



MODULE 3 VIDEO 9 INGREDIENTS DATA: OTHER INPUTS

Hello and welcome to Module 3 Video 9. This video will follow the same pattern as Module 3: Videos 6 through 8 but I'll be talking about the data you need to collect for Other Inputs, that is, items that don't fall into the categories already covered in those videos which were personnel, materials and equipment, and facilities.

This includes items like travel and fees for services.

As in the other 3 videos in this set, I'll also show you how to enter the data into CAPCAT 1.2 Plus.

I'll continue using ingredients needed to implement Reading Recovery.

As for every other category of ingredient, there are 4 pieces of information you need to gather for each Other Input used to implement each component of the program:

Type

Quantity

Percentage of use

And price

For Other Inputs, the type is captured by indicating details on some or all of the following:

What the item is; for what activity or purpose it is used in implementing the program you are studying; and which entities or types of personnel need the input, for example, is it an item that each school needs, or that each first-grade teacher needs; and the useful lifetime of the item which is how long it lasts.

For quantity, you need to state the units, for example, it could be an annual fee or a one-way flight; and how many of these units are required to implement the program.

There are quite a few Other Inputs needed to implement Reading Recovery. Here's my overview table summarizing type and quantity information for Other Inputs used by the district office to implement Reading Recovery.

By now, I expect you are pretty familiar with what each column of data in these overview tables is, so instead of reviewing every detail about every Other Input, I'll briefly explain what's in this list and then show you the list of Other Inputs needed at the school level.

I'll pick out just a few datapoints to review with you, focusing on items that are likely to be relevant to many cost analyses.

The district office list of Other Inputs includes annual fees for data evaluation services and training that are specific to Reading Recovery, and district membership in Reading Recovery Council of North America.

Also, college credits that the Teacher Leader must complete in their first year of training and mileage reimbursement for the drive to and from the university twice a week for 34 weeks.

Plus, various travel inputs for the Teacher Leader to attend the annual Reading Recovery conference in Columbus, Ohio. These include registration fees, hotel room, meal per diems and mileage reimbursement for the drive there and back.

And two more mileage reimbursements for trips the Teacher Leader makes for ongoing professional development 3 times a year and to observe another Reading Recovery site.

This is the list of Other Inputs needed at the school level. They are very similar to the inputs I listed for the district office—college credits, membership fees, and travel costs—but these are for the Reading Recovery teachers who are based at each school rather than for the Teacher Leader whose costs are mostly covered by the district office.

Let's take a closer look at the last item on the list which is mileage reimbursement for the Reading Recovery teachers to attend the annual Reading Recovery conference.

The drive is 206 miles each way so you'll see that I indicated 412 as the number of miles per round trip and I assumed that the teachers carpool with up to four in the same car, so not every site will incur this cost. Remember that each of the 15 schools in the study is staffed by between 1 and 3 Reading Recovery teachers.

The only other thing I want to point out in this table is that most items result in recurring costs each year so their useful lifetimes are listed as one year. The one exception is for the college credits the Teacher Leader must complete in their first year of training. I've spread these costs over seven years because these credits only have to be earned once and you will recall that seven years is the average tenure of Reading Recovery staff in this district.

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

If the Other Input is used for more than one activity, you will need to determine the number of different activities it is used for and what proportion of time on each.

You also need to determine how the Other Input's usage is distributed across sites and participants.

Alternatively, you can find out for how many hours the Other Input is used to implement the program over a fixed period of time, and the total number of hours it 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.

We don't need to spend a lot of time on this for the Other Inputs because every input we listed is used 100% for Reading Recovery.

For district-level ingredients we assume the Other Input is distributed proportionally to the number of students participating in Reading Recovery at each school.

For school level ingredients we assume the other input is distributed equally across students participating in Reading Recovery at that school.

Now let's move on to prices for Other Inputs.

For some items there may be a market price, for example, an airfare. Be sure to note the year to which the price is relevant in case it needs inflation-adjusting later for your analysis.

For other items, there might be a standard rate set by a federal, state, or district agency, for example, per diem rates for meals, or hotel rooms, and mileage reimbursements.

In some cases, the price is not publicly available because it's a negotiated amount between the school or district and the vendor. This is the case for a lot of technology services and may mean you need to communicate with the chief technology officer, or the school principal, or whoever signs off on those contracts. But it would be hard to get this information from districts you aren't working with, so getting an average price may be difficult.

When you can't find a price, you need to come up with a way to place a value on the input and we call this kind of estimate a shadow price. You may remember that in Module 3 Video 6, I used an hourly volunteer price for parents' time spent reading to their children at home. And Jaunelle mentioned the example about valuing a new curriculum using textbook prices. An example for other inputs could be trying to put a value on travel costs for someone who uses a pedal bike to get to a PD event. There isn't a mileage rate for pedal bikes so, instead, you could use the mileage reimbursement rate for cars.

Here is my local price data for the district level ingredients.

Most of the prices I used came from the Reading Recovery website, or from district records, or from the school district's travel guidelines which sets allowable rates for meal per diems and for mileage reimbursement.

To get a price for the college credits earned by the Teacher Leader, we found tuition fees for the relevant university online. And for the hotel room rate in Columbus, Ohio, where the annual Reading Recovery conference is held, I used the online lookup tool provided by the U. S. Government Services Administration. You can see the nightly allowance for Columbus, Ohio, is \$115 for any month of the year.

Our national price data for the same district-level ingredients are identical for some items like the annual fees related to Reading Recovery and the Columbus, Ohio hotel rate.

But for the meal per diems, I used the U.S. Government Services Administration look-up tool instead of the district's travel guidelines.

And for mileage reimbursement, I used a national rate published by the Internal Revenue Service.

It was 53 1/2 cents per mile in 2017.

One ingredient that did require a little sleuthing was producing a national average price per college credit earned by the Teacher Leader.

Here we started with the National Center for Education Statistics table reporting average graduate tuition and fees. We used the 2016-17 figure for public institutions, which is \$11,617. This was the latest data available at the time of our study.

But we needed a price per credit and the table notes don't tell us the average number of credits this \$11 1/2-thousand-dollar amount covers. So, we had to come up with an assumption.

We hunted around for relevant information and found an article online that indicated that Masters Degrees are typically 30 credits.

So, we divided the \$11,617 by 30 to get a price of \$387 per credit.

But we know that graduate institutions also offer doctoral programs with more credits, so it's likely that the average number of credits is higher than 30. This means we are likely to be overestimating the price per credit. We might say that our price per credit is a conservative estimate meaning that we are being cautious and expect the true price might actually be lower.

If graduate credits constituted a significant proportion of the overall costs of this program, it would be wise to conduct a sensitivity analysis in which we used a higher number of credits as the denominator, which would mean the price per credit would be lower. For example, if we used 45 as the number of credits, our

new, more liberal or optimistic price estimate would be \$258 per credit. A liberal price estimate is one that is likely to be lower than the true price.

In our reporting, we could show this ingredient with a price range of \$258-\$387 per credit.

Let's not forget that we also had a bunch of Other Inputs at the school level related to the Reading Recovery Teachers' travel and training. These are the local prices we used which are all the same as the local prices we used for district level items, except that we actually found district records showing the cost per graduate credit for these teachers at a local private university, which was \$500. But this was at a 50% discount from the regular tuition which seems to be a special arrangement for Reading Recovery teachers.

So, for our national price for this item, we used the National Center for Education Statistics' average graduate tuition and fees for private institutions, which was \$24,712 in 2016-17.

To match the 50% discount, we halved this to \$12,356 and then divided by 30 credits to get \$412 per credit.

Now we've covered type, quantity, percentage of use, and prices for Other Inputs, so let's look at the optional cost breakdowns before I show you how to put the data into CAPCAT. We'll just look at the district level ingredients as the school level ingredients are very similar.

The first breakdown is the cost stage. Almost all items are labeled ongoing as their costs will recur every year the program is in operation.

The exceptions are the college credits for the Teacher Leaders in their first year of training and the travel costs associated with this. These are labeled startup as their costs won't be incurred again - at least not until the district needs to hire another Teacher Leader.

In the next 2 columns, you can see who bears the cost of each ingredient and the source of funding for this item. We got this information by asking the district office personnel.

The federal government supports some of the items through its Title II program which funds professional development activities, and some other items through

its Title I program which supports districts and schools with a high percentage of low-income students.

The district bears the costs of mileage reimbursement using its General Funds.

Finally, there is one item that falls on the teachers who must pay their own membership fees for Reading Recovery Council of North America out of their own pockets.

Now, I'll show you how to enter one Other Input into CAPCAT 1.2 Plus: mileage reimbursement for the Reading Recovery teachers at Site T15 to attend the annual Reading Recovery conference.

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

This is what the Other Inputs tab looks like when you first get to it, with just a few columns already populated with some defaults. Let's enter the data for the mileage reimbursement.

In the Site name column, I use the dropdown to select T15 from the list of sites.

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

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

Then I write or paste in the name of the item under Other Input.

In the next column, I use the dropdown to select "Yes" as this is a cost of miles.

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 the Reading Recovery activity for which this item is relevant. I included a note to myself that the trip is 206 miles each way.

The next three columns ask for the number of miles per trip, the units in which you're measuring the quantity of this item, and then the actual numerical quantity needed. There are a couple of different ways you could enter data here to arrive at the same answer, but there's also an opportunity to misalign the units and

quantity to arrive at the wrong answer, so it's worth taking a moment to make sure your approach is consistent across the columns.

I could say the unit is a one-way trip of 206 miles and I need 2 of them.

Or, I could say the unit is a round-trip of 412 miles and I just need one.

I prefer the latter approach because it's easier for me later when I am checking my data entries to see whether I have

- a) remembered that people usually have to get home again, and
- b) the quantity matches the number of vehicles used.

You might recall that there are actually three Reading Recovery teachers at site T15 and I have assumed that they carpool so only one of them needs to get reimbursed. Of course, if each of them decided to drive in their own car, you'd need to change the quantity to three.

Whatever you decide, leave yourself a note in the last column in this sheet to remind yourself and anyone who is reviewing your work. As Jaunelle cautioned you in her video about cost analysis timelines, you will not be able to remember every small decision you make unless you document it as you go along.

In the next column I indicate that 100% of the costs of this item are attributable to the program.

In the Cost stage column, I again leave the default label of Ongoing as that's correct for this Other Input which recurs every year.

In the next column, which is the period over which the cost is spread, CAPCAT shows a default value of 1 year for Other Inputs that are Ongoing. That makes sense in this case so I leave it as is.

The next few columns are for the local price data which I copied in from my overview table.

And then the national price data which I again copied in from my overview table.

These next 2 columns are the optional cost breakdowns. In the first one, I use the drop down to indicate that it's the school who bears the cost of this Other Input.

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 Other Input that you need for each year for all components of the program.

Once you are done with Other Inputs, congratulations! You are done with data entry – at least until a new site gets added or you receive additional information which leads you to revise some of the entries you’ve already made.

So now you’re ready for the next stage: Analyzing your results which is covered in Module 4. If you have been using CAPCAT, it actually does much the analysis for you as you enter the data, but there are some steps you may need to take yourself. And, of course, you should understand what CAPCAT is doing behind the scenes so you can review your results and check that everything makes sense in the context of your analysis.