

Commission to Study School Funding (RSA 193-E:2-e)

Meeting Minutes

October 19, 2020, 1-4:30 pm

Website: <https://carsey.unh.edu/school-funding>
<http://www.gencourt.state.nh.us/statstudcomm/committees/1506/>

Commission Attendance: Dave Luneau, Rick Ladd, Dick Ames, Iris Estabrook, Susan Huard, Bill Ardinger, Jane Bergeron-Beaulieu, Barbara Tremblay, Jay Kahn, Mel Myler, Val Zanchuk, Jon Morgan, Corinne Cascadden, Mary Heath, Chris Dwyer, Dave Ryan, John Beardmore. Also Present: Bruce Mallory, Jordan Hensley, Carrie Portrie, Drew Atchison, Jenn Foor. 21 attendees from the public listening.

Welcome/Call to order/Tech check/Chair's comments:

Just after 1pm Dave welcomed attendees, noted a more frequent schedule in the upcoming weeks, and called roll. Bruce Mallory reviewed the Commission's group agreements. The Commission approved the minutes from October 5's Commission meeting by a yes vote of all members except Dave Ryan (abstaining) and John Beardmore (not in attendance at the opening).

AIR Presentation

The meeting started with a description by Bruce of why the Commission decided earlier in the year to use an outcomes-based approach, followed by presentation by AIR's Drew Atchison, who discussed AIR's cost model and regression analysis. The presentation slides can be found here:

https://carsey.unh.edu/sites/default/files/media/2020/10/regression_explanation_v3.pdf, and the full video of the presentation can be found on the [Commission's website](#).

Jay – when you add several variables that are independent (to the outcome variable), how does that fit together vs a single variable? Drew – It's still working in combination to minimize the amount or error. So if you have two related variables, one of them might be stronger vs another variable, so you might find a stronger relationship for one variable vs another. So if you had FRPL and another variable, one would be a stronger predictor, so you might find a relationship for FRPL and not for income, or it might split the variation of both but it will add up to a combined impact. The amount of variation doesn't change but the explanatory power of the variable does. When you have them all in there at the same time, they are working together to make the best prediction possible. Some further discussion was had of the variables in AIR's cost model.

Rick – is there a relationship between age of schoolhouses and student achievement? Drew – didn't have the data and complicated to define – have to consider renovations, etc, may find in more populous areas that buildings are older or vice versa. All sorts of reasons why buildings would differ in age, etc. Rick – research shows a relationship between school building quality and achievement.

Iris – As you provide funding (for state average outcomes) over time, districts will either improve (getting closer to average outcome) or not. What happens to this model over time as the amounts provided begin to affect outcomes? Drew – It's a hard question to anticipate, but if all districts end up achieving the average outcome and spent the levels of dollars predicting the model wouldn't change at all. If spending went up in high needs districts and outcomes did not go up, re-estimation of the model might show that we were underestimating costs for higher needs districts.

Drew – if talking about the steps, step 1 is the cost model described, followed by weight estimation and then the simulation. Dave – So basically the estimated cost model is based on FY19 spending and outcomes gets you to the model.

Further discussion was had on how the model could be updated in future years with new data.

Dick – The way I understand it is that the average outcome in the state—which is pretty good—is the target worked off of, then there is an assumption that our current spending level is what enables that outcome. That current spending level in effect gets keyed into this formula, and that leads the other numbers you've developed through your analysis. I'm wondering why you would pick the average current spending in NH as the dollar input that you put into this formula, which leads unsurprisingly to a total spend that is approximately equal to the current total spending. Could you have chosen 10% less than the statewide spending level on the theory that part of this success in NH in outcomes relates to engagement at the local level in the educational process that has a different quality than dollars. Could you have chosen to put in a lower number or a range across a low/high instead of what you have done? Drew – Yes. In this case the outcome here is what is predicting total level of spending, if that is changed spending changes up or down accordingly. Your example is that there is some kind of local factor that might also be affecting outcomes, but the state's level of outcomes is what it is. Your assumption would also be that whatever that local engagement level is would exist at its current level. So we would assume some average level of engagement across districts, and you would still end up with the same level of spending to achieve level of outcomes, unless you made different assumptions. Dick – still puzzling over this. In this model we have the spending of some very high spending districts, and those dollars are going into this pot directly or indirectly, and they may have outcomes that are higher/lower. We seem to have locked ourselves into a process that leads inevitably to a per pupil spending figure that is going to be \$16 or \$17k without federal spending and some other things. The total costs now include a lot of spending well above the norm. Trying to get my head around why that spend level is what we should be pushing for. Drew – If that level of spending is contributing to higher outcomes in those districts then the model would pick that up. If it's not, that would be an example of inefficiency and the efficiency variable should be picking that up. Dave – there is certainly a strong correlation between spending and outcomes, well documented. It sounds like you're saying that other factors might contribute to that. Dick – MA approaches this challenge differently, and they have a foundation budget concept sort of equivalent to adequacy. They've got success in terms of performance similar to NH and have developed their foundation budget through an input process. Through that process they have developed a foundation budget that is 25-26% less than the total spending of the school districts, and they are doing pretty well. Through this outcome analysis we are getting to a point where we've developed a district by

district spending level equal to current spending. If you did that in MA, you'd say that the foundation budget should be 25% higher (at 125% of where it's at now).

Dave – this is a cost model, not a statement on adequacy. It is the estimate of spending per district to get everyone to state average. It's an important thing to note for this Commission. As we look to improve student and taxpayer equity the student equity part of it is important, and it shouldn't matter what your zip code is to have equitable outcomes. Drew – if you took an approach where you set foundation level to 75% of predicted costs, you should be realistic about what that means for student equity and what happens to the 25% of dollars left out. Any time you don't account for dollars then the dollars you don't account for will end up in the districts that have the most.

Rick – trying to wrap my mind around average outcomes designed around current spending. In looking at the cost model, I'm looking at the comparative wage variable, and looking at Manchester which has a lot of administrative town vs Colebrook which is lucky to have a superintendent. Looking at the initial model which was input based, and there we used bachelor + x # of years. No admin costs or nursing costs or contracted costs built in. Is it true that you're building in every cost to all this and the wage variable? Drew – it estimates the price level of individuals who are not in the education space who have similar credentials to those who would be employed as teachers. What you don't want to do is use actual teacher spending, because that will be highly correlated with actual spending and penalizing low spending districts/rewarding high spending districts. So this estimates costs of other professionals who have similar credentials but are employed differently. In Manchester it's .99, which is on par with the national average. If you go to a different community with different costs or more amenities you wouldn't have to pay them the same level. It's basically like a geographic difference estimator, using cost of living, etc. Rick – so looking at NH, to get the average wage of a police officer in Grafton County will be impacted by Hanover/Lebanon, but in Haverhill can't compete with that. Drew – this variable is at a metropolitan statistical level, around certain metros or groups of rural areas. In our model we did not find it having an impact, and that is why it isn't a weight in the weights model.

Chris – Still confused about why include the efficiency values if they are always going to be the same for all districts. What is that doing? Drew – We're applying them as if they are the same for districts, but in reality they are different. So when we estimate for individual districts the coefficients, it is accounting for the differences in efficiency, but in predicting costs setting it all the same, so a district that is more efficient is being treated the same as those who are less efficient. Same idea as setting the outcomes to state average – want to compensate districts at the same level and not reward inefficient districts. Places all districts on a level playing field to achieve a certain level of outcomes. Chris – when it's actually applied to an actual district, how does efficiency play in? Drew – we treat districts as if they are operating at the same level of efficiency, which is why set to state average, and why it is not in the weight estimation. Accounting for it in determining student needs/outcomes but treating efficiency as constant in putting dollars into system.

Dave – said another way, does that mean that the efficiency number ends up being part of the residual (the \$~6000 starting point)? Drew – yes, it is rolled into the constant term.

Corinne – I can certainly understand how the costs are remarkably more than what districts have been getting (from the state), but the base has increased minimally compared to what

districts are spending, and districts have been forced to reduce services. It's reached a breaking point. Question is – why does the share of population 5-17 matter in the formula? Drew – that is one of the three efficiency variables. Bruce Baker could explain this better than I could, but the efficiency variables are trying to get at unexplained differences in either spending or outcomes across districts. If you think about the incentives for districts to spend a lot on education – if you have a higher share of population school age you might spend more on education, and that might create incentives for inefficiencies. Set these to state average amount. Intended to influence other relationships but they end up not being part of the reasons why districts get more or less money in the end result of the model. A figure in the appendix of the report that explains more about the efficiency variables, and shows projections if those variables are allowed to vary. They end up not contributing much to the overall differences in costs across districts. There from a theoretical standpoint, we should control for efficiency, and end up not doing a ton in terms of altering district costs.

Bill – at the point where you're shifting from step 1 to step 2 (weights) – the relationships are preserved in your step two effort to create a simpler model, right? So the core of your work of predicted costs from step one, step 2 is simply a way to create a simpler model that would allow the model/weights to generate policies and spending until you redo it? Step 1 produces the core result and that is preserved and then creating the step 2 weights, yes? Drew – correct, relationships are generated in step 1. They might change slightly in step 2 based on changes to total spending (for example, excluding federal aid), but yes, underlying relationships determined in step 1.

Dave – the base per pupil cost is not to be equated to the base costs of an adequate education. This number is there because we're only looking at four factors for weights. If we had ten weight categories, or 20, or 100, then that base would be significantly less because you have more factors you're piling on. Drew – exactly. The more factors you want to account for, the more it will pull from the base and add dollars into factors being differentiated for. Base cost here would be a student who had zero for all other values. When we apply all the weights we have an effective range of ~\$12,500 to \$30,000, similar to current spending range that exists in NH.

Jane – can you confirm for me, as we look at the special education weight. Does that not include the 3-5 age range as well as the 18-21 year old? Are those areas taken into consideration? Drew – in the simulator the ADM is pulled from the state's existing formula, and my understanding is that only applies grades k-12. Jane – so those are two areas that can be very costly for school districts. Jay – I think that you're right about the 3-5, but because 18-21 still hasn't graduated that population is counted. Drew – it's what the data is. I don't know all the exact items that go into the data, might want to check on that with the DOE. Jane – need to check data to know if we're right on where age groups fit in. Dave – included in ADMA, right? Jane – not sure, need to confirm.

Iris – When we were discussing these weights in adequacy work group and trying to determine moving forward with them, there was some discussion that they need to be considered as a package. Some of us have concerns about weights for small schools and special education areas. Going forward, isn't it possible to change some of the weights and redirect within the whole approach that funding to other weights that are identified? Drew – that is possible. If we

talk about step 1 and step 2 being independent processes, step 1 generates predicted costs and step 2 creates the weights that best describe. In step 2 you can make choices about what to include or exclude. You could, for example, drop weights and see how the rest of the weights shake out, and it wouldn't change the predicted costs from step 1 but it will change what variation weights are picking up. Each time you drop one of the weights the accuracy will decrease, so if you drop middle school and it goes from 98% to 75% it would indicate that it is important, but if it only drops to 97% perhaps not a major issue.

Val – The R squared here is quite high, but in step 1 it's .37, so just predicting 37% in step one?

Drew – correct. So if we included more predictors in the first equation could increase that r-square values, but do those items make sense to include as items that drive spending in districts? Could include teacher salaries, and that would be highly predictive of spending, but do you want to reward districts paying teachers a lot? Want to include factors that would a) be reasonably included in a state funding model and b) not include factors that incentivize extra spending in already high spending models. Want to include things outside district's controls, like student needs, input costs, and scale of operations. Not sure what else to include, perhaps other student needs variables, but not sure what else we would want to include in first stage model.

Dave – think what Val and Drew brought up is really important, that step 1 is critical to understand and be confident in, especially when spending across districts is all over the place. There's no way you can draw a straight line and have all the districts right there on the line. They will be well above and well below along the entire x-axis. Finding a way to represent that with a straight line will be error prone, and they didn't use a lot of factors that contribute to that error like teacher salary variations. In step 2, you can see how a pretty straightforward set of weights basically reproduces estimated costs quite accurately, which you would expect in step 2. Need to have confidence in step 1.

Bill – What Drew and AIR have brought to the table is their expertise. This step 1 model, which as you say needs to be credible to this Commission and public, has credibility based on AIR's expertise. This model is not dreamed up just for NH and our report. As the AIR report indicated, is based on substantial academic work by the AIR team and others. We are relying on the credibility of their expertise and in our own judgements that the relationships produced makes sense – the gut level test. None of us individually may be able to reproduce the model, but can see whether this model passes what experts on the Commission know about NH. Drew – also ran a regional model, which aligned well with the NH-specific model.

Jay – These factors are relevant in a whole variety of state funding formulas. It's not like these were made up whole cloth. From the first presentations we saw from ECS and NCSL, they pointed to these same variables. The current state funding formula, when it comes to differentiated aid, uses these factors. The only surprise is that rather than having an extra weight for elementary students, costs are higher for non-elementary. That is the only change in direction, but this model gives more accuracy. Have not just an expert team that is advising us but have a clear rationale for the basis of differentiating need across our state.

Rick – I am still trying to wrap my head around step 1, but in step 2 we are looking at weighted categories very similar to what we have in current law/what we've strived to do. But the special education weight of 4.29 X base is basically making the statement that every special education student is the same, and I don't think that is the case. We have some students on the way out

the door being monitored, and some students that are very expensive. Has any model that uses these weights tried to find an average weight for a student receiving minimal services? Drew – These weights are averages. The weights represent the average cost for special education, for FRPL, etc. it's not saying that every special education student will cost the same but if you average costs, that is what students will cost on average. Some will cost far less, some will cost far more, and hopefully on average districts are able to spread costs to serve all special education students. Note that catastrophic aid is not included. Rick – But 3.5X will not kick in, may need to change catastrophic aid in addition to estimated costs. Dave – model is based on actual spending, for all students. Has nothing to do with 198:40. Rick – averaging out apples and oranges.

Further discussion was had regarding adequacy vs total spending in the estimated cost model. Bruce – Drew, can you help the group understand why we cannot take the current base adequacy costs (~\$3700) generated by the legislature/DOE and compare them to the average costs in the model developed by AIR?

Drew – the main difference in the formula is the amount allocated through the weights. As we discussed previously adding weights would reduce the base costs, the real difference is in how much is allocated via the weights vs the base. In the new formula, far more is allocated through the weights, which creates a much higher spend vs the previous formula which mostly is base costs. How we've set up this formula, which is part of the challenge the Commission is having with it, is that it allocates the bulk of the dollars through the formula—a big shift from what has historically happened in NH, where almost 70% of dollars have been through local revenue. I'm not saying that all of the money has to come from state coffers here, but it is accounted for in the formula. Where the money comes from is a separate discussion. Bruce – by having so much of the formula distributed by weights it moves the distribution to a closer alignment between student needs and dollars going to districts.

Bruce – remind us of how the middle grade weights were treated in the weights. Drew – in the actual cost model that relies on district level data, we were able to obtain data that had the breakout of enrollment in specific grade levels. When talking about middle school enrollment, it is the proportion of students in grades 6-8, regardless of the type of building. The challenge is in the simulator in moving to costs, only have data of classification of enrollment in middle or high school grades at the town level. Not the same as the proportion of students in grades 6-8.

Moving forward encourage the Commission to work with the DOE to get student grade level data by town. Doesn't impact weights but does impact allocation.

Bruce – what is it about the state average achievement levels the Commission is achieving? The Commission has that question in mind. Should the commission recommend that additional or different performance measures against which costs could be measured/districts held accountable by? We work with the data and policies we have, but it remains an open question whether those outcome measures are the ones most useful for the Commission.

Jay – While you've proportioned the grade levels in a district back to the towns in the same level of their enrollment, the actual error in that is pretty minimal, right? Drew – depends on the town. Could look at other ways of doing that through the simulator. If a k-8 school defined as all elementary, that has an impact on funding. Different options could be taken to account for middle/high school enrollment. Would not be too concerned at this point, does not affect

weights estimated but rather weights to funding, and there is time to work with DOE and legislative analysts to figure that out.

Some discussion was had of pre-k students age 3-5 in the formula currently and possibly moving forward. Further discussion was had of changing state-level outcomes in the simulator and cost model.

Rick – can Drew get us what 1 standard deviation either up or down, can you give us something specific so if we do end up messing around we can figure that out? Drew – yes, think we put in 17.5% in the simulator.

Work Group Updates

After a short break, the Commission moved to work group updates. Mel Myler discussed Engagement's efforts, Jay Kahn provided an overview of Adequacy's work, and Dave Luneau noted the work being done by Fiscal Policy. Further discussion was had on "first/last" dollar approaches, MA's Chapter 70, and teacher salaries.

Final Report/Remaining Key Questions

Bruce noted the current timeline for the Commission and the proposed structure for the final report. Bruce noted that he would send the working document and that it would be posted publicly. Some further discussion was had about ongoing efforts to craft briefs and draft the final report.

Comments and Questions placed in the Q/A Box in Zoom:

Fred Bramante 01:54 PM

There are other ways to measure outcomes than test scores. i.e. Graduation rates, college acceptance.

Fred Bramante 02:08 PM

Can you give a hypothetical on how this formula could be used including a final approach to how Manchester and Bedford or Portsmouth and Waterville Valley would be impacted?

Fred Bramante 02:18 PM

Why not state targets rather than current state averages?

Fred Bramante 02:42 PM

When defining "spending a lot", it could be in \$\$ or tax effort.

Fred Bramante 02:46 PM

The BIG ? is how do you use the model to get to actual money to districts.

Fred Bramante 01:43 PM

Is this assuming that achieving the state average is a good thing?

Val Zanchuk - Graphicast 03:05 PM

Fred:

Much of this is addressed in the AIR report and in the simulation model they developed. In the simulator, you can adjust many of the factors you question to see the impact on each town.

Fred Bramante 03:06 PM

Don't confuse districts with SAUs. Many districts don't have high schools but send their HS students to the SAU.

Doug Hall 03:08 PM

The count of middle school students is here

Doug Hall 03:08 PM

https://www.education.nh.gov/sites/g/files/ehbemt326/files/inline-documents/school_enroll19-20.pdf

Doug Hall 03:09 PM

Percents can be calculated as they have been for the districts with separate middle schools

Fred Bramante 03:50 PM

Don't get re-stuck in the statewide equal amount per pupil.

Fred Bramante 03:55 PM

We are different than Massachusetts in the basic concept of how we educate our students. They are still a Carnegie Unit (Time Based) model. We have moved / are moving to a Competency-Based model. Still in transition but, this is significant.

Marcia Garber/she,her/Manch nh 04:19 PM

Health care

Fred Bramante 04:32 PM

Every tax causes donors and receivers.

Public Comments:

Jeff McLynch: Responding to a suggestion earlier in the meeting – wanted to express hesitancy that movement would be from a statewide target outcome to a range. Concerned about the approach given what it might imply about an adequate education in NH, and contemplating students achieving less than the state average. Would ask rhetorically, who would be the students who would receive a less than average education? If Commission endorses a range approach, Commission should be very clear about what that means on a district-by-district basis. AIR's current model uses a logarithmic regression, hard to explain. If moving by 1 standard deviation, what would that mean?

Doug Hall: With the outline for your report, I am harkening back to HB4 setting up the items the Commission is charged with doing. Hope that the final report addresses all those items in addition to the much larger amount of material placed in the draft. Hope you go back, look at the charge, and will respond to each item.

Jane Ferrini: Very interested in looking at the adequacy work group and further assignments. That is something that is very challenging but an important inquiry, because I believe all the public comment to date has relayed that the property tax is overburdened across all public engagement types. I urge this committee to be open minded and examine that piece coming up. It is a challenging piece but I know that is a tough one on folks, and no one wants to return to a donor town situation. I know that this group has worked hard at public engagement, but I do think that there are communities that have not been able to participate to the extent that they might have and the issue is so complicated it is scary for people to reach out and say that this is complicated/a lot to handle. I truly commend the work of this Commission, but I am going to be quite honest—any formula with a donor town component would be problematic

and a challenge. Certainly what you have ahead of you is yeoman's work but I just feel it would be inappropriate for me not to say that in black and white.

Direct further public comments to Commission Chair David Luneau at schoolfunding.commission@unh.edu

Next open public comment period: Wednesday, October 28, 4-5 pm

Next set of Commission work group meetings will take place on THURSDAY, October 22.

Adjourn

Documents:

Documents for this meeting can be found on the Commission website under 10/19 materials - <https://carsey.unh.edu/school-funding/school-funding-study/resources/meeting-documents-video>