recovery. All these spaces are owned by the district rather than rented.

I've listed four items, two at the district office and two at the school sites.

First, I've listed a district office training space which is used by the Teacher Leader (TL) to train first-year Reading Recovery teachers. The district only needs one of these spaces but, because space is typically priced by size, we show the quantity as 900 square feet. We assume this space, and all the others on our list, last for 30 years before needing renovation or replacement.

Next, I have an item that is very specific to Reading Recovery. The district needs to convert part of a regular elementary classroom space to create a one-way glass room. This is used for observing students and teachers engaging in Reading Recovery. Usually there is one of these per Teacher Leader so we need just one in this district.

At the school sites, we need a dedicated work space of 900 square feet for the Teacher Leader to use for student instruction and for ongoing training every year with the district's Reading Recovery teachers.

And each Reading Recovery teacher needs 150 square feet of classroom space for their one-on-one instructional sessions with the students.

Next, we need information that allows us to determine what percentage of the value of each facility to attribute to Reading Recovery.

Facilities, like materials, are often used for a variety of activities, so you can use strategies like the ones I described for materials in Module 3: Video 7 to figure out across how many activities and sites you can spread a facility's value.

Or you can find out for how many hours the facility is used to implement the program over a fixed period of time, and the total number of hours the facility is potentially available for use over that same time period. Dividing the former by the latter gives you the percentage of time attributable to your program.

Here's the information we gathered about percentage of use of facilities for Reading Recovery.

Starting with the easiest items to explain, the one-way glass room and the Teacher Leader's workspace were only used to implement this program so we attributed 100% of their value to Reading Recovery.

For the Reading Recovery teacher's space, we attribute 50% of the usable time to Reading Recovery because we know these teachers spend half their time on Reading Recovery and half their time on other literacy activities.

As you can imagine, the district office training space is used for a lot of different activities so the best way for me to figure out the percentage of use for Reading Recovery is using the strategy in which I divide the number of hours the space is used for this program by the total number of hours the space is available for any activity.

The district office is open all year round, eight hours per day. So that's 8 hours times 5 days per week times 52 weeks per year which is 2,080 hours per year.

The first-year training sessions for Reading Recovery teachers are 3 hours per week for 30 weeks which is 90 hours.

So, the percentage of use is 90 divided by 2,080 which is 4.33%.

For distribution across sites and participants, we assume that the costs of the district office training space and the one-way glass room were attributed to schools in proportion to the number of students participating in Reading Recovery at each school.

And we assumed that the costs of the Teacher Leader's workspace and the Reading Recovery teachers' classroom spaces were equally distributed across students served.

Now let's move on to facilities prices.

There isn't an active market for buying and selling school buildings as public-school districts typically build the structures they need and use them for decades. This means you'll usually be looking for a construction or renovation price per square foot. While this might lead you to expect facilities costs will be very high, in practice, we spread construction and renovation costs over 30 or more years and many activities, so it usually turns out to be a very small amount

per year for any one program. We'll show you how to do that calculation in Module 4.

However, we generally uprate construction costs by 21% to account for furniture, furnishing, fees, and site preparation - but this does not include purchasing the site.

Note that furniture, furnishing, and equipment or "FF&E" which are sometimes included in construction costs are items like heating and cooling systems, vents, or electrical and plumbing items that produce a "finished space." Desks, chairs, cabinets, whiteboards, and other movable items are not included. These would need to be in your materials and equipment list.

You may also want to add maintenance fees, either as a separate ingredient, or as an additional percentage of the construction costs, or as part of an overall indirect cost rate that includes various overhead charges.

We rarely find prices of land on which educational buildings are constructed because the buildings have usually been around for a long time. If we did, we'd spread the cost of the land over so many years and activities that it would constitute only a tiny proportion of the total costs of a program.

A facilities price could also be a rental price, for example, for a convention space for a large meeting or conference. When available, these prices are usually a lot easier to work with as everything like maintenance and any other overhead is already factored into the price, and the rental period is well defined so you aren't guessing how long the space is going to last in order to spread costs over that time.

However, rental prices usually turn out to be a lot higher than construction costs once the construction costs have been spread over 30 or more years and across multiple activities.

Here are the facilities price data we collected. As for materials, we assumed that local and national facilities costs were the same. This assumption is less likely to be true for facilities than for materials because construction costs do vary.

However, at the time, we could not readily identify local prices and the difference for our overall cost results was unlikely to be significant given that facilities make up such a small percentage of the total costs of Reading Recovery.

Three of the prices are construction prices per square foot uprated 21% to reflect the cost of finished spaces. Sources for these prices were School and College Planning and Management magazines which used to conduct an annual survey on construction costs around the US.

CAP Project does have a database of prices posted on its resources page and we list some of these older facilities prices and also some new ones from a project management company called Cumming.

The National Council on School Facilities also reports average school construction costs for PK- 12 by state and for the US as a whole. The US average was \$343 per square foot in 2020. They also report annual Maintenance and Operations expenditure from 2017 to 2019 which averaged \$6.90 per square foot or about 2% of construction costs.

Now we've covered type, quantity, percentage of use, and prices for the Reading Recovery facilities, let's look at the optional cost breakdowns before I show you how to put the data into CAPCAT.

The first breakdown is the cost stage. You can see that only the conversion of classroom space into a one-way glass room is categorized as a start-up cost.

You might be surprised that I've listed the cost of the training space as ongoing instead of startup, but that's because new Reading Recovery teachers are hired on a pretty regular basis at this district so there might be 2 to 3 new teachers doing first-year training every year. So, this space turns out to be a recurring cost, not one that is only incurred when the program is first implemented.

In the next two columns, you can see who bears the cost of each ingredient and the source of funding for this item.

The district office bears the cost of the training space and this is covered by the district's General Funds.

The classroom conversion was paid for by a private funder who gave the district a grant for this purpose.

And the schools bore the costs of the elementary classroom spaces for the Teacher Leader and the Reading Recovery teachers. This was covered by the schools' General Funds.

Now, I'll show you how to enter one facilities ingredient, the district office training space, into CAPCAT 1.2 Plus so it's set up ready for analysis.

First, we need to look for the Facilities tab along the bottom of CAPCAT 1.2 Plus.

This is what the Facilities tab looks like when you first get to it. Let's enter the data for the training space.

In the Site name column, I use the dropdown to select District Office from the list of sites.

Next, I choose "District" from the dropdown list in the Site Type column.

In the Condition column, I choose "T" for Treatment.

Then I write the name of the item under Facility.

It's not a rental fee so I use the dropdown in the next column to say "No."

The program is only implemented for a year during my study so I am leaving the default value of 1 for the Year of Use.

I use the dropdown list in the Component/ Activity column to choose "Training."

In the Activity/purpose column, I write in how this facility is used for Reading Recovery.

These next two columns are for the units and quantity. Our unit is a square foot and the quantity we need is 900.

Again, remember to make sure that your units and quantity align with your price. You don't want to indicate 900 for quantity and then put in the price of constructing a whole new classroom. Or put in a quantity of 1 because you only need one space but then use the price for a single square foot. That would be a very tight squeeze for the Reading Recovery staff!

The next two columns facilitate that calculation I showed you earlier to determine the percentage of the facility's usable time that is attributable to Reading Recovery. We agreed the amount of time the room is available per year is 2,080 hours and the amount of time it is used by Reading Recovery is 90 hours per year.

And here's the same 4.33% answer that we came up with earlier.

In the Cost stage column, I again leave the default label of Ongoing as that's correct for this particular training space which gets used every year.

In the next column, which is the period over which the cost is spread, CAPCAT shows a default value of 30 years for facilities unless you indicated that it was actually a rental. 30 years is good for me so I leave that as is. If I had said "Yes" in the rental dropdown a few columns back, the default would show as 1 year for an ongoing rental cost.

The next bunch of columns are for the local and national price data which I copied in from my overview table. As I mentioned earlier, we used the same data for local and national prices so I am only showing you the national price columns here.

These next 2 columns are the optional cost breakdowns. In the first one, I use the dropdown to indicate that it's the district who bears the cost of this facility.

And in the next column, I use the dropdown to indicate that the source of funds for this ingredient is General Funds.

And now you repeat this process for any facility that you need for each year for all components of the program.

Once you are done with facilities, you can move to the last category of ingredients if there are any, which we call "Other Inputs." I address those in the next and last of the four videos in this set.