CAP Project

MODULE 4 VIDEO 7 PRICE ANALYZING COST DATA IN A COST ANALYSIS TEMPLATE: DISTRIBUTING CENTRALIZED COSTS ACROSS SITES

Hello and welcome to Module 4 Video 7 where I'll show you how to distribute centralized costs across sites using CAPCAT 1.2 Plus.

Centralized costs are those that are incurred by a central organizational entity like a district office or state education department for resources that benefit multiple sites like schools.

If the program you are studying was only implemented at one site or you are not interested in presenting site-by-site costs, you can skip this video.

In the study we are using as our main example in these modules, the Reading Recovery Teacher Leader is an example of a centralized cost. She is hired by the central district office but she spends her time working with staff from all 15 schools in the district implementing Reading Recovery. So, we need to spread the costs of this Teacher Leader across these 15 sites.

When we were setting up our study in CAPCAT 1.2, we listed the names of the 15 sites in the Site Names table in the Setup tab: We named them T1 through T15. This allows CAPCAT to provide a summary of site-by-site costs.

In the Costs by Sites T tab we can review a summary of costs for each Treatment site. In our study, these are the sites implementing Reading Recovery. I use the dropdown list in the first column to select each of the Reading Recovery sites and CAPCAT populates the costs at each site for me like this.

There is also a Costs by Sites C tab where we can review a summary of costs for control sites. In our study these were the schools implementing Fast ForWord Reading.

Back in the Site Names table in the Setup tab, we also listed the district office because it provides some of the resources, including the Teacher Leader, that are

used for implementing Reading Recovery. This is the centralized ingredient whose costs we want to spread across the 15 schools.

One option for doing this is to list the Teacher Leader at each site and split her time among the schools. This would require entering 15 rows of data for training and 15 rows of data for program delivery just for this one person. For each new pair of rows, the only changes would be the site name in each row and the proportion of time attributed to each school. If the Teacher Leader kept a time log, we could have entered the actual hours she spent at each school, but this was not the case, so we had to make an assumption about how her time was spread across the schools. You may remember from the overview table we created that our assumption was that the time she spent at each site was directly proportional to the number of students served at each school.

We have the number of students served at each site documented in the sites table in the Setup tab. There are between 8 and 26 students at each school. The total number of students served is 195 and the number at Site T1 is 8. So, we would assign eight 195ths of the Teacher Leader's time to Site T1.

The Teacher Leader worked a total of 1,560 hours on Reading Recovery in her first year so that's 8 divided by 195 multiplied by 1,560 hours for Site T1, which results in 64 hours.

We'd do the same calculation for each site, dividing the number of students served by 195 and multiplying by 1,560 hours.

A second option that we built into CAPCAT to make our lives a little easier, is to keep just the 2 rows of data for the Teacher Leader but, in the Cost distribution column, use the dropdown to change Distributed to Centralized.

Then, either now or after you have entered all ingredients into this tab, you can go to the "Centralized Costs T" tab down here. This brings you to a table for centralized costs for the treatment sites which looks like this when you first open it – pretty devoid of any useful data as yet.

But this is where you can quickly distribute the costs of centralized ingredients across sites by assigning weights to each site. You can assign different weights to each of the four categories of ingredient:

- Personnel
- Materials
- Facilities and
- Other Inputs.

One big assumption CAPCAT makes when you use this sheet is that each ingredient that you label as centralized needs to be distributed across the sites in the same proportions or weights as all the other centralized ingredients in that same category. If you know this assumption is not valid for your situation, you'll have to stick to repeating the ingredient at each site in the ingredients tab and assigning the correct proportions there.

Let's assume we're happy with the assumption that all centralized personnel involved in implementing Reading Recovery will be spread in the same way across the 15 schools.

The first thing you need to do here is to enter the names of the sites to which the centralized costs need to be applied. Usually, this will be the whole list of schools and you can just copy and paste the list from the Site Names table in the Setup tab. Or you can use the drop downs in each of the cells of this column to select the site name.

The moment you enter a site name, CAPCAT automatically pulls the number of participants treated at that site from the Setup tab into the Weighting units column. You can see that site T1 has 8 participants while site T9 has 13.

You can double check that's correct by taking a look back at the Site Names table in the Setup tab. 8 at Site T1. 13 at Site T9. Perfect, CAPCAT is working as planned.

At the same time as the number of participants is pulled in for each site, CAPCAT calculates the percentage of costs to assign to the site using that same calculation I just showed you for determining the proportion of the Teacher Leader costs to attribute to Site T1. The proportion we obtained was 4% which matches what's here. Site T9 serves 13 students which represents thirteen 195ths or 7% of the total students served.

If this weighting scheme makes sense for your analysis, you can simply copy these percentages into the next 4 columns like this.

Also notice that as soon as you populate the columns with weights, CAPCAT automatically calculates the dollar amount of centralized costs to assign to each site over here in the results section.

Costs of centralized ingredients using local prices are in the columns with green headings and costs using national prices are in the columns with orange headings.

So, you can see that, using local prices, Site T1, which has only 8 students, has been attributed $4,345 of centralized personnel costs, while site T15 with 26 students has been attributed $14,122.

Once you have distributed the centralized costs in this tab, CAPCAT will automatically add them to the relevant sites in the Costs by site tab, and your site level analysis is complete. For example, total local costs per site for Site T1 are $62,919.

Now, if you think the weighting scheme should be different for any of the categories of ingredients, you can simply plug in the percentages you want to attribute to each site in the relevant columns.

A few minutes ago, I told you that can enter a different weighting scheme for each of the four ingredient categories.

For example, if you decide that the costs of any district office facilities used for training purposes should be weighted by the number of Reading Recovery teachers at each school, then you could calculate those weights using the data in the Sites table in the Setup tab, and enter them in the facilities column.

For example, Site T15 has 3 Reading Recovery Teachers and there are 24 total in the district so the proportion of costs to attribute to Site T15 is 3/24 or 12.5%.

So, I can enter 12.5% in the Facilities column for Site T15, and repeat this calculation for the other sites, entering the new percentages as I go along. The proportions are not that much different from the first set which is not that surprising as the number of students and teachers should be highly correlated.

CAPCAT automatically applies these new weights to distribute centralized facilities costs so you'll see the changes in the results columns for facilities.

And then let's imagine that you want materials costs incurred at the district office to be weighted equally for each school. In this case, you just enter 100÷15 or 6.67% for each site in the materials column, like this.

Whatever you do for your weighting scheme, just make sure that, for each of the four categories of ingredients, the sum of the weights listed is neither more nor less than 100%. You can see this calculated for you in the row above the column headings and the number will turn red if it isn't exactly 100%.

At this point in your cost analysis, you should have entered all your data, checked your data entries for accuracy and consistency, made all your adjustments, spread any centralized costs across sites, conducted sensitivity analysis by varying key assumptions, and be ready for the reporting stage.

In the next module, we'll be looking at what kinds of cost metrics and cost breakdowns to report. See you there!